Location and Results of Underground Storm Sewer Samples Adjacent to UPRR

On October 3, 2019, after a 72-hour dry period, storm sewers were sampled at six manholes locations. Each storm sewer is located on the periphery of the Union Pacific Railroad (UPRR) site. Five samples were from the northern part of the site and one sample was taken from the southern part of the site. Each manhole was given a numerical label for identification purposes. Figure 1 depicts the physical locations of each sampled manhole with its corresponding label. Benzene was detected in samples taken from manholes 3, 4, and 5. These concentrations exceeded the Texas Surface Water Quality Standards (TSWQS) of 0.005 mg/l for benzene. Naphthalene was detected in the sample taken from manhole 3, which exceeded the Texas Risk Reduction Program (TRRP) Aquatic Life Surface Water Risk Based Exposure Levels of 0.25 mg/l for naphthalene. VOC and SVOC constituents that were detected did not exceed the TRRP or the TSWQS concentrations. Personnel noted indications of the presence of dense non aqueous phase liquid contamination.

Figure 1: Google map image showing the Union Pacific Railroad site. The red dots represent the locations where the City of Houston's underground storm sewers were sampled for possible contamination.

October 24, 2019

City of Houston
Public Works & Engineering
1002 Washington Avenue
Houston, TX 77002

Attn.: Mr. Richard Chapin
Senior Project Manager
832.394.9133
Richard.Chapin@houstontx.gov

Re: **Manhole Sampling**
Union Pacific Railroad Transfer Station
Houston, Harris County, Texas
Terracon Project No. 97197619

Dear Mr. Chapin:

This letter report summarizes the findings of the dry-weather sampling event at 6 of the City's storm sewer manhole locations near a Union Pacific Railroad Transfer Station.

SCOPE OF WORK

The City of Houston (COH) requested that Terracon provide hands-on training and assist City of Houston Public Works and Engineering (PWE) staff with the collection of water samples at six separate manholes adjacent to the Union Pacific Railroad Transfer Station property. Five of the six manhole (MH) sampling points are located north of the facility along Liberty Road, just east of Lockwood Drive and the sixth MH point is located south of the facility at the intersection of Lee Street and Schwelkhardt Street. These 6 MH sampling locations are identified on Attachment 1 which represents the project area on a map entitled "UPRR Storm Sample Locations" previously developed by the City of Houston. The samples were collected to characterize the quality of any dry weather flows entering the City's MS4 from the subject site, with regards to the target constituents.

According to Terracon's Proposal Number P91297619, dated August 27, 2019, issued under the Professional Consulting Services Agreement for TMDL Support Services dated April 12, 2010, between City of Houston and Terracon Consultants, Inc., six samples were collected from the manholes for chemical analysis.

FIELD ACTIVITIES

On October 3, 2019, Ralph Calvino and Meg Haile from Terracon mobilized to the above-referenced site to collect water samples from the manholes. One water sample was collected for laboratory analysis from each of the six manholes. The Terracon team met Mr. Darrel Anderson and Mr. Ryan Dahl of The City of Houston Public Works and Engineering who assisted with site access and traffic control.

A sampling demonstration and training was conducted for the COH staff and water samples were collected using the peristaltic pump to collect the sample directly into the sample containers provided by the laboratory. Water samples were collected to represent dry weather conditions. For the purposes of this sampling plan, dry weather conditions are defined as an antecedent dry period (<0.1" of rainfall) of at least 72 hours. One dry weather sample was collected at each of the MH sample locations contingent on weather conditions and flow characteristics encountered on-site.

Field observations included flow condition at each manhole sampling point which ranged from standing/ponded water with trickle flow, progressively increasing in a downstream manner from manhole to manhole.

The water samples were collected in laboratory prepared glassware and placed on ice in a cooler. The samples, along with the completed chain-of-custody forms, were relinquished to TestAmerica Laboratory in Houston, Texas for analysis under standard laboratory turn around terms.

LABORATORY ANALYTICAL PROGRAM

The water samples collected at the site were analyzed for volatile organic compounds (VOCs) using Environmental Protection Agency (EPA) Method 8260B and semi-volatile organic compounds (sVOCs) using EPA Method 8270C LL.

INVESTIGATION EVALUATION

The analytical results are summarized in Table 1. VOC and SVOC constituents analyzed but not detected are not included in Table 1 however; they are provided in the analytical reports received from the laboratory in Attachment 2 which also contains the sample chain-of-custody forms.

Water concentrations were compared to Texas Commission on Environmental Quality (TCEQ) standards from the Texas Surface Water Quality Standards (TSWQS). Texas Risk Reduction Program (TRRP) Aquatic Life Surface Water Risk Based Exposure Levels (RBELs) for freshwater acute and freshwater chronic were also used for comparison and discussion purposes. For comparative purposes, the analytical results were compared to the most conservative standard.

ANALYTICAL RESULTS

VOC constituents were not detected at concentrations exceeding the TRRP ^{SW}RBELs and/or the TSWQS, with the exceptions of benzene and naphthalene. Benzene was detected in the water samples collected from Manhole 3 (0.00506 milligrams per liter (mg/L), Manhole 4 (0.0104 mg/L), and Manhole 5 (0.00935 mg/L). The detected concentrations exceed the TSWQS (Water and Fish) of 0.005 mg/L. Naphthalene was detected in the water sample collected from Manhole 3 at a concentration of 0.253 mg/L, which exceeds the TRRP ^{SW}RBELs (Freshwater Chronic) of 0.25 mg/L. It should be noted that naphthalene was additionally detected in the trip blank provided by the laboratory.

VOC constituents 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, acetone, chlorobenzene, chloroform, ethylbenzene, n-butylbenzene, toluene, and xylenes were detected in at least one of the water samples at concentrations below the ^{SW}RBELs and/or TSWQS.

SVOC constituents 2,4-dimethylphenol, 2-methylnaphthalene, 2-methylphenol, acenaphthene, carbazole, dibenzofuran, fluorene, and naphthalene were detected in at least one of the water samples at concentrations below the ^{SW}RBELs and/or TSWQS.

We appreciate the opportunity to perform these services for City of Houston. Please contact either of the undersigned at 713-690-8989 if you have any questions regarding the information provided in the report.

Sincerely,

Terracon Consultants, Inc.
(TBPE Firm Registration No. F-3272)
(TBPG Firm Registration No. 50058)

Ralph Calvino, REM
Regulatory Compliance Department Manager

Sheraden Porter
Senior Staff Geologist

Attachments: Table 1: Summary of Analytical Results
Attachment 1: UPRR Sample Locations
Attachment 2: Analytical Laboratory Reports

TABLES

TABLE 1 - SUMMARY OF ANALYTICAL RESULTS

Table 1
Summary of Water Analytical Results
Manhole Sampling
Union Pacific Railroad Transfer Station
Houston, Harris County, Texas
Project Number 92197619

Parameter	Method	TRRP Aquatic Life Surface Water[1] (^{SW}RBELs) (Freshwater Acute)	TRRP Aquatic Life Surface Water[1] (^{SW}RBELs) (Freshwater Chronic)	TSWQS[2] (Water and Fish)	TSWQS[2] (Fish Only)	Sample Identifier					
						MH 1	MH 2	MH 3	MH 4	MH 5	MH 6
						10/3/2019 09:15	10/3/2019 9:40	10/3/2019 10:10	10/3/2019 10:40	10/3/2019 11:00	10/3/2019 11:30
Volatile Organic Compounds (mg/L)											
1,2,4-Trimethylbenzene	EPA 8260B	0.462[a]	0.077[a]	-	-	<0.000215	<0.000215	**0.00333**	**0.00316**	**0.0013**	<0.000215
1,3,5-Trimethylbenzene	EPA 8260B	0.4245[a]	0.071[a]	-	-	<0.000210	<0.000210	**0.00137**	**0.00169**	**0.00107**	<0.000210
Acetone	EPA 8260B	607.4[a]	101.2[a]	-	-	<0.000447	<0.000447	<0.000447	**0.00303 J**	**0.00935**	<0.000447
Benzene	EPA 8260B	2.3[b]	0.13[d]	0.005[e]	0.581	<0.000176	<0.000176	**0.00506**	**0.0104**	**0.00935**	<0.000176
Chlorobenzene	EPA 8260B	1.1[b]	0.064	0.1[e]	2.737	<0.000185	**0.000214 J**	<0.000185	<0.000185	**0.00935**	<0.000185
Chloroform	EPA 8260B	5.37[c]	1.79[c]	0.07[e]	7.697	<0.000151	<0.000151	**0.00223**	**0.000452 J**	**0.00267**	<0.000151
Ethylbenzene	EPA 8260B	3.0[c]	1.0[c]	0.7[e]	1.867	<0.000212	<0.000212	**0.00512**	**0.00518**	**0.00217**	<0.000212
Naphthalene	EPA 8260B	1.48[d]	0.25[d]	-	-	**0.000281 JB**	**0.00199 JB**	**0.253 B**	**0.0352 B**	**0.00119 JB**	**0.000367 JB**
n-Butylbenzene	EPA 8260B	0.213[d]	0.036[d]	-	-	<0.000212	<0.000212	**0.000254 J**	**0.000227 J**	<0.000212	<0.000212
Toluene	EPA 8260B	10.21[c]	3.4[c]	1.0[e]	1.0[g]	<0.000198	<0.000198	**0.00345**	**0.00641**	**0.00185**	<0.000198
Xylenes	EPA 8260B	4.02[c]	1.34[c]	-	-	<0.000366	**0.000354 J**	**0.0103**	**0.0601**	**0.00472**	<0.000366
Semi-Volatile Organic Compounds (mg/L)											
2,4-Dimethylphenol	EPA 8270C	0.63[d]	0.105[d]	0.444	8.436	<0.000180	<0.00360	**0.0196 J**	**0.0343 J**	<0.0125	<0.00360
2-Methylnaphthalene	EPA 8270C	0.38[d]	0.063[d]	-	-	**0.000180 J**	<0.00280	<0.00286	<0.00280	<0.00700	<0.00280
2-Methylphenol (o-Cresol)	EPA 8270C	1.63[d]	0.272[d]	-	-	<0.000190	<0.00380	**0.0101 J**	<0.00380	<0.00950	<0.00380
Acenaphthene	EPA 8270C	0.08[h]	0.023[h]	0.07[f]	0.09[f]	<0.000160	**0.00601 J**	**0.00977 J**	**0.0209**	<0.00800	<0.00320
Carbazole	EPA 8270C	-	-	-	-	<0.000350	<0.00700	**0.00805 J**	**0.0163 J**	<0.0175	<0.00700
Dibenzofuran	EPA 8270C	0.562[d]	0.094[d]	-	-	<0.000160	<0.00320	<0.00327	**0.00774 J**	<0.00800	<0.00320
Fluorene	EPA 8270C	0.064[d]	0.011[d]	0.05[f]	0.07[f]	<0.000120	<0.00620	**0.00419 J**	**0.0107 J**	<0.00600	<0.00240
Naphthalene	EPA 8270C	1.48[d]	0.25[d]	-	-	**0.000251 J**	<0.00320	<0.00327	<0.00320	<0.00800	<0.00320

Notes

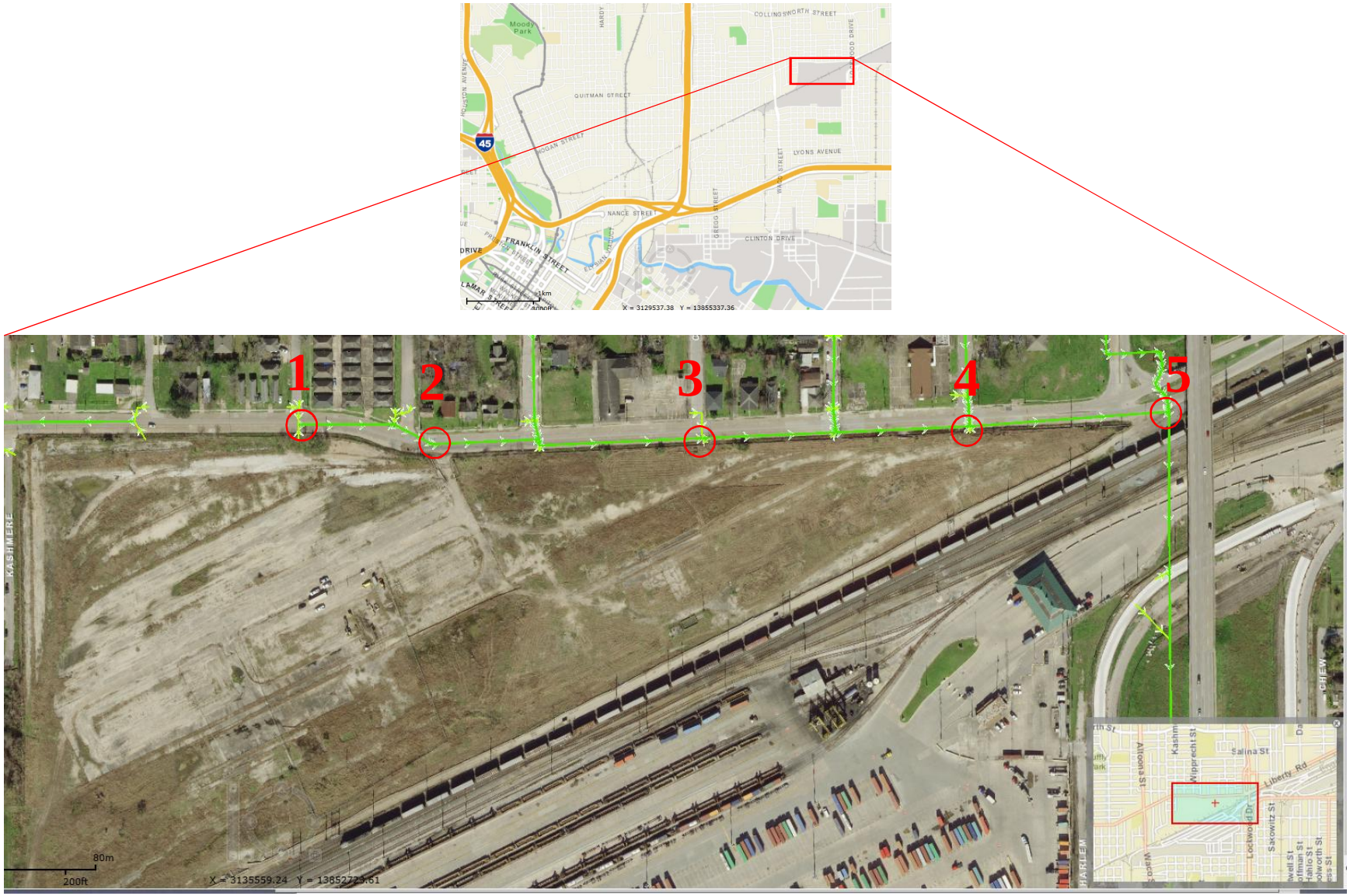
1) Water samples were analyzed for VOCs by EPA 8260B and SVOCs by EPA 8270C.
Only chemicals of concern detected above laboratory method detection limits and related to the site were reported in this table.
*2) **BOLD** Font = Indicates result detected at a concentration exceeding the SDL*
*2) **BOLD** and **Highlighted** Font = Indicates result detected at a concentration exceeding either the TRRP ^{SW} RBELs and/or the TSWQS*
mg/L - milligrams per liter
SDL - Sample Detection Limit
< - not detected at concentrations above the indicated SDL
- - not established
TCEQ - Texas Commission on Environmental Quality
TRRP - Texas Risk Reduction Program
EPA - Environmental Protection Agency
VOCs- Volatile Organic Compounds
SVOCs - Semivolatile Organic Compounds
J - Constituent detected at a concentration between the SDL and the method quantitation limit
B - Compound was found in the blank and sample
TSWQS - Texas Surface Water Quality Standards
(1) Based on the Aquatic Life Surface Water Risk-Based Exposure Limits
(2) Based on the Human Health Surface Water Risk-Based Exposure Limits
(a) - Benchmark derived by TCEQ using the LC_{50} approach in accordance with the TSWQS 30 TAC 307.6 (c)(7)
(b) - Benchmark from Suter, G.W. II, and C.L. Tsao. 1996. Toxicological benchmarks for screening potential contaminants of concern for effects on aquatic biota. Revised. Oak Ridge, TN: Lockheed Martin Energy Systems, U.S. Department of Energy. ES/ER/TM-96/R2.
(c) - Benchmark derived by TCEQ using the LC50 approach in accordance with the Texas Surface Water Quality Standards 30 TAC 307.6(c)(7).
(d) - Benchmark derived by TCEQ using the LC50 approach in accordance with the Texas Surface Water Quality Standards 30 TAC 307.6 (c) (7) before 2016.
(e) - Based on the Maximum Contaminant levels (MCLs) specified in 30 TAC Chapter 290 (relating to Public Drinking Water) and referenced as so in the TSWQS. Applies to Water and Fish value.
(f) - National Recommended Water Quality Criterion. Available online at: *http://water.epa.gove/scitech/swguidance/standards/criteria/health/*>. Accessed February 9, 2018. Carcinogens were adjusted to a 10-5 risk level
(g) - The current federal criterion is 0.520 mg/L. This is lower than the TSWQS "water and fish" value, which is based on the federal MCL. The "water and fish" value will be used until such time that the state or federal criterion is revised.
(h) - Surface water value calculated by the EPA for use in the derivation of the sediment quality criteria. U.S. EPA. 1993. Sediment quality criteria for the protection of benthic organisms—acenaphthene. EPA-822-R-93-013. Washington.

ATTACHMENT 1

UPRR SAMPLE LOCATIONS

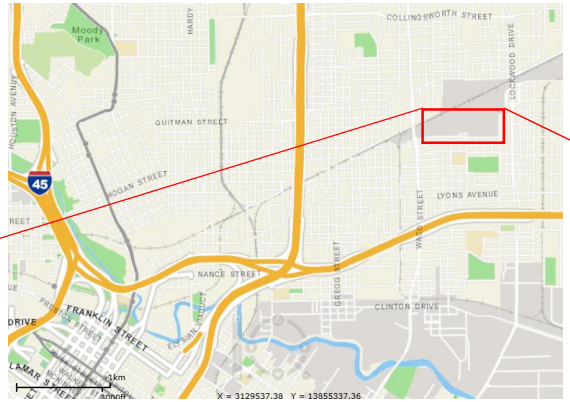
Attachment 1

UPRR Sample locations



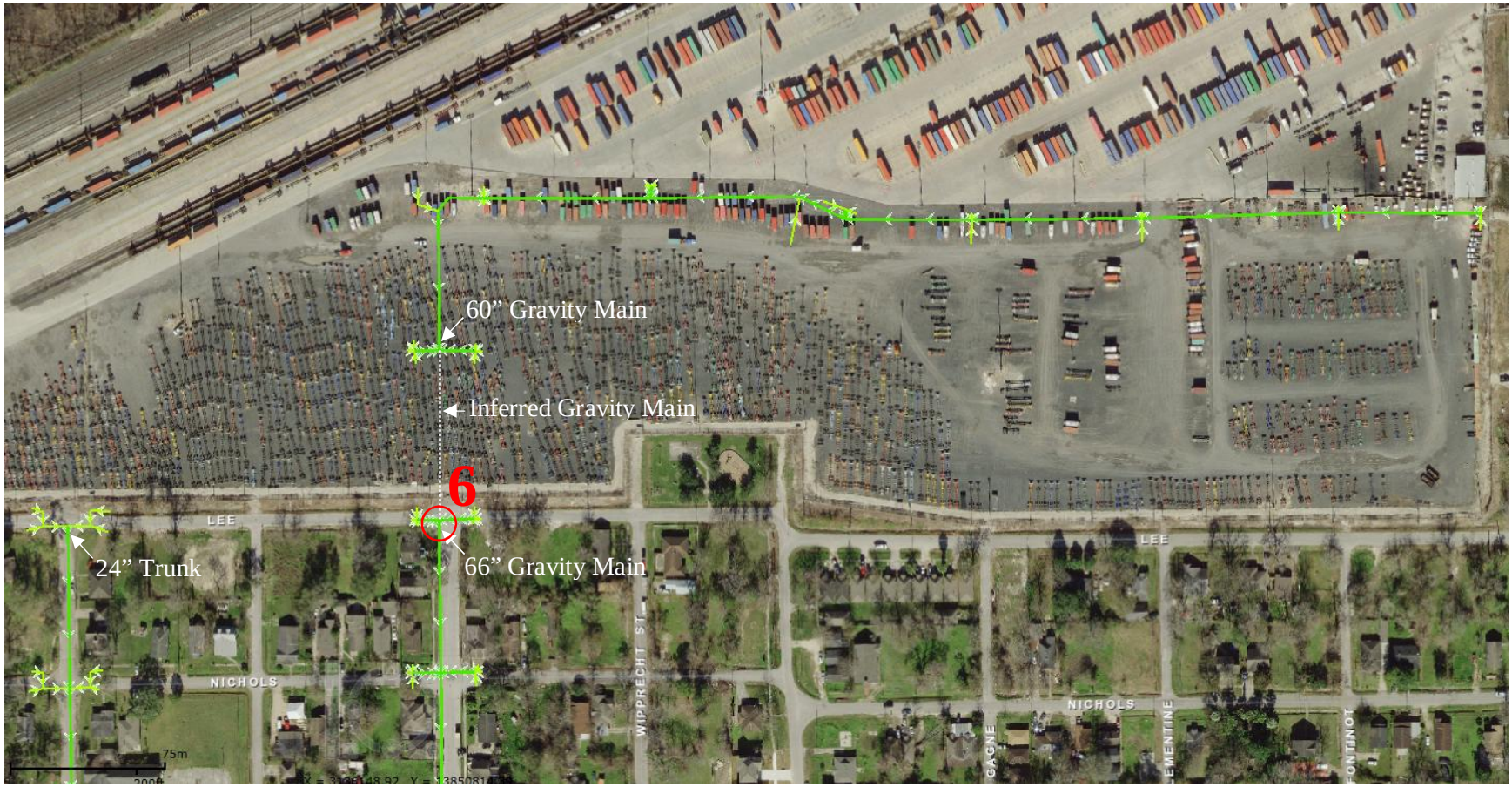
Note: This Attachment 1 was created and provided by the City of Houston

Attachment 1



Note: This Attachment 1 was created and provided by the City of Houston

Attachment 1



Note: This Attachment 1 was created and provided by the City of Houston

Attachment 1

Sample	Manhole UFID	Location	Photo
1	2949572	At the intersection of Liberty Road and Wipprecht Street in the middle of the inside west bound lane	
2	2949578	A little east of the intersection of Liberty Road and Solo Street in the middle of the inside east bound lane at the driveway going to the UPRR site.	
3	2949573	At the intersection of Liberty Road and Clementine Street between the two east bound lanes on Liberty, near the curb inlet.	
4	2949568	At the intersection of Liberty Road and Erastus Street between the two east bound lanes on Liberty, near the curb inlet.	
5	2847191	A little east of the intersection of Liberty Road and Cushing Street close to the Lockwood Drive overpass, on the outside lane close to the curb.	

Note: This Attachment 1 was created and provided by the City of Houston

Attachment 1

6	2848131	In the intersection of Lee Street and Schwelkhardt Street in the east bound lane. South and west of the Sanitary sewer in the middle of the intersection.		

Note: This Attachment 1 was created and provided by the City of Houston

ATTACHMENT 2

ANALYTICAL LABORATORY REPORTS

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-193270-1
Client Project/Site: Terracon Site 1 10-03-19

For:
Terracon Consulting Eng & Scientists
11555 Clay Road
Suite 100
Houston, Texas 77043

Attn: Meg Haile

Dean A. Joiner

Authorized for release by:
10/11/2019 4:43:46 PM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 1 10-03-19

Job ID: 600-193270-1

Job ID: 600-193270-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-193270-1

Comments
No additional comments.

Receipt
The sample was received on 10/3/2019 1:24 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

GC/MS VOA
Method(s) 8260B: The method blank for analytical batch 600-276735 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 600-276735: Naphthalene (-44.4%). These compounds are not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. The D% of the compound is outside 35% limits but within 50% in house limits. Therefore; the data is valid and reportable.

Method(s) 8260B: The method blank for analytical batch 600-276870 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270C LL: The continuing calibration verification (CCV) associated with batch 600-276980 recovered above the upper control limit for 4-Chloro-3-methylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 600-276980/2).

Method(s) 8270C LL: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 600-276931 and analytical batch 600-276980 recovered outside control limits for the following analytes: 2,4-Dinitrophenol, 4-Nitrophenol, 4-Chloroaniline, 4,6-Dinitro-2-methylphenol and Carbazole.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 1 10-03-19

Job ID: 600-193270-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL HOU
3510C LVI	Liquid-Liquid Extraction (Separatory Funnel) LVI	SW846	TAL HOU
5030B	Purge and Trap	SW846	TAL HOU

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 1 10-03-19

Job ID: 600-193270-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-193270-1	1	Water	10/03/19 09:15	10/03/19 13:24	

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 1 10-03-19

Job ID: 600-193270-1

Client Sample ID: 1
Date Collected: 10/03/19 09:15
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193270-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 16:32	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 16:32	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 16:32	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 16:32	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 16:32	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 16:32	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 16:32	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 16:32	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 16:32	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 16:32	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 16:32	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 16:32	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 16:32	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 16:32	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 16:32	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 16:32	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 16:32	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 16:32	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 16:32	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 16:32	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 16:32	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 16:32	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 16:32	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 16:32	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 16:32	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 16:32	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 16:32	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 16:32	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 16:32	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 16:32	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/07/19 16:32	1
Naphthalene	**0.000281**	**J B**	0.00200	0.000129	mg/L			10/08/19 14:26	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 16:32	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 16:32	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 16:32	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 16:32	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 16:32	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 16:32	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 16:32	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 16:32	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 16:32	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 16:32	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*50 - 134*		*10/07/19 16:32*	*1*
1,2-Dichloroethane-d4 (Surr)	*86*		*50 - 134*		*10/08/19 14:26*	*1*
4-Bromofluorobenzene	*112*		*67 - 139*		*10/07/19 16:32*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/08/19 14:26*	*1*
Dibromofluoromethane	*93*		*62 - 130*		*10/07/19 16:32*	*1*

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 1 10-03-19

Job ID: 600-193270-1

Client Sample ID: 1
Date Collected: 10/03/19 09:15
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193270-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	*88*		*62 - 130*		*10/08/19 14:26*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*10/07/19 16:32*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*10/08/19 14:26*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.000730	U	0.00150	0.000730	mg/L		10/08/19 16:26	10/10/19 00:11	1
2,4,5-Trichlorophenol	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/10/19 00:11	1
2,4,6-Trichlorophenol	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/10/19 00:11	1
2,4-Dichlorophenol	0.000260	U	0.00250	0.000260	mg/L		10/08/19 16:26	10/10/19 00:11	1
2,4-Dimethylphenol	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/10/19 00:11	1
2,4-Dinitrophenol	0.000400	U *	0.00500	0.000400	mg/L		10/08/19 16:26	10/10/19 00:11	1
2,4-Dinitrotoluene	0.000320	U	0.00150	0.000320	mg/L		10/08/19 16:26	10/10/19 00:11	1
2,6-Dinitrotoluene	0.000290	U	0.00100	0.000290	mg/L		10/08/19 16:26	10/10/19 00:11	1
2-Chloronaphthalene	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/10/19 00:11	1
2-Chlorophenol	0.000220	U	0.00200	0.000220	mg/L		10/08/19 16:26	10/10/19 00:11	1
2-Methylnaphthalene	**0.000180**	**J**	0.00150	0.000140	mg/L		10/08/19 16:26	10/10/19 00:11	1
2-Methylphenol	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/10/19 00:11	1
2-Nitroaniline	0.000350	U	0.00250	0.000350	mg/L		10/08/19 16:26	10/10/19 00:11	1
2-Nitrophenol	0.000220	U	0.00100	0.000220	mg/L		10/08/19 16:26	10/10/19 00:11	1
3 & 4 Methylphenol	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/10/19 00:11	1
3,3'-Dichlorobenzidine	0.000320	U	0.00500	0.000320	mg/L		10/08/19 16:26	10/10/19 00:11	1
3-Nitroaniline	0.000130	U	0.00250	0.000130	mg/L		10/08/19 16:26	10/10/19 00:11	1
4,6-Dinitro-2-methylphenol	0.000160	U *	0.00200	0.000160	mg/L		10/08/19 16:26	10/10/19 00:11	1
4-Bromophenyl phenyl ether	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/10/19 00:11	1
4-Chloro-3-methylphenol	0.000250	U	0.00100	0.000250	mg/L		10/08/19 16:26	10/10/19 00:11	1
4-Chloroaniline	0.000110	U *	0.00100	0.000110	mg/L		10/08/19 16:26	10/10/19 00:11	1
4-Chlorophenyl phenyl ether	0.000230	U	0.00150	0.000230	mg/L		10/08/19 16:26	10/10/19 00:11	1
4-Nitroaniline	0.000230	U	0.00250	0.000230	mg/L		10/08/19 16:26	10/10/19 00:11	1
4-Nitrophenol	0.000330	U *	0.00250	0.000330	mg/L		10/08/19 16:26	10/10/19 00:11	1
Acenaphthene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/10/19 00:11	1
Acenaphthylene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/10/19 00:11	1
Acetophenone	0.000680	U	0.00150	0.000680	mg/L		10/08/19 16:26	10/10/19 00:11	1
Anthracene	0.000440	U	0.00150	0.000440	mg/L		10/08/19 16:26	10/10/19 00:11	1
Benzo[a]anthracene	0.000250	U	0.00200	0.000250	mg/L		10/08/19 16:26	10/10/19 00:11	1
Benzo[a]pyrene	0.000130	U	0.00150	0.000130	mg/L		10/08/19 16:26	10/10/19 00:11	1
Benzo[b]fluoranthene	0.000180	U	0.00200	0.000180	mg/L		10/08/19 16:26	10/10/19 00:11	1
Benzo[g,h,i]perylene	0.000350	U	0.00200	0.000350	mg/L		10/08/19 16:26	10/10/19 00:11	1
Benzo[k]fluoranthene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/10/19 00:11	1
bis (2-Chloroisopropyl) ether	0.000180	U	0.00100	0.000180	mg/L		10/08/19 16:26	10/10/19 00:11	1
Bis(2-chloroethoxy)methane	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/10/19 00:11	1
Bis(2-chloroethyl)ether	0.000180	U	0.00150	0.000180	mg/L		10/08/19 16:26	10/10/19 00:11	1
Bis(2-ethylhexyl) phthalate	0.000590	U	0.00250	0.000590	mg/L		10/08/19 16:26	10/10/19 00:11	1
Butyl benzyl phthalate	0.000850	U	0.00250	0.000850	mg/L		10/08/19 16:26	10/10/19 00:11	1
Carbazole	0.000350	U *	0.00500	0.000350	mg/L		10/08/19 16:26	10/10/19 00:11	1
Chrysene	0.000240	U	0.00150	0.000240	mg/L		10/08/19 16:26	10/10/19 00:11	1
Dibenz(a,h)anthracene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/10/19 00:11	1
Dibenzofuran	0.000160	U	0.00150	0.000160	mg/L		10/08/19 16:26	10/10/19 00:11	1
Diethyl phthalate	0.00419	U	0.00500	0.00419	mg/L		10/08/19 16:26	10/10/19 00:11	1

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 1 10-03-19

Job ID: 600-193270-1

Client Sample ID: 1
Date Collected: 10/03/19 09:15
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193270-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/10/19 00:11	1
Di-n-butyl phthalate	0.00187	U	0.00500	0.00187	mg/L		10/08/19 16:26	10/10/19 00:11	1
Di-n-octyl phthalate	0.000160	U	0.00500	0.000160	mg/L		10/08/19 16:26	10/10/19 00:11	1
Fluoranthene	0.000310	U	0.00200	0.000310	mg/L		10/08/19 16:26	10/10/19 00:11	1
Fluorene	0.000120	U	0.00150	0.000120	mg/L		10/08/19 16:26	10/10/19 00:11	1
Hexachlorobenzene	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/10/19 00:11	1
Hexachlorobutadiene	0.000190	U	0.00200	0.000190	mg/L		10/08/19 16:26	10/10/19 00:11	1
Hexachlorocyclopentadiene	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/10/19 00:11	1
Hexachloroethane	0.000170	U	0.00200	0.000170	mg/L		10/08/19 16:26	10/10/19 00:11	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/10/19 00:11	1
Isophorone	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/10/19 00:11	1
Naphthalene	**0.000251**	**J**	0.00200	0.000160	mg/L		10/08/19 16:26	10/10/19 00:11	1
Nitrobenzene	0.000200	U	0.00150	0.000200	mg/L		10/08/19 16:26	10/10/19 00:11	1
N-Nitrosodi-n-propylamine	0.000240	U	0.00250	0.000240	mg/L		10/08/19 16:26	10/10/19 00:11	1
N-Nitrosodiphenylamine	0.000330	U	0.00150	0.000330	mg/L		10/08/19 16:26	10/10/19 00:11	1
Pentachlorophenol	0.000960	U	0.00250	0.000960	mg/L		10/08/19 16:26	10/10/19 00:11	1
Phenanthrene	0.000290	U	0.00150	0.000290	mg/L		10/08/19 16:26	10/10/19 00:11	1
Phenol	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/10/19 00:11	1
Pyrene	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/10/19 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*71*		*17 - 137*	*10/08/19 16:26*	*10/10/19 00:11*	*1*
2-Fluorobiphenyl	*60*		*36 - 130*	*10/08/19 16:26*	*10/10/19 00:11*	*1*
2-Fluorophenol	*42*		*12 - 130*	*10/08/19 16:26*	*10/10/19 00:11*	*1*
Nitrobenzene-d5	*56*		*40 - 130*	*10/08/19 16:26*	*10/10/19 00:11*	*1*
Phenol-d5 (Surr)	*32*		*10 - 130*	*10/08/19 16:26*	*10/10/19 00:11*	*1*
Terphenyl-d14	*80*		*52 - 130*	*10/08/19 16:26*	*10/10/19 00:11*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 1 10-03-19

Job ID: 600-193270-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(50-134)	(67-139)	(62-130)	(70-130)
600-193270-1	1	95	112	93	105
600-193270-1	1	86	113	88	107
LCS 600-276735/3	Lab Control Sample	87	111	91	105
LCS 600-276870/3	Lab Control Sample	79	113	89	107
LCSD 600-276735/4	Lab Control Sample Dup	83	110	93	104
LCSD 600-276870/4	Lab Control Sample Dup	82	111	92	106
MB 600-276735/6	Method Blank	96	113	96	106
MB 600-276870/6	Method Blank	89	114	88	107

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(17-137)	(36-130)	(12-130)	(40-130)	(10-130)	(52-130)
600-193270-1	1	71	60	42	56	32	80
LCS 600-276931/2-A	Lab Control Sample	79	66	58	73	50	83
LCSD 600-276931/3-A	Lab Control Sample Dup	73	62	53	67	50	72
MB 600-276931/1-A	Method Blank	74	77	59	86	51	90

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 13:55	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 13:55	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 13:55	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 13:55	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 13:55	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 13:55	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 13:55	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 13:55	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 13:55	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 13:55	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 13:55	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 13:55	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 13:55	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 13:55	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 13:55	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 13:55	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 13:55	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 13:55	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 13:55	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 13:55	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 13:55	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 13:55	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 13:55	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 13:55	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/07/19 13:55	1
Naphthalene	0.0005119	J	0.00200	0.000129	mg/L			10/07/19 13:55	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 13:55	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 13:55	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 13:55	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 13:55	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 13:55	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 13:55	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 13:55	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*50 - 134*		*10/07/19 13:55*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/07/19 13:55*	*1*
Dibromofluoromethane	*96*		*62 - 130*		*10/07/19 13:55*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		70 - 130		10/07/19 13:55	1

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009939		mg/L		99	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01161		mg/L		116	58 - 133
1,1,2-Trichloroethane	0.0100	0.008432		mg/L		84	70 - 130
1,1-Dichloroethane	0.0100	0.01117		mg/L		112	70 - 140
1,1-Dichloroethene	0.0100	0.01047		mg/L		105	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009523		mg/L		95	70 - 130
1,2-Dichloroethane	0.0100	0.008545		mg/L		85	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01940		mg/L		97	69 - 130
1,2-Dichloropropane	0.0100	0.01015		mg/L		102	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.009964		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01683		mg/L		84	41 - 141
2-Hexanone	0.0200	0.01294		mg/L		65	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01389		mg/L		69	62 - 136
Acetone	0.0200	0.01300		mg/L		65	18 - 144
Benzene	0.0100	0.01007		mg/L		101	70 - 130
Bromodichloromethane	0.0100	0.009399		mg/L		94	70 - 131
Bromoform	0.0100	0.006534		mg/L		65	54 - 133
Bromomethane	0.0100	0.007027		mg/L		70	25 - 150
Carbon disulfide	0.0100	0.01070		mg/L		107	55 - 150
Carbon tetrachloride	0.0100	0.009915		mg/L		99	70 - 144
Chlorobenzene	0.0100	0.008985		mg/L		90	69 - 130
Chloroethane	0.0100	0.006654		mg/L		67	47 - 150
Chloroform	0.0100	0.01062		mg/L		106	70 - 130
Chloromethane	0.0100	0.006610		mg/L		66	10 - 150
cis-1,2-Dichloroethene	0.0100	0.009690		mg/L		97	68 - 130
cis-1,3-Dichloropropene	0.0100	0.009382		mg/L		94	57 - 130
Dibromochloromethane	0.0100	0.007488		mg/L		75	62 - 130
Ethylbenzene	0.0100	0.009466		mg/L		95	70 - 130
Methyl tert-butyl ether	0.0100	0.008257		mg/L		83	56 - 132
Methylene Chloride	0.0100	0.01102		mg/L		110	55 - 147
m-Xylene & p-Xylene	0.0100	0.009305		mg/L		93	70 - 130
Naphthalene	0.0100	0.007379		mg/L		74	10 - 150
n-Butylbenzene	0.0100	0.01044		mg/L		104	70 - 130
o-Xylene	0.0100	0.009219		mg/L		92	70 - 130
sec-Butylbenzene	0.0100	0.01057		mg/L		106	68 - 130
Styrene	0.0100	0.008290		mg/L		83	70 - 130
Tetrachloroethene	0.0100	0.009626		mg/L		96	47 - 150
Toluene	0.0100	0.01003		mg/L		100	70 - 130
trans-1,2-Dichloroethene	0.0100	0.009712		mg/L		97	68 - 131
trans-1,3-Dichloropropene	0.0100	0.008328		mg/L		83	60 - 130
Trichloroethene	0.0100	0.009269		mg/L		93	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			0.0100	0.009980		mg/L		100	33 - 150		
Xylenes, Total			0.0200	0.01852		mg/L		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*91*		*62 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			0.0100	0.01039		mg/L		104	70 - 136	4	20
1,1,2,2-Tetrachloroethane			0.0100	0.01261		mg/L		126	58 - 133	8	20
1,1,2-Trichloroethane			0.0100	0.009221		mg/L		92	70 - 130	9	20
1,1-Dichloroethane			0.0100	0.01108		mg/L		111	70 - 140	1	20
1,1-Dichloroethene			0.0100	0.01103		mg/L		110	58 - 148	5	20
1,2,4-Trimethylbenzene			0.0100	0.009707		mg/L		97	70 - 130	2	20
1,2-Dichloroethane			0.0100	0.009452		mg/L		95	67 - 134	10	20
1,2-Dichloroethene, Total			0.0200	0.02053		mg/L		103	69 - 130	6	20
1,2-Dichloropropane			0.0100	0.01129		mg/L		113	70 - 130	11	20
1,3,5-Trimethylbenzene			0.0100	0.01003		mg/L		100	69 - 130	1	20
2-Butanone (MEK)			0.0200	0.01906		mg/L		95	41 - 141	12	20
2-Hexanone			0.0200	0.01480		mg/L		74	56 - 130	13	20
4-Methyl-2-pentanone (MIBK)			0.0200	0.01580		mg/L		79	62 - 136	13	20
Acetone			0.0200	0.01439		mg/L		72	18 - 144	10	20
Benzene			0.0100	0.01057		mg/L		106	70 - 130	5	20
Bromodichloromethane			0.0100	0.01008		mg/L		101	70 - 131	7	20
Bromoform			0.0100	0.007023		mg/L		70	54 - 133	7	20
Bromomethane			0.0100	0.007279		mg/L		73	25 - 150	4	20
Carbon disulfide			0.0100	0.01109		mg/L		111	55 - 150	4	20
Carbon tetrachloride			0.0100	0.01040		mg/L		104	70 - 144	5	20
Chlorobenzene			0.0100	0.009318		mg/L		93	69 - 130	4	20
Chloroethane			0.0100	0.007113		mg/L		71	47 - 150	7	20
Chloroform			0.0100	0.01123		mg/L		112	70 - 130	6	20
Chloromethane			0.0100	0.007335		mg/L		73	10 - 150	10	20
cis-1,2-Dichloroethene			0.0100	0.01033		mg/L		103	68 - 130	6	20
cis-1,3-Dichloropropene			0.0100	0.009876		mg/L		99	57 - 130	5	20
Dibromochloromethane			0.0100	0.008131		mg/L		81	62 - 130	8	20
Ethylbenzene			0.0100	0.009659		mg/L		97	70 - 130	2	20
Methyl tert-butyl ether			0.0100	0.009296		mg/L		93	56 - 132	12	20
Methylene Chloride			0.0100	0.01097		mg/L		110	55 - 147	0	20
m-Xylene & p-Xylene			0.0100	0.009732		mg/L		97	70 - 130	4	20
Naphthalene			0.0100	0.008643		mg/L		86	10 - 150	16	20
n-Butylbenzene			0.0100	0.01046		mg/L		105	70 - 130	0	20
o-Xylene			0.0100	0.009587		mg/L		96	70 - 130	4	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
sec-Butylbenzene			0.0100	0.01039		mg/L		104	68 - 130	2	20
Styrene			0.0100	0.008882		mg/L		89	70 - 130	7	20
Tetrachloroethene			0.0100	0.009852		mg/L		99	47 - 150	2	20
Toluene			0.0100	0.01027		mg/L		103	70 - 130	2	20
trans-1,2-Dichloroethene			0.0100	0.01020		mg/L		102	68 - 131	5	20
trans-1,3-Dichloropropene			0.0100	0.009137		mg/L		91	60 - 130	9	20
Trichloroethene			0.0100	0.009859		mg/L		99	70 - 130	6	20
Vinyl chloride			0.0100	0.01087		mg/L		109	33 - 150	8	20
Xylenes, Total			0.0200	0.01932		mg/L		97	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*50 - 134*
4-Bromofluorobenzene	*110*		*67 - 139*
Dibromofluoromethane	*93*		*62 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: MB 600-276870/6
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/08/19 14:00	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/08/19 14:00	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/08/19 14:00	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/08/19 14:00	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/08/19 14:00	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/08/19 14:00	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/08/19 14:00	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/08/19 14:00	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/08/19 14:00	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/08/19 14:00	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/08/19 14:00	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/08/19 14:00	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/08/19 14:00	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/08/19 14:00	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/08/19 14:00	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/08/19 14:00	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/08/19 14:00	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/08/19 14:00	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/08/19 14:00	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/08/19 14:00	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/08/19 14:00	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/08/19 14:00	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/08/19 14:00	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/08/19 14:00	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/08/19 14:00	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/08/19 14:00	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276870/6
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/08/19 14:00	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/08/19 14:00	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/08/19 14:00	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/08/19 14:00	1
Naphthalene	0.0006109	J	0.00200	0.000129	mg/L			10/08/19 14:00	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/08/19 14:00	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/08/19 14:00	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/08/19 14:00	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/08/19 14:00	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/08/19 14:00	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/08/19 14:00	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/08/19 14:00	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/08/19 14:00	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/08/19 14:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*50 - 134*		*10/08/19 14:00*	*1*
4-Bromofluorobenzene	*114*		*67 - 139*		*10/08/19 14:00*	*1*
Dibromofluoromethane	*88*		*62 - 130*		*10/08/19 14:00*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*10/08/19 14:00*	*1*

Lab Sample ID: LCS 600-276870/3
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009716		mg/L		97	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01233		mg/L		123	58 - 133
1,1,2-Trichloroethane	0.0100	0.008988		mg/L		90	70 - 130
1,1-Dichloroethane	0.0100	0.01050		mg/L		105	70 - 140
1,1-Dichloroethene	0.0100	0.01024		mg/L		102	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009627		mg/L		96	70 - 130
1,2-Dichloroethane	0.0100	0.008691		mg/L		87	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01922		mg/L		96	69 - 130
1,2-Dichloropropane	0.0100	0.01052		mg/L		105	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.01003		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01779		mg/L		89	41 - 141
2-Hexanone	0.0200	0.01425		mg/L		71	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01450		mg/L		72	62 - 136
Acetone	0.0200	0.01335		mg/L		67	18 - 144
Benzene	0.0100	0.009911		mg/L		99	70 - 130
Bromodichloromethane	0.0100	0.009263		mg/L		93	70 - 131
Bromoform	0.0100	0.006575		mg/L		66	54 - 133
Bromomethane	0.0100	0.009544		mg/L		95	25 - 150
Carbon disulfide	0.0100	0.009329		mg/L		93	55 - 150
Carbon tetrachloride	0.0100	0.009745		mg/L		97	70 - 144

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276870/3
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorobenzene			0.0100	0.009078		mg/L		91	69 - 130		
Chloroethane			0.0100	0.006403		mg/L		64	47 - 150		
Chloroform			0.0100	0.01054		mg/L		105	70 - 130		
Chloromethane			0.0100	0.006701		mg/L		67	10 - 150		
cis-1,2-Dichloroethene			0.0100	0.009581		mg/L		96	68 - 130		
cis-1,3-Dichloropropene			0.0100	0.009872		mg/L		99	57 - 130		
Dibromochloromethane			0.0100	0.007861		mg/L		79	62 - 130		
Ethylbenzene			0.0100	0.009521		mg/L		95	70 - 130		
Methyl tert-butyl ether			0.0100	0.008514		mg/L		85	56 - 132		
Methylene Chloride			0.0100	0.01038		mg/L		104	55 - 147		
m-Xylene & p-Xylene			0.0100	0.009508		mg/L		95	70 - 130		
Naphthalene			0.0100	0.008108		mg/L		81	10 - 150		
n-Butylbenzene			0.0100	0.01035		mg/L		103	70 - 130		
o-Xylene			0.0100	0.009241		mg/L		92	70 - 130		
sec-Butylbenzene			0.0100	0.01045		mg/L		105	68 - 130		
Styrene			0.0100	0.008494		mg/L		85	70 - 130		
Tetrachloroethene			0.0100	0.009707		mg/L		97	47 - 150		
Toluene			0.0100	0.01019		mg/L		102	70 - 130		
trans-1,2-Dichloroethene			0.0100	0.009637		mg/L		96	68 - 131		
trans-1,3-Dichloropropene			0.0100	0.008914		mg/L		89	60 - 130		
Trichloroethene			0.0100	0.008966		mg/L		90	70 - 130		
Vinyl chloride			0.0100	0.01023		mg/L		102	33 - 150		
Xylenes, Total			0.0200	0.01875		mg/L		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*79*		*50 - 134*
4-Bromofluorobenzene	*113*		*67 - 139*
Dibromofluoromethane	*89*		*62 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 600-276870/4
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			0.0100	0.01103		mg/L		110	70 - 136	13	20
1,1,2,2-Tetrachloroethane			0.0100	0.01288		mg/L		129	58 - 133	4	20
1,1,2-Trichloroethane			0.0100	0.009328		mg/L		93	70 - 130	4	20
1,1-Dichloroethane			0.0100	0.01151		mg/L		115	70 - 140	9	20
1,1-Dichloroethene			0.0100	0.01151		mg/L		115	58 - 148	12	20
1,2,4-Trimethylbenzene			0.0100	0.01025		mg/L		103	70 - 130	6	20
1,2-Dichloroethane			0.0100	0.009475		mg/L		95	67 - 134	9	20
1,2-Dichloroethene, Total			0.0200	0.02139		mg/L		107	69 - 130	11	20
1,2-Dichloropropane			0.0100	0.01143		mg/L		114	70 - 130	8	20
1,3,5-Trimethylbenzene			0.0100	0.01069		mg/L		107	69 - 130	6	20
2-Butanone (MEK)			0.0200	0.01866		mg/L		93	41 - 141	5	20
2-Hexanone			0.0200	0.01470		mg/L		73	56 - 130	3	20
4-Methyl-2-pentanone (MIBK)			0.0200	0.01551		mg/L		78	62 - 136	7	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276870/4
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			0.0200	0.01358		mg/L		68	18 - 144	2	20
Benzene			0.0100	0.01098		mg/L		110	70 - 130	10	20
Bromodichloromethane			0.0100	0.01024		mg/L		102	70 - 131	10	20
Bromoform			0.0100	0.006997		mg/L		70	54 - 133	6	20
Bromomethane			0.0100	0.009979		mg/L		100	25 - 150	4	20
Carbon disulfide			0.0100	0.01024		mg/L		102	55 - 150	9	20
Carbon tetrachloride			0.0100	0.01081		mg/L		108	70 - 144	10	20
Chlorobenzene			0.0100	0.009664		mg/L		97	69 - 130	6	20
Chloroethane			0.0100	0.006705		mg/L		67	47 - 150	5	20
Chloroform			0.0100	0.01163		mg/L		116	70 - 130	10	20
Chloromethane			0.0100	0.007024		mg/L		70	10 - 150	5	20
cis-1,2-Dichloroethene			0.0100	0.01066		mg/L		107	68 - 130	11	20
cis-1,3-Dichloropropene			0.0100	0.01026		mg/L		103	57 - 130	4	20
Dibromochloromethane			0.0100	0.008243		mg/L		82	62 - 130	5	20
Ethylbenzene			0.0100	0.01028		mg/L		103	70 - 130	8	20
Methyl tert-butyl ether			0.0100	0.009201		mg/L		92	56 - 132	8	20
Methylene Chloride			0.0100	0.01124		mg/L		112	55 - 147	8	20
m-Xylene & p-Xylene			0.0100	0.01020		mg/L		102	70 - 130	7	20
Naphthalene			0.0100	0.008719		mg/L		87	10 - 150	7	20
n-Butylbenzene			0.0100	0.01099		mg/L		110	70 - 130	6	20
o-Xylene			0.0100	0.01004		mg/L		100	70 - 130	8	20
sec-Butylbenzene			0.0100	0.01113		mg/L		111	68 - 130	6	20
Styrene			0.0100	0.009223		mg/L		92	70 - 130	8	20
Tetrachloroethene			0.0100	0.01044		mg/L		104	47 - 150	7	20
Toluene			0.0100	0.01078		mg/L		108	70 - 130	6	20
trans-1,2-Dichloroethene			0.0100	0.01073		mg/L		107	68 - 131	11	20
trans-1,3-Dichloropropene			0.0100	0.009400		mg/L		94	60 - 130	5	20
Trichloroethene			0.0100	0.01012		mg/L		101	70 - 130	12	20
Vinyl chloride			0.0100	0.01032		mg/L		103	33 - 150	1	20
Xylenes, Total			0.0200	0.02024		mg/L		101	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*82*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*92*		*62 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.000730	U	0.00150	0.000730	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,5-Trichlorophenol	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,6-Trichlorophenol	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dichlorophenol	0.000260	U	0.00250	0.000260	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dimethylphenol	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	0.000400	U	0.00500	0.000400	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrotoluene	0.000320	U	0.00150	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,6-Dinitrotoluene	0.000290	U	0.00100	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chloronaphthalene	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chlorophenol	0.000220	U	0.00200	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylnaphthalene	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylphenol	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitroaniline	0.000350	U	0.00250	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitrophenol	0.000220	U	0.00100	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
3 & 4 Methylphenol	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
3,3'-Dichlorobenzidine	0.000320	U	0.00500	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
3-Nitroaniline	0.000130	U	0.00250	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
4,6-Dinitro-2-methylphenol	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Bromophenyl phenyl ether	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloro-3-methylphenol	0.000250	U	0.00100	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloroaniline	0.000110	U	0.00100	0.000110	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chlorophenyl phenyl ether	0.000230	U	0.00150	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitroaniline	0.000230	U	0.00250	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitrophenol	0.000330	U	0.00250	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthylene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acetophenone	0.000680	U	0.00150	0.000680	mg/L		10/08/19 16:26	10/09/19 12:46	1
Anthracene	0.000440	U	0.00150	0.000440	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]anthracene	0.000250	U	0.00200	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]pyrene	0.000130	U	0.00150	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[b]fluoranthene	0.000180	U	0.00200	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[g,h,i]perylene	0.000350	U	0.00200	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[k]fluoranthene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
bis (2-Chloroisopropyl) ether	0.000180	U	0.00100	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethoxy)methane	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethyl)ether	0.000180	U	0.00150	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-ethylhexyl) phthalate	0.000590	U	0.00250	0.000590	mg/L		10/08/19 16:26	10/09/19 12:46	1
Butyl benzyl phthalate	0.000850	U	0.00250	0.000850	mg/L		10/08/19 16:26	10/09/19 12:46	1
Carbazole	0.000350	U	0.00500	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Chrysene	0.000240	U	0.00150	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenz(a,h)anthracene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenzofuran	0.000160	U	0.00150	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Diethyl phthalate	0.00419	U	0.00500	0.00419	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dimethyl phthalate	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-butyl phthalate	0.00187	U	0.00500	0.00187	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-octyl phthalate	0.000160	U	0.00500	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluoranthene	0.000310	U	0.00200	0.000310	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluorene	0.000120	U	0.00150	0.000120	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobenzene	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobutadiene	0.000190	U	0.00200	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorocyclopentadiene	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachloroethane	0.000170	U	0.00200	0.000170	mg/L		10/08/19 16:26	10/09/19 12:46	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Isophorone	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Nitrobenzene	0.000200	U	0.00150	0.000200	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodi-n-propylamine	0.000240	U	0.00250	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodiphenylamine	0.000330	U	0.00150	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pentachlorophenol	0.000960	U	0.00250	0.000960	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenanthrene	0.000290	U	0.00150	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenol	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pyrene	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*17 - 137*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorobiphenyl	*77*		*36 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorophenol	*59*		*12 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Nitrobenzene-d5	*86*		*40 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Phenol-d5 (Surr)	*51*		*10 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Terphenyl-d14	*90*		*52 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	0.00800	0.005004		mg/L		63	41 - 130
2,4,5-Trichlorophenol	0.00800	0.005148		mg/L		64	38 - 140
2,4,6-Trichlorophenol	0.00800	0.004856		mg/L		61	34 - 148
2,4-Dichlorophenol	0.00800	0.005080		mg/L		64	45 - 134
2,4-Dimethylphenol	0.00800	0.005130		mg/L		64	23 - 150
2,4-Dinitrophenol	0.0160	0.009369		mg/L		59	10 - 144
2,4-Dinitrotoluene	0.00800	0.005235		mg/L		65	17 - 150
2,6-Dinitrotoluene	0.00800	0.005281		mg/L		66	34 - 150
2-Chloronaphthalene	0.00800	0.005007		mg/L		63	38 - 135
2-Chlorophenol	0.00800	0.004753		mg/L		59	40 - 134
2-Methylnaphthalene	0.00800	0.005024		mg/L		63	23 - 150
2-Methylphenol	0.00800	0.004686		mg/L		59	31 - 150
2-Nitroaniline	0.00800	0.005204		mg/L		65	31 - 142
2-Nitrophenol	0.00800	0.005163		mg/L		65	40 - 134
3 & 4 Methylphenol	0.00800	0.005158		mg/L		64	25 - 146
3,3'-Dichlorobenzidine	0.00800	0.008607		mg/L		108	15 - 162
3-Nitroaniline	0.00800	0.009391		mg/L		117	10 - 150
4,6-Dinitro-2-methylphenol	0.0160	0.01104		mg/L		69	25 - 140
4-Bromophenyl phenyl ether	0.00800	0.005610		mg/L		70	42 - 138
4-Chloro-3-methylphenol	0.00800	0.005821		mg/L		73	34 - 145
4-Chloroaniline	0.00800	0.005883		mg/L		74	10 - 150
4-Chlorophenyl phenyl ether	0.00800	0.005015		mg/L		63	39 - 137
4-Nitroaniline	0.00800	0.004741		mg/L		59	10 - 150
4-Nitrophenol	0.0160	0.005890		mg/L		37	10 - 140
Acenaphthene	0.00800	0.004803		mg/L		60	41 - 130
Acenaphthylene	0.00800	0.004826		mg/L		60	42 - 130

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetophenone	0.00800	0.004647		mg/L		58	33 - 133
Anthracene	0.00800	0.005512		mg/L		69	42 - 136
Benzo[a]anthracene	0.00800	0.005461		mg/L		68	41 - 150
Benzo[a]pyrene	0.00800	0.006224		mg/L		78	35 - 150
Benzo[b]fluoranthene	0.00800	0.005040		mg/L		63	35 - 150
Benzo[g,h,i]perylene	0.00800	0.006445		mg/L		81	10 - 150
Benzo[k]fluoranthene	0.00800	0.007044		mg/L		88	35 - 150
bis (2-Chloroisopropyl) ether	0.00800	0.005042		mg/L		63	20 - 138
Bis(2-chloroethoxy)methane	0.00800	0.005629		mg/L		70	33 - 135
Bis(2-chloroethyl)ether	0.00800	0.004401		mg/L		55	29 - 138
Bis(2-ethylhexyl) phthalate	0.00800	0.006462		mg/L		81	40 - 150
Butyl benzyl phthalate	0.00800	0.005298		mg/L		66	35 - 150
Carbazole	0.00800	0.003365	J	mg/L		42	10 - 150
Chrysene	0.00800	0.006572		mg/L		82	43 - 142
Dibenz(a,h)anthracene	0.00800	0.006584		mg/L		82	10 - 150
Dibenzofuran	0.00800	0.005178		mg/L		65	42 - 130
Diethyl phthalate	0.00800	0.005080		mg/L		63	20 - 150
Dimethyl phthalate	0.00800	0.005519		mg/L		69	33 - 144
Di-n-butyl phthalate	0.00800	0.005216		mg/L		65	34 - 150
Di-n-octyl phthalate	0.00800	0.005851		mg/L		73	40 - 150
Fluoranthene	0.00800	0.004489		mg/L		56	42 - 146
Fluorene	0.00800	0.005521		mg/L		69	40 - 138
Hexachlorobenzene	0.00800	0.004726		mg/L		59	35 - 138
Hexachlorobutadiene	0.00800	0.003605		mg/L		45	31 - 136
Hexachlorocyclopentadiene	0.00800	0.003746		mg/L		47	10 - 130
Hexachloroethane	0.00800	0.003935		mg/L		49	25 - 141
Indeno[1,2,3-cd]pyrene	0.00800	0.006617		mg/L		83	10 - 150
Isophorone	0.00800	0.005126		mg/L		64	28 - 134
Naphthalene	0.00800	0.005149		mg/L		64	21 - 150
Nitrobenzene	0.00800	0.005261		mg/L		66	38 - 134
N-Nitrosodi-n-propylamine	0.00800	0.005015		mg/L		63	26 - 146
N-Nitrosodiphenylamine	0.00800	0.005154		mg/L		64	50 - 150
Pentachlorophenol	0.0160	0.004484		mg/L		28	10 - 130
Phenanthrene	0.00800	0.004919		mg/L		61	38 - 138
Phenol	0.00800	0.003826		mg/L		48	10 - 150
Pyrene	0.00800	0.005213		mg/L		65	36 - 146

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*79*		*17 - 137*
2-Fluorobiphenyl	*66*		*36 - 130*
2-Fluorophenol	*58*		*12 - 130*
Nitrobenzene-d5	*73*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*83*		*52 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	0.00800	0.004801		mg/L		60	41 - 130	4	20
2,4,5-Trichlorophenol	0.00800	0.005317		mg/L		66	38 - 140	3	20
2,4,6-Trichlorophenol	0.00800	0.005406		mg/L		68	34 - 148	11	20
2,4-Dichlorophenol	0.00800	0.004865		mg/L		61	45 - 134	4	20
2,4-Dimethylphenol	0.00800	0.005577		mg/L		70	23 - 150	8	20
2,4-Dinitrophenol	0.0160	0.003335	J *	mg/L		21	10 - 144	95	20
2,4-Dinitrotoluene	0.00800	0.005803		mg/L		73	17 - 150	10	20
2,6-Dinitrotoluene	0.00800	0.005759		mg/L		72	34 - 150	9	20
2-Chloronaphthalene	0.00800	0.004738		mg/L		59	38 - 135	6	20
2-Chlorophenol	0.00800	0.005032		mg/L		63	40 - 134	6	20
2-Methylnaphthalene	0.00800	0.004860		mg/L		61	23 - 150	3	20
2-Methylphenol	0.00800	0.004493		mg/L		56	31 - 150	4	20
2-Nitroaniline	0.00800	0.004753		mg/L		59	31 - 142	9	20
2-Nitrophenol	0.00800	0.004692		mg/L		59	40 - 134	10	20
3 & 4 Methylphenol	0.00800	0.005126		mg/L		64	25 - 146	1	20
3,3'-Dichlorobenzidine	0.00800	0.01259		mg/L		157	15 - 162	38	40
3-Nitroaniline	0.00800	0.01095		mg/L		137	10 - 150	15	20
4,6-Dinitro-2-methylphenol	0.0160	0.008923	*	mg/L		56	25 - 140	21	20
4-Bromophenyl phenyl ether	0.00800	0.004860		mg/L		61	42 - 138	14	20
4-Chloro-3-methylphenol	0.00800	0.004846		mg/L		61	34 - 145	18	20
4-Chloroaniline	0.00800	0.007410	*	mg/L		93	10 - 150	23	20
4-Chlorophenyl phenyl ether	0.00800	0.005296		mg/L		66	39 - 137	5	20
4-Nitroaniline	0.00800	0.005516		mg/L		69	10 - 150	15	20
4-Nitrophenol	0.0160	0.007471	*	mg/L		47	10 - 140	24	20
Acenaphthene	0.00800	0.004795		mg/L		60	41 - 130	0	20
Acenaphthylene	0.00800	0.005051		mg/L		63	42 - 130	5	20
Acetophenone	0.00800	0.005104		mg/L		64	33 - 133	9	20
Anthracene	0.00800	0.005571		mg/L		70	42 - 136	1	20
Benzo[a]anthracene	0.00800	0.005332		mg/L		67	41 - 150	2	20
Benzo[a]pyrene	0.00800	0.006314		mg/L		79	35 - 150	1	20
Benzo[b]fluoranthene	0.00800	0.005557		mg/L		69	35 - 150	10	20
Benzo[g,h,i]perylene	0.00800	0.007142		mg/L		89	10 - 150	10	20
Benzo[k]fluoranthene	0.00800	0.006642		mg/L		83	35 - 150	6	20
bis (2-Chloroisopropyl) ether	0.00800	0.005358		mg/L		67	20 - 138	6	20
Bis(2-chloroethoxy)methane	0.00800	0.005762		mg/L		72	33 - 135	2	20
Bis(2-chloroethyl)ether	0.00800	0.004481		mg/L		56	29 - 138	2	20
Bis(2-ethylhexyl) phthalate	0.00800	0.006568		mg/L		82	40 - 150	2	20
Butyl benzyl phthalate	0.00800	0.004765		mg/L		60	35 - 150	11	20
Carbazole	0.00800	0.005335	*	mg/L		67	10 - 150	45	20
Chrysene	0.00800	0.007077		mg/L		88	43 - 142	7	20
Dibenz(a,h)anthracene	0.00800	0.007325		mg/L		92	10 - 150	11	20
Dibenzofuran	0.00800	0.005709		mg/L		71	42 - 130	10	20
Diethyl phthalate	0.00800	0.005682		mg/L		71	20 - 150	11	20
Dimethyl phthalate	0.00800	0.005367		mg/L		67	33 - 144	3	20
Di-n-butyl phthalate	0.00800	0.005930		mg/L		74	34 - 150	13	20
Di-n-octyl phthalate	0.00800	0.006273		mg/L		78	40 - 150	7	20
Fluoranthene	0.00800	0.005377		mg/L		67	42 - 146	18	20
Fluorene	0.00800	0.005909		mg/L		74	40 - 138	7	20

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene			0.00800	0.004774		mg/L		60	35 - 138	1	20
Hexachlorobutadiene			0.00800	0.003437		mg/L		43	31 - 136	5	20
Hexachlorocyclopentadiene			0.00800	0.003872		mg/L		48	10 - 130	3	20
Hexachloroethane			0.00800	0.004043		mg/L		51	25 - 141	3	20
Indeno[1,2,3-cd]pyrene			0.00800	0.006811		mg/L		85	10 - 150	3	20
Isophorone			0.00800	0.005551		mg/L		69	28 - 134	8	20
Naphthalene			0.00800	0.004691		mg/L		59	21 - 150	9	20
Nitrobenzene			0.00800	0.005894		mg/L		74	38 - 134	11	20
N-Nitrosodi-n-propylamine			0.00800	0.005412		mg/L		68	26 - 146	8	20
N-Nitrosodiphenylamine			0.00800	0.005296		mg/L		66	50 - 150	3	20
Pentachlorophenol			0.0160	0.004127		mg/L		26	10 - 130	8	20
Phenanthrene			0.00800	0.004696		mg/L		59	38 - 138	5	20
Phenol			0.00800	0.004106		mg/L		51	10 - 150	7	20
Pyrene			0.00800	0.004895		mg/L		61	36 - 146	6	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*73*		*17 - 137*
2-Fluorobiphenyl	*62*		*36 - 130*
2-Fluorophenol	*53*		*12 - 130*
Nitrobenzene-d5	*67*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*72*		*52 - 130*

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 1 10-03-19

Job ID: 600-193270-1

GC/MS VOA

Analysis Batch: 276735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193270-1	1	Total/NA	Water	8260B	
MB 600-276735/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276735/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276735/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 276870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193270-1	1	Total/NA	Water	8260B	
MB 600-276870/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276870/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276870/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 276931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193270-1	1	Total/NA	Water	3510C LVI	
MB 600-276931/1-A	Method Blank	Total/NA	Water	3510C LVI	
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	3510C LVI	
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	3510C LVI	

Analysis Batch: 276980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-276931/1-A	Method Blank	Total/NA	Water	8270C LL	276931
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	8270C LL	276931
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	276931

Analysis Batch: 277050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193270-1	1	Total/NA	Water	8270C LL	276931

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193270-1
Project/Site: Terracon Site 1 10-03-19

Client Sample ID: 1
Lab Sample ID: 600-193270-1

Date Collected: 10/03/19 09:15
Matrix: Water

Date Received: 10/03/19 13:24

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	276735	10/07/19 16:32	YX1	TAL HOU
Total/NA	Analysis	8260B		1	20 mL	20 mL	276870	10/08/19 14:26	YX1	TAL HOU
Total/NA	Prep	3510C LVI			250 mL	1 mL	276931	10/08/19 16:26	ARS	TAL HOU
Total/NA	Analysis	8270C LL		1	1 mL	1.0 mL	277050	10/10/19 00:11	PXS	TAL HOU

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193270-1
Project/Site: Terracon Site 1 10-03-19

Laboratory: Eurofins TestAmerica, Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-18-23	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,2-Dichloroethene, Total
8270C LL	3510C LVI	Water	3 & 4 Methylphenol

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins

Client Information	Sampler: R. Calvino	Lab PM: Joiner, Dean A	Carrier Tracking No(s):	COC No: 600-71021-19427.1
Client Contact: ~~Meg Haile~~ Ralph Calvino	Phone: 832-783-8332	E-Mail: dean.joiner@testamericainc.com		Page: Page 1 of 1
Company: Terracon Consulting Eng & Scientists		Analysis Requested		Job #: 9219 7619
Address: 11555 Clay Road Suite 100	Due Date Requested:			Preservation Codes:
City: Houston	TAT Requested (days): ~~5 WD TAT Level 3e~~ Standard TAT			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: TX, 77043				
Phone: ~~713-330-2300~~(Tel) 832-235-3936	PO #: Purchase Order Requested			
Email: ~~Meg.Haile~~@terracon.com Ralph.Calvino@terracon.com	WO #:			Other:
Project Name: Water Analysis	Project #: 60011379 Analytical Grp: Water 2019			
Site: 1	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_LL VOCs	8270C_LL SVOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N		
1	10/3/19	0915	G	Water			X	X	5	

600-193270 Chain of Custody

RC 10/3/19

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Standard	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/3/19 1324	Terracon	Santa Jones	10/3/19 13:20	TAH
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Loc: 600
193270

eurofins | Environment Testing
TestAmerica

19OCT 3 13:24

Eurofins TestAmerica Houston

Sample Receipt Checklist

JOB NUMBER: 193270 — Date/Time Received: _____

UNPACKED BY: LD — CLIENT: Terracon

CARRIER/DRIVER: client

Custody Seal Present: ☐YES ☐NO — Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
SBW	Y / N	Y / (N)	4.5	678	-0.3	4.2
SBW	Y / N	Y / (N)	4.3	678	-0.3	4.0
SBW	Y / N	Y / (N)	3.0	678	-0.3	2.7
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8
SBW	Y / N	Y / (N)	3.8	678	-0.3	3.5
* SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8

CF = correction factor

Samples received on ice? ☑YES ☐NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑NO ☐YES

Base samples are>pH 12: ☐YES ☐NO — Acid preserved are<pH 2: ☐YES ☐NO

TX1005 samples frozen upon receipt: ☐ YES — DATE & TIME PUT IN FREEZER: _____

pH paper Lot #_____ — VOA headspace acceptable (5-6mm): ☑YES ☐NO ☐NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☑YES	☐ NO

COMMENTS:

HS-SA-WI-013 — Rev. 4A: 08/26/2019

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 600-193270-1

Login Number: 193270

List Source: Eurofins TestAmerica, Houston

List Number: 1

Creator: Taylor, Jacquelyn R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-193269-1
Client Project/Site: Terracon Site 2 10-03-19

For:
Terracon Consulting Eng & Scientists
11555 Clay Road
Suite 100
Houston, Texas 77043

Attn: Meg Haile

Dean A. Joiner

Authorized for release by:
10/11/2019 4:43:00 PM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 2 10-03-19

Job ID: 600-193269-1

Job ID: 600-193269-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-193269-1

Comments
No additional comments.

Receipt
The sample was received on 10/3/2019 1:24 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5º C.

GC/MS VOA
Method(s) 8260B: The method blank for analytical batch 600-276735 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 600-276735: Naphthalene (-44.4%). These compounds are not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. The D% of the compound is outside 35% limits but within 50% in house limits. Therefore; the data is valid and reportable.

Method(s) 8260B: The method blank for analytical batch 600-276870 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270C LL: The continuing calibration verification (CCV) associated with batch 600-276980 recovered above the upper control limit for 4-Chloro-3-methylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 600-276980/2).

Method(s) 8270C LL: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 600-276931 and analytical batch 600-276980 recovered outside control limits for the following analytes: 2,4-Dinitrophenol, 4-Nitrophenol, 4-Chloroaniline, 4,6-Dinitro-2-methylphenol and Carbazole.

Method(s) 8270C LL: The following sample required a dilution due to the nature of the sample matrix: 2 (600-193269-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C LL: The following sample was diluted due to the nature of the sample matrix: 2 (600-193269-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193269-1
Project/Site: Terracon Site 2 10-03-19

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL HOU
3510C LVI	Liquid-Liquid Extraction (Separatory Funnel) LVI	SW846	TAL HOU
5030B	Purge and Trap	SW846	TAL HOU

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 2 10-03-19

Job ID: 600-193269-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-193269-1	2	Water	10/03/19 09:40	10/03/19 13:24	

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 2 10-03-19

Job ID: 600-193269-1

Client Sample ID: 2
Date Collected: 10/03/19 09:40
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193269-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 16:06	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 16:06	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 16:06	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 16:06	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 16:06	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 16:06	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 16:06	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 16:06	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 16:06	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 16:06	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 16:06	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 16:06	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 16:06	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 16:06	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 16:06	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 16:06	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 16:06	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 16:06	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 16:06	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 16:06	1
Chlorobenzene	**0.000214**	**J**	0.00100	0.000185	mg/L			10/07/19 16:06	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 16:06	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 16:06	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 16:06	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 16:06	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 16:06	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 16:06	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 16:06	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 16:06	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 16:06	1
m-Xylene & p-Xylene	**0.000354**	**J**	0.00100	0.000205	mg/L			10/07/19 16:06	1
Naphthalene	**0.00199**	**J B**	0.00200	0.000129	mg/L			10/08/19 14:52	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 16:06	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 16:06	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 16:06	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 16:06	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 16:06	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 16:06	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 16:06	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 16:06	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 16:06	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 16:06	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*50 - 134*		*10/07/19 16:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*50 - 134*		*10/08/19 14:52*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/07/19 16:06*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/08/19 14:52*	*1*
Dibromofluoromethane	*91*		*62 - 130*		*10/07/19 16:06*	*1*

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 2 10-03-19

Job ID: 600-193269-1

Client Sample ID: 2
Date Collected: 10/03/19 09:40
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193269-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	*92*		*62 - 130*		*10/08/19 14:52*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*10/07/19 16:06*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*10/08/19 14:52*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.0146	U	0.0300	0.0146	mg/L		10/08/19 16:26	10/09/19 23:47	20
2,4,5-Trichlorophenol	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 23:47	20
2,4,6-Trichlorophenol	0.00660	U	0.0400	0.00660	mg/L		10/08/19 16:26	10/09/19 23:47	20
2,4-Dichlorophenol	0.00520	U	0.0500	0.00520	mg/L		10/08/19 16:26	10/09/19 23:47	20
2,4-Dimethylphenol	0.00360	U	0.0500	0.00360	mg/L		10/08/19 16:26	10/09/19 23:47	20
2,4-Dinitrophenol	0.00800	U *	0.100	0.00800	mg/L		10/08/19 16:26	10/09/19 23:47	20
2,4-Dinitrotoluene	0.00640	U	0.0300	0.00640	mg/L		10/08/19 16:26	10/09/19 23:47	20
2,6-Dinitrotoluene	0.00580	U	0.0200	0.00580	mg/L		10/08/19 16:26	10/09/19 23:47	20
2-Chloronaphthalene	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 23:47	20
2-Chlorophenol	0.00440	U	0.0400	0.00440	mg/L		10/08/19 16:26	10/09/19 23:47	20
2-Methylnaphthalene	0.00280	U	0.0300	0.00280	mg/L		10/08/19 16:26	10/09/19 23:47	20
2-Methylphenol	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 23:47	20
2-Nitroaniline	0.00700	U	0.0500	0.00700	mg/L		10/08/19 16:26	10/09/19 23:47	20
2-Nitrophenol	0.00440	U	0.0200	0.00440	mg/L		10/08/19 16:26	10/09/19 23:47	20
3 & 4 Methylphenol	0.00320	U	0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 23:47	20
3,3'-Dichlorobenzidine	0.00640	U	0.100	0.00640	mg/L		10/08/19 16:26	10/09/19 23:47	20
3-Nitroaniline	0.00260	U	0.0500	0.00260	mg/L		10/08/19 16:26	10/09/19 23:47	20
4,6-Dinitro-2-methylphenol	0.00320	U *	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 23:47	20
4-Bromophenyl phenyl ether	0.00500	U	0.0300	0.00500	mg/L		10/08/19 16:26	10/09/19 23:47	20
4-Chloro-3-methylphenol	0.00500	U	0.0200	0.00500	mg/L		10/08/19 16:26	10/09/19 23:47	20
4-Chloroaniline	0.00220	U *	0.0200	0.00220	mg/L		10/08/19 16:26	10/09/19 23:47	20
4-Chlorophenyl phenyl ether	0.00460	U	0.0300	0.00460	mg/L		10/08/19 16:26	10/09/19 23:47	20
4-Nitroaniline	0.00460	U	0.0500	0.00460	mg/L		10/08/19 16:26	10/09/19 23:47	20
4-Nitrophenol	0.00660	U *	0.0500	0.00660	mg/L		10/08/19 16:26	10/09/19 23:47	20
Acenaphthene	**0.00601**	**J**	0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 23:47	20
Acenaphthylene	0.00320	U	0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 23:47	20
Acetophenone	0.0136	U	0.0300	0.0136	mg/L		10/08/19 16:26	10/09/19 23:47	20
Anthracene	0.00880	U	0.0300	0.00880	mg/L		10/08/19 16:26	10/09/19 23:47	20
Benzo[a]anthracene	0.00500	U	0.0400	0.00500	mg/L		10/08/19 16:26	10/09/19 23:47	20
Benzo[a]pyrene	0.00260	U	0.0300	0.00260	mg/L		10/08/19 16:26	10/09/19 23:47	20
Benzo[b]fluoranthene	0.00360	U	0.0400	0.00360	mg/L		10/08/19 16:26	10/09/19 23:47	20
Benzo[g,h,i]perylene	0.00700	U	0.0400	0.00700	mg/L		10/08/19 16:26	10/09/19 23:47	20
Benzo[k]fluoranthene	0.00320	U	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 23:47	20
bis (2-Chloroisopropyl) ether	0.00360	U	0.0200	0.00360	mg/L		10/08/19 16:26	10/09/19 23:47	20
Bis(2-chloroethoxy)methane	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 23:47	20
Bis(2-chloroethyl)ether	0.00360	U	0.0300	0.00360	mg/L		10/08/19 16:26	10/09/19 23:47	20
Bis(2-ethylhexyl) phthalate	0.0118	U	0.0500	0.0118	mg/L		10/08/19 16:26	10/09/19 23:47	20
Butyl benzyl phthalate	0.0170	U	0.0500	0.0170	mg/L		10/08/19 16:26	10/09/19 23:47	20
Carbazole	0.00700	U *	0.100	0.00700	mg/L		10/08/19 16:26	10/09/19 23:47	20
Chrysene	0.00480	U	0.0300	0.00480	mg/L		10/08/19 16:26	10/09/19 23:47	20
Dibenz(a,h)anthracene	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 23:47	20
Dibenzofuran	0.00320	U	0.0300	0.00320	mg/L		10/08/19 16:26	10/09/19 23:47	20
Diethyl phthalate	0.0838	U	0.100	0.0838	mg/L		10/08/19 16:26	10/09/19 23:47	20

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 2 10-03-19

Job ID: 600-193269-1

Client Sample ID: 2
Date Collected: 10/03/19 09:40
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193269-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	0.00360	U	0.0500	0.00360	mg/L		10/08/19 16:26	10/09/19 23:47	20
Di-n-butyl phthalate	0.0374	U	0.100	0.0374	mg/L		10/08/19 16:26	10/09/19 23:47	20
Di-n-octyl phthalate	0.00320	U	0.100	0.00320	mg/L		10/08/19 16:26	10/09/19 23:47	20
Fluoranthene	0.00620	U	0.0400	0.00620	mg/L		10/08/19 16:26	10/09/19 23:47	20
Fluorene	0.00240	U	0.0300	0.00240	mg/L		10/08/19 16:26	10/09/19 23:47	20
Hexachlorobenzene	0.00500	U	0.0300	0.00500	mg/L		10/08/19 16:26	10/09/19 23:47	20
Hexachlorobutadiene	0.00380	U	0.0400	0.00380	mg/L		10/08/19 16:26	10/09/19 23:47	20
Hexachlorocyclopentadiene	0.00300	U	0.0300	0.00300	mg/L		10/08/19 16:26	10/09/19 23:47	20
Hexachloroethane	0.00340	U	0.0400	0.00340	mg/L		10/08/19 16:26	10/09/19 23:47	20
Indeno[1,2,3-cd]pyrene	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 23:47	20
Isophorone	0.00300	U	0.0300	0.00300	mg/L		10/08/19 16:26	10/09/19 23:47	20
Naphthalene	0.00320	U	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 23:47	20
Nitrobenzene	0.00400	U	0.0300	0.00400	mg/L		10/08/19 16:26	10/09/19 23:47	20
N-Nitrosodi-n-propylamine	0.00480	U	0.0500	0.00480	mg/L		10/08/19 16:26	10/09/19 23:47	20
N-Nitrosodiphenylamine	0.00660	U	0.0300	0.00660	mg/L		10/08/19 16:26	10/09/19 23:47	20
Pentachlorophenol	0.0192	U	0.0500	0.0192	mg/L		10/08/19 16:26	10/09/19 23:47	20
Phenanthrene	0.00580	U	0.0300	0.00580	mg/L		10/08/19 16:26	10/09/19 23:47	20
Phenol	0.00280	U	0.0300	0.00280	mg/L		10/08/19 16:26	10/09/19 23:47	20
Pyrene	0.00660	U	0.0400	0.00660	mg/L		10/08/19 16:26	10/09/19 23:47	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*55*		*17 - 137*	*10/08/19 16:26*	*10/09/19 23:47*	*20*
2-Fluorobiphenyl	*65*		*36 - 130*	*10/08/19 16:26*	*10/09/19 23:47*	*20*
2-Fluorophenol	*35*		*12 - 130*	*10/08/19 16:26*	*10/09/19 23:47*	*20*
Nitrobenzene-d5	*52*		*40 - 130*	*10/08/19 16:26*	*10/09/19 23:47*	*20*
Phenol-d5 (Surr)	*27*		*10 - 130*	*10/08/19 16:26*	*10/09/19 23:47*	*20*
Terphenyl-d14	*97*		*52 - 130*	*10/08/19 16:26*	*10/09/19 23:47*	*20*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 2 10-03-19

Job ID: 600-193269-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(50-134)	(67-139)	(62-130)	(70-130)
600-193269-1	2	92	113	91	103
600-193269-1	2	88	113	92	106
LCS 600-276735/3	Lab Control Sample	87	111	91	105
LCS 600-276870/3	Lab Control Sample	79	113	89	107
LCSD 600-276735/4	Lab Control Sample Dup	83	110	93	104
LCSD 600-276870/4	Lab Control Sample Dup	82	111	92	106
MB 600-276735/6	Method Blank	96	113	96	106
MB 600-276870/6	Method Blank	89	114	88	107

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(17-137)	(36-130)	(12-130)	(40-130)	(10-130)	(52-130)
600-193269-1	2	55	65	35	52	27	97
LCS 600-276931/2-A	Lab Control Sample	79	66	58	73	50	83
LCSD 600-276931/3-A	Lab Control Sample Dup	73	62	53	67	50	72
MB 600-276931/1-A	Method Blank	74	77	59	86	51	90

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 13:55	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 13:55	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 13:55	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 13:55	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 13:55	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 13:55	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 13:55	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 13:55	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 13:55	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 13:55	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 13:55	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 13:55	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 13:55	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 13:55	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 13:55	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 13:55	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 13:55	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 13:55	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 13:55	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 13:55	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 13:55	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 13:55	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 13:55	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 13:55	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/07/19 13:55	1
Naphthalene	0.0005119	J	0.00200	0.000129	mg/L			10/07/19 13:55	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 13:55	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 13:55	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 13:55	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 13:55	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 13:55	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 13:55	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 13:55	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*50 - 134*		*10/07/19 13:55*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/07/19 13:55*	*1*
Dibromofluoromethane	*96*		*62 - 130*		*10/07/19 13:55*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		70 - 130		10/07/19 13:55	1

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009939		mg/L		99	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01161		mg/L		116	58 - 133
1,1,2-Trichloroethane	0.0100	0.008432		mg/L		84	70 - 130
1,1-Dichloroethane	0.0100	0.01117		mg/L		112	70 - 140
1,1-Dichloroethene	0.0100	0.01047		mg/L		105	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009523		mg/L		95	70 - 130
1,2-Dichloroethane	0.0100	0.008545		mg/L		85	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01940		mg/L		97	69 - 130
1,2-Dichloropropane	0.0100	0.01015		mg/L		102	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.009964		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01683		mg/L		84	41 - 141
2-Hexanone	0.0200	0.01294		mg/L		65	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01389		mg/L		69	62 - 136
Acetone	0.0200	0.01300		mg/L		65	18 - 144
Benzene	0.0100	0.01007		mg/L		101	70 - 130
Bromodichloromethane	0.0100	0.009399		mg/L		94	70 - 131
Bromoform	0.0100	0.006534		mg/L		65	54 - 133
Bromomethane	0.0100	0.007027		mg/L		70	25 - 150
Carbon disulfide	0.0100	0.01070		mg/L		107	55 - 150
Carbon tetrachloride	0.0100	0.009915		mg/L		99	70 - 144
Chlorobenzene	0.0100	0.008985		mg/L		90	69 - 130
Chloroethane	0.0100	0.006654		mg/L		67	47 - 150
Chloroform	0.0100	0.01062		mg/L		106	70 - 130
Chloromethane	0.0100	0.006610		mg/L		66	10 - 150
cis-1,2-Dichloroethene	0.0100	0.009690		mg/L		97	68 - 130
cis-1,3-Dichloropropene	0.0100	0.009382		mg/L		94	57 - 130
Dibromochloromethane	0.0100	0.007488		mg/L		75	62 - 130
Ethylbenzene	0.0100	0.009466		mg/L		95	70 - 130
Methyl tert-butyl ether	0.0100	0.008257		mg/L		83	56 - 132
Methylene Chloride	0.0100	0.01102		mg/L		110	55 - 147
m-Xylene & p-Xylene	0.0100	0.009305		mg/L		93	70 - 130
Naphthalene	0.0100	0.007379		mg/L		74	10 - 150
n-Butylbenzene	0.0100	0.01044		mg/L		104	70 - 130
o-Xylene	0.0100	0.009219		mg/L		92	70 - 130
sec-Butylbenzene	0.0100	0.01057		mg/L		106	68 - 130
Styrene	0.0100	0.008290		mg/L		83	70 - 130
Tetrachloroethene	0.0100	0.009626		mg/L		96	47 - 150
Toluene	0.0100	0.01003		mg/L		100	70 - 130
trans-1,2-Dichloroethene	0.0100	0.009712		mg/L		97	68 - 131
trans-1,3-Dichloropropene	0.0100	0.008328		mg/L		83	60 - 130
Trichloroethene	0.0100	0.009269		mg/L		93	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			0.0100	0.009980		mg/L		100	33 - 150		
Xylenes, Total			0.0200	0.01852		mg/L		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*91*		*62 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			0.0100	0.01039		mg/L		104	70 - 136	4	20
1,1,2,2-Tetrachloroethane			0.0100	0.01261		mg/L		126	58 - 133	8	20
1,1,2-Trichloroethane			0.0100	0.009221		mg/L		92	70 - 130	9	20
1,1-Dichloroethane			0.0100	0.01108		mg/L		111	70 - 140	1	20
1,1-Dichloroethene			0.0100	0.01103		mg/L		110	58 - 148	5	20
1,2,4-Trimethylbenzene			0.0100	0.009707		mg/L		97	70 - 130	2	20
1,2-Dichloroethane			0.0100	0.009452		mg/L		95	67 - 134	10	20
1,2-Dichloroethene, Total			0.0200	0.02053		mg/L		103	69 - 130	6	20
1,2-Dichloropropane			0.0100	0.01129		mg/L		113	70 - 130	11	20
1,3,5-Trimethylbenzene			0.0100	0.01003		mg/L		100	69 - 130	1	20
2-Butanone (MEK)			0.0200	0.01906		mg/L		95	41 - 141	12	20
2-Hexanone			0.0200	0.01480		mg/L		74	56 - 130	13	20
4-Methyl-2-pentanone (MIBK)			0.0200	0.01580		mg/L		79	62 - 136	13	20
Acetone			0.0200	0.01439		mg/L		72	18 - 144	10	20
Benzene			0.0100	0.01057		mg/L		106	70 - 130	5	20
Bromodichloromethane			0.0100	0.01008		mg/L		101	70 - 131	7	20
Bromoform			0.0100	0.007023		mg/L		70	54 - 133	7	20
Bromomethane			0.0100	0.007279		mg/L		73	25 - 150	4	20
Carbon disulfide			0.0100	0.01109		mg/L		111	55 - 150	4	20
Carbon tetrachloride			0.0100	0.01040		mg/L		104	70 - 144	5	20
Chlorobenzene			0.0100	0.009318		mg/L		93	69 - 130	4	20
Chloroethane			0.0100	0.007113		mg/L		71	47 - 150	7	20
Chloroform			0.0100	0.01123		mg/L		112	70 - 130	6	20
Chloromethane			0.0100	0.007335		mg/L		73	10 - 150	10	20
cis-1,2-Dichloroethene			0.0100	0.01033		mg/L		103	68 - 130	6	20
cis-1,3-Dichloropropene			0.0100	0.009876		mg/L		99	57 - 130	5	20
Dibromochloromethane			0.0100	0.008131		mg/L		81	62 - 130	8	20
Ethylbenzene			0.0100	0.009659		mg/L		97	70 - 130	2	20
Methyl tert-butyl ether			0.0100	0.009296		mg/L		93	56 - 132	12	20
Methylene Chloride			0.0100	0.01097		mg/L		110	55 - 147	0	20
m-Xylene & p-Xylene			0.0100	0.009732		mg/L		97	70 - 130	4	20
Naphthalene			0.0100	0.008643		mg/L		86	10 - 150	16	20
n-Butylbenzene			0.0100	0.01046		mg/L		105	70 - 130	0	20
o-Xylene			0.0100	0.009587		mg/L		96	70 - 130	4	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
sec-Butylbenzene			0.0100	0.01039		mg/L		104	68 - 130	2	20
Styrene			0.0100	0.008882		mg/L		89	70 - 130	7	20
Tetrachloroethene			0.0100	0.009852		mg/L		99	47 - 150	2	20
Toluene			0.0100	0.01027		mg/L		103	70 - 130	2	20
trans-1,2-Dichloroethene			0.0100	0.01020		mg/L		102	68 - 131	5	20
trans-1,3-Dichloropropene			0.0100	0.009137		mg/L		91	60 - 130	9	20
Trichloroethene			0.0100	0.009859		mg/L		99	70 - 130	6	20
Vinyl chloride			0.0100	0.01087		mg/L		109	33 - 150	8	20
Xylenes, Total			0.0200	0.01932		mg/L		97	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*50 - 134*
4-Bromofluorobenzene	*110*		*67 - 139*
Dibromofluoromethane	*93*		*62 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: MB 600-276870/6
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/08/19 14:00	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/08/19 14:00	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/08/19 14:00	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/08/19 14:00	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/08/19 14:00	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/08/19 14:00	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/08/19 14:00	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/08/19 14:00	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/08/19 14:00	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/08/19 14:00	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/08/19 14:00	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/08/19 14:00	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/08/19 14:00	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/08/19 14:00	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/08/19 14:00	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/08/19 14:00	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/08/19 14:00	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/08/19 14:00	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/08/19 14:00	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/08/19 14:00	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/08/19 14:00	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/08/19 14:00	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/08/19 14:00	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/08/19 14:00	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/08/19 14:00	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/08/19 14:00	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276870/6
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/08/19 14:00	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/08/19 14:00	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/08/19 14:00	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/08/19 14:00	1
Naphthalene	0.0006109	J	0.00200	0.000129	mg/L			10/08/19 14:00	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/08/19 14:00	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/08/19 14:00	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/08/19 14:00	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/08/19 14:00	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/08/19 14:00	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/08/19 14:00	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/08/19 14:00	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/08/19 14:00	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/08/19 14:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*50 - 134*		*10/08/19 14:00*	*1*
4-Bromofluorobenzene	*114*		*67 - 139*		*10/08/19 14:00*	*1*
Dibromofluoromethane	*88*		*62 - 130*		*10/08/19 14:00*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*10/08/19 14:00*	*1*

Lab Sample ID: LCS 600-276870/3
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009716		mg/L		97	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01233		mg/L		123	58 - 133
1,1,2-Trichloroethane	0.0100	0.008988		mg/L		90	70 - 130
1,1-Dichloroethane	0.0100	0.01050		mg/L		105	70 - 140
1,1-Dichloroethene	0.0100	0.01024		mg/L		102	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009627		mg/L		96	70 - 130
1,2-Dichloroethane	0.0100	0.008691		mg/L		87	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01922		mg/L		96	69 - 130
1,2-Dichloropropane	0.0100	0.01052		mg/L		105	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.01003		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01779		mg/L		89	41 - 141
2-Hexanone	0.0200	0.01425		mg/L		71	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01450		mg/L		72	62 - 136
Acetone	0.0200	0.01335		mg/L		67	18 - 144
Benzene	0.0100	0.009911		mg/L		99	70 - 130
Bromodichloromethane	0.0100	0.009263		mg/L		93	70 - 131
Bromoform	0.0100	0.006575		mg/L		66	54 - 133
Bromomethane	0.0100	0.009544		mg/L		95	25 - 150
Carbon disulfide	0.0100	0.009329		mg/L		93	55 - 150
Carbon tetrachloride	0.0100	0.009745		mg/L		97	70 - 144

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276870/3
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorobenzene			0.0100	0.009078		mg/L		91	69 - 130		
Chloroethane			0.0100	0.006403		mg/L		64	47 - 150		
Chloroform			0.0100	0.01054		mg/L		105	70 - 130		
Chloromethane			0.0100	0.006701		mg/L		67	10 - 150		
cis-1,2-Dichloroethene			0.0100	0.009581		mg/L		96	68 - 130		
cis-1,3-Dichloropropene			0.0100	0.009872		mg/L		99	57 - 130		
Dibromochloromethane			0.0100	0.007861		mg/L		79	62 - 130		
Ethylbenzene			0.0100	0.009521		mg/L		95	70 - 130		
Methyl tert-butyl ether			0.0100	0.008514		mg/L		85	56 - 132		
Methylene Chloride			0.0100	0.01038		mg/L		104	55 - 147		
m-Xylene & p-Xylene			0.0100	0.009508		mg/L		95	70 - 130		
Naphthalene			0.0100	0.008108		mg/L		81	10 - 150		
n-Butylbenzene			0.0100	0.01035		mg/L		103	70 - 130		
o-Xylene			0.0100	0.009241		mg/L		92	70 - 130		
sec-Butylbenzene			0.0100	0.01045		mg/L		105	68 - 130		
Styrene			0.0100	0.008494		mg/L		85	70 - 130		
Tetrachloroethene			0.0100	0.009707		mg/L		97	47 - 150		
Toluene			0.0100	0.01019		mg/L		102	70 - 130		
trans-1,2-Dichloroethene			0.0100	0.009637		mg/L		96	68 - 131		
trans-1,3-Dichloropropene			0.0100	0.008914		mg/L		89	60 - 130		
Trichloroethene			0.0100	0.008966		mg/L		90	70 - 130		
Vinyl chloride			0.0100	0.01023		mg/L		102	33 - 150		
Xylenes, Total			0.0200	0.01875		mg/L		94	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*79*		*50 - 134*
4-Bromofluorobenzene	*113*		*67 - 139*
Dibromofluoromethane	*89*		*62 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 600-276870/4
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			0.0100	0.01103		mg/L		110	70 - 136	13	20
1,1,2,2-Tetrachloroethane			0.0100	0.01288		mg/L		129	58 - 133	4	20
1,1,2-Trichloroethane			0.0100	0.009328		mg/L		93	70 - 130	4	20
1,1-Dichloroethane			0.0100	0.01151		mg/L		115	70 - 140	9	20
1,1-Dichloroethene			0.0100	0.01151		mg/L		115	58 - 148	12	20
1,2,4-Trimethylbenzene			0.0100	0.01025		mg/L		103	70 - 130	6	20
1,2-Dichloroethane			0.0100	0.009475		mg/L		95	67 - 134	9	20
1,2-Dichloroethene, Total			0.0200	0.02139		mg/L		107	69 - 130	11	20
1,2-Dichloropropane			0.0100	0.01143		mg/L		114	70 - 130	8	20
1,3,5-Trimethylbenzene			0.0100	0.01069		mg/L		107	69 - 130	6	20
2-Butanone (MEK)			0.0200	0.01866		mg/L		93	41 - 141	5	20
2-Hexanone			0.0200	0.01470		mg/L		73	56 - 130	3	20
4-Methyl-2-pentanone (MIBK)			0.0200	0.01551		mg/L		78	62 - 136	7	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276870/4
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			0.0200	0.01358		mg/L		68	18 - 144	2	20
Benzene			0.0100	0.01098		mg/L		110	70 - 130	10	20
Bromodichloromethane			0.0100	0.01024		mg/L		102	70 - 131	10	20
Bromoform			0.0100	0.006997		mg/L		70	54 - 133	6	20
Bromomethane			0.0100	0.009979		mg/L		100	25 - 150	4	20
Carbon disulfide			0.0100	0.01024		mg/L		102	55 - 150	9	20
Carbon tetrachloride			0.0100	0.01081		mg/L		108	70 - 144	10	20
Chlorobenzene			0.0100	0.009664		mg/L		97	69 - 130	6	20
Chloroethane			0.0100	0.006705		mg/L		67	47 - 150	5	20
Chloroform			0.0100	0.01163		mg/L		116	70 - 130	10	20
Chloromethane			0.0100	0.007024		mg/L		70	10 - 150	5	20
cis-1,2-Dichloroethene			0.0100	0.01066		mg/L		107	68 - 130	11	20
cis-1,3-Dichloropropene			0.0100	0.01026		mg/L		103	57 - 130	4	20
Dibromochloromethane			0.0100	0.008243		mg/L		82	62 - 130	5	20
Ethylbenzene			0.0100	0.01028		mg/L		103	70 - 130	8	20
Methyl tert-butyl ether			0.0100	0.009201		mg/L		92	56 - 132	8	20
Methylene Chloride			0.0100	0.01124		mg/L		112	55 - 147	8	20
m-Xylene & p-Xylene			0.0100	0.01020		mg/L		102	70 - 130	7	20
Naphthalene			0.0100	0.008719		mg/L		87	10 - 150	7	20
n-Butylbenzene			0.0100	0.01099		mg/L		110	70 - 130	6	20
o-Xylene			0.0100	0.01004		mg/L		100	70 - 130	8	20
sec-Butylbenzene			0.0100	0.01113		mg/L		111	68 - 130	6	20
Styrene			0.0100	0.009223		mg/L		92	70 - 130	8	20
Tetrachloroethene			0.0100	0.01044		mg/L		104	47 - 150	7	20
Toluene			0.0100	0.01078		mg/L		108	70 - 130	6	20
trans-1,2-Dichloroethene			0.0100	0.01073		mg/L		107	68 - 131	11	20
trans-1,3-Dichloropropene			0.0100	0.009400		mg/L		94	60 - 130	5	20
Trichloroethene			0.0100	0.01012		mg/L		101	70 - 130	12	20
Vinyl chloride			0.0100	0.01032		mg/L		103	33 - 150	1	20
Xylenes, Total			0.0200	0.02024		mg/L		101	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*82*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*92*		*62 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.000730	U	0.00150	0.000730	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,5-Trichlorophenol	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,6-Trichlorophenol	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dichlorophenol	0.000260	U	0.00250	0.000260	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dimethylphenol	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	0.000400	U	0.00500	0.000400	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrotoluene	0.000320	U	0.00150	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,6-Dinitrotoluene	0.000290	U	0.00100	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chloronaphthalene	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chlorophenol	0.000220	U	0.00200	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylnaphthalene	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylphenol	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitroaniline	0.000350	U	0.00250	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitrophenol	0.000220	U	0.00100	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
3 & 4 Methylphenol	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
3,3'-Dichlorobenzidine	0.000320	U	0.00500	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
3-Nitroaniline	0.000130	U	0.00250	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
4,6-Dinitro-2-methylphenol	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Bromophenyl phenyl ether	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloro-3-methylphenol	0.000250	U	0.00100	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloroaniline	0.000110	U	0.00100	0.000110	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chlorophenyl phenyl ether	0.000230	U	0.00150	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitroaniline	0.000230	U	0.00250	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitrophenol	0.000330	U	0.00250	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthylene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acetophenone	0.000680	U	0.00150	0.000680	mg/L		10/08/19 16:26	10/09/19 12:46	1
Anthracene	0.000440	U	0.00150	0.000440	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]anthracene	0.000250	U	0.00200	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]pyrene	0.000130	U	0.00150	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[b]fluoranthene	0.000180	U	0.00200	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[g,h,i]perylene	0.000350	U	0.00200	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[k]fluoranthene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
bis (2-Chloroisopropyl) ether	0.000180	U	0.00100	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethoxy)methane	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethyl)ether	0.000180	U	0.00150	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-ethylhexyl) phthalate	0.000590	U	0.00250	0.000590	mg/L		10/08/19 16:26	10/09/19 12:46	1
Butyl benzyl phthalate	0.000850	U	0.00250	0.000850	mg/L		10/08/19 16:26	10/09/19 12:46	1
Carbazole	0.000350	U	0.00500	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Chrysene	0.000240	U	0.00150	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenz(a,h)anthracene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenzofuran	0.000160	U	0.00150	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Diethyl phthalate	0.00419	U	0.00500	0.00419	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dimethyl phthalate	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-butyl phthalate	0.00187	U	0.00500	0.00187	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-octyl phthalate	0.000160	U	0.00500	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluoranthene	0.000310	U	0.00200	0.000310	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluorene	0.000120	U	0.00150	0.000120	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobenzene	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobutadiene	0.000190	U	0.00200	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorocyclopentadiene	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachloroethane	0.000170	U	0.00200	0.000170	mg/L		10/08/19 16:26	10/09/19 12:46	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Isophorone	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Nitrobenzene	0.000200	U	0.00150	0.000200	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodi-n-propylamine	0.000240	U	0.00250	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodiphenylamine	0.000330	U	0.00150	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pentachlorophenol	0.000960	U	0.00250	0.000960	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenanthrene	0.000290	U	0.00150	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenol	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pyrene	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*17 - 137*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorobiphenyl	*77*		*36 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorophenol	*59*		*12 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Nitrobenzene-d5	*86*		*40 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Phenol-d5 (Surr)	*51*		*10 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Terphenyl-d14	*90*		*52 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	0.00800	0.005004		mg/L		63	41 - 130
2,4,5-Trichlorophenol	0.00800	0.005148		mg/L		64	38 - 140
2,4,6-Trichlorophenol	0.00800	0.004856		mg/L		61	34 - 148
2,4-Dichlorophenol	0.00800	0.005080		mg/L		64	45 - 134
2,4-Dimethylphenol	0.00800	0.005130		mg/L		64	23 - 150
2,4-Dinitrophenol	0.0160	0.009369		mg/L		59	10 - 144
2,4-Dinitrotoluene	0.00800	0.005235		mg/L		65	17 - 150
2,6-Dinitrotoluene	0.00800	0.005281		mg/L		66	34 - 150
2-Chloronaphthalene	0.00800	0.005007		mg/L		63	38 - 135
2-Chlorophenol	0.00800	0.004753		mg/L		59	40 - 134
2-Methylnaphthalene	0.00800	0.005024		mg/L		63	23 - 150
2-Methylphenol	0.00800	0.004686		mg/L		59	31 - 150
2-Nitroaniline	0.00800	0.005204		mg/L		65	31 - 142
2-Nitrophenol	0.00800	0.005163		mg/L		65	40 - 134
3 & 4 Methylphenol	0.00800	0.005158		mg/L		64	25 - 146
3,3'-Dichlorobenzidine	0.00800	0.008607		mg/L		108	15 - 162
3-Nitroaniline	0.00800	0.009391		mg/L		117	10 - 150
4,6-Dinitro-2-methylphenol	0.0160	0.01104		mg/L		69	25 - 140
4-Bromophenyl phenyl ether	0.00800	0.005610		mg/L		70	42 - 138
4-Chloro-3-methylphenol	0.00800	0.005821		mg/L		73	34 - 145
4-Chloroaniline	0.00800	0.005883		mg/L		74	10 - 150
4-Chlorophenyl phenyl ether	0.00800	0.005015		mg/L		63	39 - 137
4-Nitroaniline	0.00800	0.004741		mg/L		59	10 - 150
4-Nitrophenol	0.0160	0.005890		mg/L		37	10 - 140
Acenaphthene	0.00800	0.004803		mg/L		60	41 - 130
Acenaphthylene	0.00800	0.004826		mg/L		60	42 - 130

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetophenone	0.00800	0.004647		mg/L		58	33 - 133
Anthracene	0.00800	0.005512		mg/L		69	42 - 136
Benzo[a]anthracene	0.00800	0.005461		mg/L		68	41 - 150
Benzo[a]pyrene	0.00800	0.006224		mg/L		78	35 - 150
Benzo[b]fluoranthene	0.00800	0.005040		mg/L		63	35 - 150
Benzo[g,h,i]perylene	0.00800	0.006445		mg/L		81	10 - 150
Benzo[k]fluoranthene	0.00800	0.007044		mg/L		88	35 - 150
bis (2-Chloroisopropyl) ether	0.00800	0.005042		mg/L		63	20 - 138
Bis(2-chloroethoxy)methane	0.00800	0.005629		mg/L		70	33 - 135
Bis(2-chloroethyl)ether	0.00800	0.004401		mg/L		55	29 - 138
Bis(2-ethylhexyl) phthalate	0.00800	0.006462		mg/L		81	40 - 150
Butyl benzyl phthalate	0.00800	0.005298		mg/L		66	35 - 150
Carbazole	0.00800	0.003365	J	mg/L		42	10 - 150
Chrysene	0.00800	0.006572		mg/L		82	43 - 142
Dibenz(a,h)anthracene	0.00800	0.006584		mg/L		82	10 - 150
Dibenzofuran	0.00800	0.005178		mg/L		65	42 - 130
Diethyl phthalate	0.00800	0.005080		mg/L		63	20 - 150
Dimethyl phthalate	0.00800	0.005519		mg/L		69	33 - 144
Di-n-butyl phthalate	0.00800	0.005216		mg/L		65	34 - 150
Di-n-octyl phthalate	0.00800	0.005851		mg/L		73	40 - 150
Fluoranthene	0.00800	0.004489		mg/L		56	42 - 146
Fluorene	0.00800	0.005521		mg/L		69	40 - 138
Hexachlorobenzene	0.00800	0.004726		mg/L		59	35 - 138
Hexachlorobutadiene	0.00800	0.003605		mg/L		45	31 - 136
Hexachlorocyclopentadiene	0.00800	0.003746		mg/L		47	10 - 130
Hexachloroethane	0.00800	0.003935		mg/L		49	25 - 141
Indeno[1,2,3-cd]pyrene	0.00800	0.006617		mg/L		83	10 - 150
Isophorone	0.00800	0.005126		mg/L		64	28 - 134
Naphthalene	0.00800	0.005149		mg/L		64	21 - 150
Nitrobenzene	0.00800	0.005261		mg/L		66	38 - 134
N-Nitrosodi-n-propylamine	0.00800	0.005015		mg/L		63	26 - 146
N-Nitrosodiphenylamine	0.00800	0.005154		mg/L		64	50 - 150
Pentachlorophenol	0.0160	0.004484		mg/L		28	10 - 130
Phenanthrene	0.00800	0.004919		mg/L		61	38 - 138
Phenol	0.00800	0.003826		mg/L		48	10 - 150
Pyrene	0.00800	0.005213		mg/L		65	36 - 146

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*79*		*17 - 137*
2-Fluorobiphenyl	*66*		*36 - 130*
2-Fluorophenol	*58*		*12 - 130*
Nitrobenzene-d5	*73*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*83*		*52 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	0.00800	0.004801		mg/L		60	41 - 130	4	20
2,4,5-Trichlorophenol	0.00800	0.005317		mg/L		66	38 - 140	3	20
2,4,6-Trichlorophenol	0.00800	0.005406		mg/L		68	34 - 148	11	20
2,4-Dichlorophenol	0.00800	0.004865		mg/L		61	45 - 134	4	20
2,4-Dimethylphenol	0.00800	0.005577		mg/L		70	23 - 150	8	20
2,4-Dinitrophenol	0.0160	0.003335	J *	mg/L		21	10 - 144	95	20
2,4-Dinitrotoluene	0.00800	0.005803		mg/L		73	17 - 150	10	20
2,6-Dinitrotoluene	0.00800	0.005759		mg/L		72	34 - 150	9	20
2-Chloronaphthalene	0.00800	0.004738		mg/L		59	38 - 135	6	20
2-Chlorophenol	0.00800	0.005032		mg/L		63	40 - 134	6	20
2-Methylnaphthalene	0.00800	0.004860		mg/L		61	23 - 150	3	20
2-Methylphenol	0.00800	0.004493		mg/L		56	31 - 150	4	20
2-Nitroaniline	0.00800	0.004753		mg/L		59	31 - 142	9	20
2-Nitrophenol	0.00800	0.004692		mg/L		59	40 - 134	10	20
3 & 4 Methylphenol	0.00800	0.005126		mg/L		64	25 - 146	1	20
3,3'-Dichlorobenzidine	0.00800	0.01259		mg/L		157	15 - 162	38	40
3-Nitroaniline	0.00800	0.01095		mg/L		137	10 - 150	15	20
4,6-Dinitro-2-methylphenol	0.0160	0.008923	*	mg/L		56	25 - 140	21	20
4-Bromophenyl phenyl ether	0.00800	0.004860		mg/L		61	42 - 138	14	20
4-Chloro-3-methylphenol	0.00800	0.004846		mg/L		61	34 - 145	18	20
4-Chloroaniline	0.00800	0.007410	*	mg/L		93	10 - 150	23	20
4-Chlorophenyl phenyl ether	0.00800	0.005296		mg/L		66	39 - 137	5	20
4-Nitroaniline	0.00800	0.005516		mg/L		69	10 - 150	15	20
4-Nitrophenol	0.0160	0.007471	*	mg/L		47	10 - 140	24	20
Acenaphthene	0.00800	0.004795		mg/L		60	41 - 130	0	20
Acenaphthylene	0.00800	0.005051		mg/L		63	42 - 130	5	20
Acetophenone	0.00800	0.005104		mg/L		64	33 - 133	9	20
Anthracene	0.00800	0.005571		mg/L		70	42 - 136	1	20
Benzo[a]anthracene	0.00800	0.005332		mg/L		67	41 - 150	2	20
Benzo[a]pyrene	0.00800	0.006314		mg/L		79	35 - 150	1	20
Benzo[b]fluoranthene	0.00800	0.005557		mg/L		69	35 - 150	10	20
Benzo[g,h,i]perylene	0.00800	0.007142		mg/L		89	10 - 150	10	20
Benzo[k]fluoranthene	0.00800	0.006642		mg/L		83	35 - 150	6	20
bis (2-Chloroisopropyl) ether	0.00800	0.005358		mg/L		67	20 - 138	6	20
Bis(2-chloroethoxy)methane	0.00800	0.005762		mg/L		72	33 - 135	2	20
Bis(2-chloroethyl)ether	0.00800	0.004481		mg/L		56	29 - 138	2	20
Bis(2-ethylhexyl) phthalate	0.00800	0.006568		mg/L		82	40 - 150	2	20
Butyl benzyl phthalate	0.00800	0.004765		mg/L		60	35 - 150	11	20
Carbazole	0.00800	0.005335	*	mg/L		67	10 - 150	45	20
Chrysene	0.00800	0.007077		mg/L		88	43 - 142	7	20
Dibenz(a,h)anthracene	0.00800	0.007325		mg/L		92	10 - 150	11	20
Dibenzofuran	0.00800	0.005709		mg/L		71	42 - 130	10	20
Diethyl phthalate	0.00800	0.005682		mg/L		71	20 - 150	11	20
Dimethyl phthalate	0.00800	0.005367		mg/L		67	33 - 144	3	20
Di-n-butyl phthalate	0.00800	0.005930		mg/L		74	34 - 150	13	20
Di-n-octyl phthalate	0.00800	0.006273		mg/L		78	40 - 150	7	20
Fluoranthene	0.00800	0.005377		mg/L		67	42 - 146	18	20
Fluorene	0.00800	0.005909		mg/L		74	40 - 138	7	20

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene			0.00800	0.004774		mg/L		60	35 - 138	1	20
Hexachlorobutadiene			0.00800	0.003437		mg/L		43	31 - 136	5	20
Hexachlorocyclopentadiene			0.00800	0.003872		mg/L		48	10 - 130	3	20
Hexachloroethane			0.00800	0.004043		mg/L		51	25 - 141	3	20
Indeno[1,2,3-cd]pyrene			0.00800	0.006811		mg/L		85	10 - 150	3	20
Isophorone			0.00800	0.005551		mg/L		69	28 - 134	8	20
Naphthalene			0.00800	0.004691		mg/L		59	21 - 150	9	20
Nitrobenzene			0.00800	0.005894		mg/L		74	38 - 134	11	20
N-Nitrosodi-n-propylamine			0.00800	0.005412		mg/L		68	26 - 146	8	20
N-Nitrosodiphenylamine			0.00800	0.005296		mg/L		66	50 - 150	3	20
Pentachlorophenol			0.0160	0.004127		mg/L		26	10 - 130	8	20
Phenanthrene			0.00800	0.004696		mg/L		59	38 - 138	5	20
Phenol			0.00800	0.004106		mg/L		51	10 - 150	7	20
Pyrene			0.00800	0.004895		mg/L		61	36 - 146	6	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*73*		*17 - 137*
2-Fluorobiphenyl	*62*		*36 - 130*
2-Fluorophenol	*53*		*12 - 130*
Nitrobenzene-d5	*67*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*72*		*52 - 130*

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 2 10-03-19

Job ID: 600-193269-1

GC/MS VOA

Analysis Batch: 276735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193269-1	2	Total/NA	Water	8260B	
MB 600-276735/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276735/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276735/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 276870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193269-1	2	Total/NA	Water	8260B	
MB 600-276870/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276870/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276870/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 276931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193269-1	2	Total/NA	Water	3510C LVI	
MB 600-276931/1-A	Method Blank	Total/NA	Water	3510C LVI	
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	3510C LVI	
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	3510C LVI	

Analysis Batch: 276980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-276931/1-A	Method Blank	Total/NA	Water	8270C LL	276931
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	8270C LL	276931
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	276931

Analysis Batch: 277050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193269-1	2	Total/NA	Water	8270C LL	276931

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 2 10-03-19

Job ID: 600-193269-1

Client Sample ID: 2

Date Collected: 10/03/19 09:40
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193269-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	276735	10/07/19 16:06	YX1	TAL HOU
Total/NA	Analysis	8260B		1	20 mL	20 mL	276870	10/08/19 14:52	YX1	TAL HOU
Total/NA	Prep	3510C LVI			250 mL	1 mL	276931	10/08/19 16:26	ARS	TAL HOU
Total/NA	Analysis	8270C LL		20	1 mL	1.0 mL	277050	10/09/19 23:47	PXS	TAL HOU

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193269-1
Project/Site: Terracon Site 2 10-03-19

Laboratory: Eurofins TestAmerica, Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-18-23	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,2-Dichloroethene, Total
8270C LL	3510C LVI	Water	3 & 4 Methylphenol

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins

Client Information	Sampler: R. Calvino	Lab PM: Joiner, Dean A	Carrier Tracking No(s):	COC No: 600-71021-19427.1
Client Contact: ~~Meg Haile~~ Ralph Calvino	Phone: 832-783-8332	E-Mail: dean.joiner@testamericainc.com		Page: Page 1 of 1
Company: Terracon Consulting Eng & Scientists				Job #: 92197619
Address: 11555 Clay Road Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days): ~~5 WD TAT Level 2a~~ Standard TAT			
State, Zip: TX, 77043				
Phone: ~~713-329-2568(Tel)~~ 832 235 3936	PO #: Purchase Order Requested			
Email: ~~Meg.Haile~~@terracon.com Ralph.Calvino@terracon.com	WO #:			
Project Name: Water Analysis	Project #: 60011379 Analytical Grp: Water 2019			
Site: 2	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_LL VOCs	8270C_LL SVOCs	Total Number of containers	Special Instructions/Note:
Preservation Code:							A	N		
2	10/3/19	0940	G	Water			X	X	5	

600-193269 Chain of Custody

RC 10/3/19

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longe
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Standard	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		10/3/19 1324	Terracon	Sandra Jones	10/3/19 13:24	TAH
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

10/11/2019

Loc: 600
193269

eurofins | Environment Testing
TestAmerica

190CT 3 13:24

Eurofins TestAmerica Houston

Sample Receipt Checklist

JOB NUMBER: 1932109

Date/Time Received: _____

CLIENT: Terracon

UNPACKED BY: LD

CARRIER/DRIVER: client

Custody Seal Present: ☐YES ☐NO

Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
SBW	Y / N	Y / (N)	4.5	678	-0.3	4.2
SBW	Y / N	Y / (N)	4.3	678	-0.3	4.0
SBW	Y / N	Y / (N)	3.0	678	-0.3	2.7
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8
*SBW	Y / N	Y / (N)	3.8	678	-0.3	3.5
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8

CF = correction factor

Samples received on ice? ☑YES ☐NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑NO ☐YES

Base samples are>pH 12: ☐YES ☐NO

Acid preserved are<pH 2: ☐YES ☐NO

TX1005 samples frozen upon receipt: ☐ YES

DATE & TIME PUT IN FREEZER: _____

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☑YES ☐NO ☐NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☑YES	☐ NO

COMMENTS:

HS-SA-WI-013

Rev. 4A: 08/26/2019

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 600-193269-1

Login Number: 193269

List Source: Eurofins TestAmerica, Houston

List Number: 1

Creator: Taylor, Jacquelyn R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

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ANALYTICAL REPORT

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-193268-1
Client Project/Site: Terracon Site 3 10-03-19

For:
Terracon Consulting Eng & Scientists
11555 Clay Road
Suite 100
Houston, Texas 77043

Attn: Meg Haile

Dean A. Joiner

Authorized for release by:
10/11/2019 4:42:31 PM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Job ID: 600-193268-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-193268-1

Comments
No additional comments.

Receipt
The sample was received on 10/3/2019 1:24 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

GC/MS VOA
Method(s) 8260B: The method blank for analytical batch 600-276735 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 600-276735: Naphthalene (-44.4%). These compounds are not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. The D% of the compound is outside 35% limits but within 50% in house limits. Therefore; the data is valid and reportable.

Method(s) 8260B: The method blank for analytical batch 600-276870 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: 3 (600-193268-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270C LL: The continuing calibration verification (CCV) associated with batch 600-276980 recovered above the upper control limit for 4-Chloro-3-methylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 600-276980/2).

Method(s) 8270C LL: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 600-276931 and analytical batch 600-276980 recovered outside control limits for the following analytes: 2,4-Dinitrophenol, 4-Nitrophenol, 4-Chloroaniline, 4,6-Dinitro-2-methylphenol and Carbazole.

Method(s) 8270C LL: The following sample required a dilution due to the nature of the sample matrix: 3 (600-193268-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C LL: The following sample was diluted due to the nature of the sample matrix: 3 (600-193268-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193268-1
Project/Site: Terracon Site 3 10-03-19

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL HOU
3510C LVI	Liquid-Liquid Extraction (Separatory Funnel) LVI	SW846	TAL HOU
5030B	Purge and Trap	SW846	TAL HOU

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 3 10-03-19

Job ID: 600-193268-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-193268-1	3	Water	10/03/19 10:10	10/03/19 13:24	

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 3 10-03-19

Job ID: 600-193268-1

Client Sample ID: 3
Date Collected: 10/03/19 10:10
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193268-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 15:39	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 15:39	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 15:39	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 15:39	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 15:39	1
1,2,4-Trimethylbenzene	**0.00333**		0.00100	0.000215	mg/L			10/07/19 15:39	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 15:39	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 15:39	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 15:39	1
1,3,5-Trimethylbenzene	**0.00137**		0.00100	0.000210	mg/L			10/07/19 15:39	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 15:39	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 15:39	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 15:39	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 15:39	1
Benzene	**0.00506**		0.00100	0.000176	mg/L			10/07/19 15:39	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 15:39	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 15:39	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 15:39	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 15:39	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 15:39	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 15:39	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 15:39	1
Chloroform	**0.00223**		0.00100	0.000151	mg/L			10/07/19 15:39	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 15:39	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 15:39	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 15:39	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 15:39	1
Ethylbenzene	**0.00512**		0.00100	0.000212	mg/L			10/07/19 15:39	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 15:39	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 15:39	1
m-Xylene & p-Xylene	**0.00722**		0.00100	0.000205	mg/L			10/07/19 15:39	1
n-Butylbenzene	**0.000254**	**J**	0.00100	0.000212	mg/L			10/07/19 15:39	1
o-Xylene	**0.00305**		0.00100	0.000192	mg/L			10/07/19 15:39	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 15:39	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 15:39	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 15:39	1
Toluene	**0.00345**		0.00100	0.000198	mg/L			10/07/19 15:39	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 15:39	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 15:39	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 15:39	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 15:39	1
Xylenes, Total	**0.0103**		0.00100	0.000366	mg/L			10/07/19 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*50 - 134*		*10/07/19 15:39*	*1*
4-Bromofluorobenzene	*110*		*67 - 139*		*10/07/19 15:39*	*1*
Dibromofluoromethane	*92*		*62 - 130*		*10/07/19 15:39*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*10/07/19 15:39*	*1*

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 3 10-03-19

Job ID: 600-193268-1

Client Sample ID: 3
Date Collected: 10/03/19 10:10
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193268-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.253**	**B**	0.200	0.0129	mg/L			10/08/19 16:10	100

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*50 - 134*		*10/08/19 16:10*	*100*
4-Bromofluorobenzene	*112*		*67 - 139*		*10/08/19 16:10*	*100*
Dibromofluoromethane	*92*		*62 - 130*		*10/08/19 16:10*	*100*
Toluene-d8 (Surr)	*105*		*70 - 130*		*10/08/19 16:10*	*100*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.0149	U	0.0306	0.0149	mg/L		10/08/19 16:26	10/09/19 23:22	20
2,4,5-Trichlorophenol	0.00592	U	0.0408	0.00592	mg/L		10/08/19 16:26	10/09/19 23:22	20
2,4,6-Trichlorophenol	0.00673	U	0.0408	0.00673	mg/L		10/08/19 16:26	10/09/19 23:22	20
2,4-Dichlorophenol	0.00531	U	0.0510	0.00531	mg/L		10/08/19 16:26	10/09/19 23:22	20
2,4-Dimethylphenol	**0.0196**	**J**	0.0510	0.00367	mg/L		10/08/19 16:26	10/09/19 23:22	20
2,4-Dinitrophenol	0.00816	U *	0.102	0.00816	mg/L		10/08/19 16:26	10/09/19 23:22	20
2,4-Dinitrotoluene	0.00653	U	0.0306	0.00653	mg/L		10/08/19 16:26	10/09/19 23:22	20
2,6-Dinitrotoluene	0.00592	U	0.0204	0.00592	mg/L		10/08/19 16:26	10/09/19 23:22	20
2-Chloronaphthalene	0.00388	U	0.0306	0.00388	mg/L		10/08/19 16:26	10/09/19 23:22	20
2-Chlorophenol	0.00449	U	0.0408	0.00449	mg/L		10/08/19 16:26	10/09/19 23:22	20
2-Methylnaphthalene	0.00286	U	0.0306	0.00286	mg/L		10/08/19 16:26	10/09/19 23:22	20
2-Methylphenol	**0.0101**	**J**	0.0306	0.00388	mg/L		10/08/19 16:26	10/09/19 23:22	20
2-Nitroaniline	0.00714	U	0.0510	0.00714	mg/L		10/08/19 16:26	10/09/19 23:22	20
2-Nitrophenol	0.00449	U	0.0204	0.00449	mg/L		10/08/19 16:26	10/09/19 23:22	20
3 & 4 Methylphenol	**0.00862**	**J**	0.0204	0.00327	mg/L		10/08/19 16:26	10/09/19 23:22	20
3,3'-Dichlorobenzidine	0.00653	U	0.102	0.00653	mg/L		10/08/19 16:26	10/09/19 23:22	20
3-Nitroaniline	0.00265	U	0.0510	0.00265	mg/L		10/08/19 16:26	10/09/19 23:22	20
4,6-Dinitro-2-methylphenol	0.00327	U *	0.0408	0.00327	mg/L		10/08/19 16:26	10/09/19 23:22	20
4-Bromophenyl phenyl ether	0.00510	U	0.0306	0.00510	mg/L		10/08/19 16:26	10/09/19 23:22	20
4-Chloro-3-methylphenol	0.00510	U	0.0204	0.00510	mg/L		10/08/19 16:26	10/09/19 23:22	20
4-Chloroaniline	0.00224	U *	0.0204	0.00224	mg/L		10/08/19 16:26	10/09/19 23:22	20
4-Chlorophenyl phenyl ether	0.00469	U	0.0306	0.00469	mg/L		10/08/19 16:26	10/09/19 23:22	20
4-Nitroaniline	0.00469	U	0.0510	0.00469	mg/L		10/08/19 16:26	10/09/19 23:22	20
4-Nitrophenol	0.00673	U *	0.0510	0.00673	mg/L		10/08/19 16:26	10/09/19 23:22	20
Acenaphthene	**0.00977**	**J**	0.0204	0.00327	mg/L		10/08/19 16:26	10/09/19 23:22	20
Acenaphthylene	0.00327	U	0.0204	0.00327	mg/L		10/08/19 16:26	10/09/19 23:22	20
Acetophenone	0.0139	U	0.0306	0.0139	mg/L		10/08/19 16:26	10/09/19 23:22	20
Anthracene	0.00898	U	0.0306	0.00898	mg/L		10/08/19 16:26	10/09/19 23:22	20
Benzo[a]anthracene	0.00510	U	0.0408	0.00510	mg/L		10/08/19 16:26	10/09/19 23:22	20
Benzo[a]pyrene	0.00265	U	0.0306	0.00265	mg/L		10/08/19 16:26	10/09/19 23:22	20
Benzo[b]fluoranthene	0.00367	U	0.0408	0.00367	mg/L		10/08/19 16:26	10/09/19 23:22	20
Benzo[g,h,i]perylene	0.00714	U	0.0408	0.00714	mg/L		10/08/19 16:26	10/09/19 23:22	20
Benzo[k]fluoranthene	0.00327	U	0.0408	0.00327	mg/L		10/08/19 16:26	10/09/19 23:22	20
bis (2-Chloroisopropyl) ether	0.00367	U	0.0204	0.00367	mg/L		10/08/19 16:26	10/09/19 23:22	20
Bis(2-chloroethoxy)methane	0.00388	U	0.0306	0.00388	mg/L		10/08/19 16:26	10/09/19 23:22	20
Bis(2-chloroethyl)ether	0.00367	U	0.0306	0.00367	mg/L		10/08/19 16:26	10/09/19 23:22	20
Bis(2-ethylhexyl) phthalate	0.0120	U	0.0510	0.0120	mg/L		10/08/19 16:26	10/09/19 23:22	20
Butyl benzyl phthalate	0.0173	U	0.0510	0.0173	mg/L		10/08/19 16:26	10/09/19 23:22	20
Carbazole	**0.00805**	**J ***	0.102	0.00714	mg/L		10/08/19 16:26	10/09/19 23:22	20
Chrysene	0.00490	U	0.0306	0.00490	mg/L		10/08/19 16:26	10/09/19 23:22	20

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 3 10-03-19

Job ID: 600-193268-1

Client Sample ID: 3
Date Collected: 10/03/19 10:10
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193268-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenz(a,h)anthracene	0.00592	U	0.0408	0.00592	mg/L		10/08/19 16:26	10/09/19 23:22	20
Dibenzofuran	0.00327	U	0.0306	0.00327	mg/L		10/08/19 16:26	10/09/19 23:22	20
Diethyl phthalate	0.0855	U	0.102	0.0855	mg/L		10/08/19 16:26	10/09/19 23:22	20
Dimethyl phthalate	0.00367	U	0.0510	0.00367	mg/L		10/08/19 16:26	10/09/19 23:22	20
Di-n-butyl phthalate	0.0382	U	0.102	0.0382	mg/L		10/08/19 16:26	10/09/19 23:22	20
Di-n-octyl phthalate	0.00327	U	0.102	0.00327	mg/L		10/08/19 16:26	10/09/19 23:22	20
Fluoranthene	0.00633	U	0.0408	0.00633	mg/L		10/08/19 16:26	10/09/19 23:22	20
Fluorene	**0.00419**	**J**	0.0306	0.00245	mg/L		10/08/19 16:26	10/09/19 23:22	20
Hexachlorobenzene	0.00510	U	0.0306	0.00510	mg/L		10/08/19 16:26	10/09/19 23:22	20
Hexachlorobutadiene	0.00388	U	0.0408	0.00388	mg/L		10/08/19 16:26	10/09/19 23:22	20
Hexachlorocyclopentadiene	0.00306	U	0.0306	0.00306	mg/L		10/08/19 16:26	10/09/19 23:22	20
Hexachloroethane	0.00347	U	0.0408	0.00347	mg/L		10/08/19 16:26	10/09/19 23:22	20
Indeno[1,2,3-cd]pyrene	0.00592	U	0.0408	0.00592	mg/L		10/08/19 16:26	10/09/19 23:22	20
Isophorone	0.00306	U	0.0306	0.00306	mg/L		10/08/19 16:26	10/09/19 23:22	20
Naphthalene	0.00327	U	0.0408	0.00327	mg/L		10/08/19 16:26	10/09/19 23:22	20
Nitrobenzene	0.00408	U	0.0306	0.00408	mg/L		10/08/19 16:26	10/09/19 23:22	20
N-Nitrosodi-n-propylamine	0.00490	U	0.0510	0.00490	mg/L		10/08/19 16:26	10/09/19 23:22	20
N-Nitrosodiphenylamine	0.00673	U	0.0306	0.00673	mg/L		10/08/19 16:26	10/09/19 23:22	20
Pentachlorophenol	0.0196	U	0.0510	0.0196	mg/L		10/08/19 16:26	10/09/19 23:22	20
Phenanthrene	0.00592	U	0.0306	0.00592	mg/L		10/08/19 16:26	10/09/19 23:22	20
Phenol	0.00286	U	0.0306	0.00286	mg/L		10/08/19 16:26	10/09/19 23:22	20
Pyrene	0.00673	U	0.0408	0.00673	mg/L		10/08/19 16:26	10/09/19 23:22	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*86*		*17 - 137*	*10/08/19 16:26*	*10/09/19 23:22*	*20*
2-Fluorobiphenyl	*75*		*36 - 130*	*10/08/19 16:26*	*10/09/19 23:22*	*20*
2-Fluorophenol	*0*	*X*	*12 - 130*	*10/08/19 16:26*	*10/09/19 23:22*	*20*
Nitrobenzene-d5	*64*		*40 - 130*	*10/08/19 16:26*	*10/09/19 23:22*	*20*
Phenol-d5 (Surr)	*0*	*X*	*10 - 130*	*10/08/19 16:26*	*10/09/19 23:22*	*20*
Terphenyl-d14	*84*		*52 - 130*	*10/08/19 16:26*	*10/09/19 23:22*	*20*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 3 10-03-19

Job ID: 600-193268-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(50-134)	(67-139)	(62-130)	(70-130)
600-193268-1	3	88	110	92	106
600-193268-1 - DL	3	88	112	92	105
LCS 600-276735/3	Lab Control Sample	87	111	91	105
LCS 600-276870/3	Lab Control Sample	79	113	89	107
LCSD 600-276735/4	Lab Control Sample Dup	83	110	93	104
LCSD 600-276870/4	Lab Control Sample Dup	82	111	92	106
MB 600-276735/6	Method Blank	96	113	96	106
MB 600-276870/6	Method Blank	89	114	88	107

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(17-137)	(36-130)	(12-130)	(40-130)	(10-130)	(52-130)
600-193268-1	3	86	75	0 X	64	0 X	84
LCS 600-276931/2-A	Lab Control Sample	79	66	58	73	50	83
LCSD 600-276931/3-A	Lab Control Sample Dup	73	62	53	67	50	72
MB 600-276931/1-A	Method Blank	74	77	59	86	51	90

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 13:55	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 13:55	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 13:55	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 13:55	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 13:55	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 13:55	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 13:55	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 13:55	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 13:55	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 13:55	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 13:55	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 13:55	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 13:55	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 13:55	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 13:55	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 13:55	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 13:55	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 13:55	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 13:55	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 13:55	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 13:55	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 13:55	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 13:55	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 13:55	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/07/19 13:55	1
Naphthalene	0.0005119	J	0.00200	0.000129	mg/L			10/07/19 13:55	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 13:55	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 13:55	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 13:55	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 13:55	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 13:55	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 13:55	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 13:55	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*50 - 134*		*10/07/19 13:55*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/07/19 13:55*	*1*
Dibromofluoromethane	*96*		*62 - 130*		*10/07/19 13:55*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		70 - 130		10/07/19 13:55	1

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009939		mg/L		99	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01161		mg/L		116	58 - 133
1,1,2-Trichloroethane	0.0100	0.008432		mg/L		84	70 - 130
1,1-Dichloroethane	0.0100	0.01117		mg/L		112	70 - 140
1,1-Dichloroethene	0.0100	0.01047		mg/L		105	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009523		mg/L		95	70 - 130
1,2-Dichloroethane	0.0100	0.008545		mg/L		85	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01940		mg/L		97	69 - 130
1,2-Dichloropropane	0.0100	0.01015		mg/L		102	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.009964		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01683		mg/L		84	41 - 141
2-Hexanone	0.0200	0.01294		mg/L		65	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01389		mg/L		69	62 - 136
Acetone	0.0200	0.01300		mg/L		65	18 - 144
Benzene	0.0100	0.01007		mg/L		101	70 - 130
Bromodichloromethane	0.0100	0.009399		mg/L		94	70 - 131
Bromoform	0.0100	0.006534		mg/L		65	54 - 133
Bromomethane	0.0100	0.007027		mg/L		70	25 - 150
Carbon disulfide	0.0100	0.01070		mg/L		107	55 - 150
Carbon tetrachloride	0.0100	0.009915		mg/L		99	70 - 144
Chlorobenzene	0.0100	0.008985		mg/L		90	69 - 130
Chloroethane	0.0100	0.006654		mg/L		67	47 - 150
Chloroform	0.0100	0.01062		mg/L		106	70 - 130
Chloromethane	0.0100	0.006610		mg/L		66	10 - 150
cis-1,2-Dichloroethene	0.0100	0.009690		mg/L		97	68 - 130
cis-1,3-Dichloropropene	0.0100	0.009382		mg/L		94	57 - 130
Dibromochloromethane	0.0100	0.007488		mg/L		75	62 - 130
Ethylbenzene	0.0100	0.009466		mg/L		95	70 - 130
Methyl tert-butyl ether	0.0100	0.008257		mg/L		83	56 - 132
Methylene Chloride	0.0100	0.01102		mg/L		110	55 - 147
m-Xylene & p-Xylene	0.0100	0.009305		mg/L		93	70 - 130
Naphthalene	0.0100	0.007379		mg/L		74	10 - 150
n-Butylbenzene	0.0100	0.01044		mg/L		104	70 - 130
o-Xylene	0.0100	0.009219		mg/L		92	70 - 130
sec-Butylbenzene	0.0100	0.01057		mg/L		106	68 - 130
Styrene	0.0100	0.008290		mg/L		83	70 - 130
Tetrachloroethene	0.0100	0.009626		mg/L		96	47 - 150
Toluene	0.0100	0.01003		mg/L		100	70 - 130
trans-1,2-Dichloroethene	0.0100	0.009712		mg/L		97	68 - 131
trans-1,3-Dichloropropene	0.0100	0.008328		mg/L		83	60 - 130
Trichloroethene	0.0100	0.009269		mg/L		93	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			0.0100	0.009980		mg/L		100	33 - 150		
Xylenes, Total			0.0200	0.01852		mg/L		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*91*		*62 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			0.0100	0.01039		mg/L		104	70 - 136	4	20
1,1,2,2-Tetrachloroethane			0.0100	0.01261		mg/L		126	58 - 133	8	20
1,1,2-Trichloroethane			0.0100	0.009221		mg/L		92	70 - 130	9	20
1,1-Dichloroethane			0.0100	0.01108		mg/L		111	70 - 140	1	20
1,1-Dichloroethene			0.0100	0.01103		mg/L		110	58 - 148	5	20
1,2,4-Trimethylbenzene			0.0100	0.009707		mg/L		97	70 - 130	2	20
1,2-Dichloroethane			0.0100	0.009452		mg/L		95	67 - 134	10	20
1,2-Dichloroethene, Total			0.0200	0.02053		mg/L		103	69 - 130	6	20
1,2-Dichloropropane			0.0100	0.01129		mg/L		113	70 - 130	11	20
1,3,5-Trimethylbenzene			0.0100	0.01003		mg/L		100	69 - 130	1	20
2-Butanone (MEK)			0.0200	0.01906		mg/L		95	41 - 141	12	20
2-Hexanone			0.0200	0.01480		mg/L		74	56 - 130	13	20
4-Methyl-2-pentanone (MIBK)			0.0200	0.01580		mg/L		79	62 - 136	13	20
Acetone			0.0200	0.01439		mg/L		72	18 - 144	10	20
Benzene			0.0100	0.01057		mg/L		106	70 - 130	5	20
Bromodichloromethane			0.0100	0.01008		mg/L		101	70 - 131	7	20
Bromoform			0.0100	0.007023		mg/L		70	54 - 133	7	20
Bromomethane			0.0100	0.007279		mg/L		73	25 - 150	4	20
Carbon disulfide			0.0100	0.01109		mg/L		111	55 - 150	4	20
Carbon tetrachloride			0.0100	0.01040		mg/L		104	70 - 144	5	20
Chlorobenzene			0.0100	0.009318		mg/L		93	69 - 130	4	20
Chloroethane			0.0100	0.007113		mg/L		71	47 - 150	7	20
Chloroform			0.0100	0.01123		mg/L		112	70 - 130	6	20
Chloromethane			0.0100	0.007335		mg/L		73	10 - 150	10	20
cis-1,2-Dichloroethene			0.0100	0.01033		mg/L		103	68 - 130	6	20
cis-1,3-Dichloropropene			0.0100	0.009876		mg/L		99	57 - 130	5	20
Dibromochloromethane			0.0100	0.008131		mg/L		81	62 - 130	8	20
Ethylbenzene			0.0100	0.009659		mg/L		97	70 - 130	2	20
Methyl tert-butyl ether			0.0100	0.009296		mg/L		93	56 - 132	12	20
Methylene Chloride			0.0100	0.01097		mg/L		110	55 - 147	0	20
m-Xylene & p-Xylene			0.0100	0.009732		mg/L		97	70 - 130	4	20
Naphthalene			0.0100	0.008643		mg/L		86	10 - 150	16	20
n-Butylbenzene			0.0100	0.01046		mg/L		105	70 - 130	0	20
o-Xylene			0.0100	0.009587		mg/L		96	70 - 130	4	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
sec-Butylbenzene			0.0100	0.01039		mg/L		104	68 - 130	2	20
Styrene			0.0100	0.008882		mg/L		89	70 - 130	7	20
Tetrachloroethene			0.0100	0.009852		mg/L		99	47 - 150	2	20
Toluene			0.0100	0.01027		mg/L		103	70 - 130	2	20
trans-1,2-Dichloroethene			0.0100	0.01020		mg/L		102	68 - 131	5	20
trans-1,3-Dichloropropene			0.0100	0.009137		mg/L		91	60 - 130	9	20
Trichloroethene			0.0100	0.009859		mg/L		99	70 - 130	6	20
Vinyl chloride			0.0100	0.01087		mg/L		109	33 - 150	8	20
Xylenes, Total			0.0200	0.01932		mg/L		97	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*50 - 134*
4-Bromofluorobenzene	*110*		*67 - 139*
Dibromofluoromethane	*93*		*62 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Lab Sample ID: MB 600-276870/6
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/08/19 14:00	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/08/19 14:00	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/08/19 14:00	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/08/19 14:00	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/08/19 14:00	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/08/19 14:00	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/08/19 14:00	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/08/19 14:00	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/08/19 14:00	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/08/19 14:00	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/08/19 14:00	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/08/19 14:00	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/08/19 14:00	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/08/19 14:00	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/08/19 14:00	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/08/19 14:00	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/08/19 14:00	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/08/19 14:00	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/08/19 14:00	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/08/19 14:00	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/08/19 14:00	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/08/19 14:00	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/08/19 14:00	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/08/19 14:00	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/08/19 14:00	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/08/19 14:00	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276870/6
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/08/19 14:00	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/08/19 14:00	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/08/19 14:00	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/08/19 14:00	1
Naphthalene	0.0006109	J	0.00200	0.000129	mg/L			10/08/19 14:00	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/08/19 14:00	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/08/19 14:00	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/08/19 14:00	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/08/19 14:00	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/08/19 14:00	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/08/19 14:00	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/08/19 14:00	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/08/19 14:00	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/08/19 14:00	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/08/19 14:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*50 - 134*		*10/08/19 14:00*	*1*
4-Bromofluorobenzene	*114*		*67 - 139*		*10/08/19 14:00*	*1*
Dibromofluoromethane	*88*		*62 - 130*		*10/08/19 14:00*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*10/08/19 14:00*	*1*

Lab Sample ID: LCS 600-276870/3
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009716		mg/L		97	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01233		mg/L		123	58 - 133
1,1,2-Trichloroethane	0.0100	0.008988		mg/L		90	70 - 130
1,1-Dichloroethane	0.0100	0.01050		mg/L		105	70 - 140
1,1-Dichloroethene	0.0100	0.01024		mg/L		102	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009627		mg/L		96	70 - 130
1,2-Dichloroethane	0.0100	0.008691		mg/L		87	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01922		mg/L		96	69 - 130
1,2-Dichloropropane	0.0100	0.01052		mg/L		105	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.01003		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01779		mg/L		89	41 - 141
2-Hexanone	0.0200	0.01425		mg/L		71	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01450		mg/L		72	62 - 136
Acetone	0.0200	0.01335		mg/L		67	18 - 144
Benzene	0.0100	0.009911		mg/L		99	70 - 130
Bromodichloromethane	0.0100	0.009263		mg/L		93	70 - 131
Bromoform	0.0100	0.006575		mg/L		66	54 - 133
Bromomethane	0.0100	0.009544		mg/L		95	25 - 150
Carbon disulfide	0.0100	0.009329		mg/L		93	55 - 150
Carbon tetrachloride	0.0100	0.009745		mg/L		97	70 - 144

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276870/3
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	0.0100	0.009078		mg/L		91	69 - 130
Chloroethane	0.0100	0.006403		mg/L		64	47 - 150
Chloroform	0.0100	0.01054		mg/L		105	70 - 130
Chloromethane	0.0100	0.006701		mg/L		67	10 - 150
cis-1,2-Dichloroethene	0.0100	0.009581		mg/L		96	68 - 130
cis-1,3-Dichloropropene	0.0100	0.009872		mg/L		99	57 - 130
Dibromochloromethane	0.0100	0.007861		mg/L		79	62 - 130
Ethylbenzene	0.0100	0.009521		mg/L		95	70 - 130
Methyl tert-butyl ether	0.0100	0.008514		mg/L		85	56 - 132
Methylene Chloride	0.0100	0.01038		mg/L		104	55 - 147
m-Xylene & p-Xylene	0.0100	0.009508		mg/L		95	70 - 130
Naphthalene	0.0100	0.008108		mg/L		81	10 - 150
n-Butylbenzene	0.0100	0.01035		mg/L		103	70 - 130
o-Xylene	0.0100	0.009241		mg/L		92	70 - 130
sec-Butylbenzene	0.0100	0.01045		mg/L		105	68 - 130
Styrene	0.0100	0.008494		mg/L		85	70 - 130
Tetrachloroethene	0.0100	0.009707		mg/L		97	47 - 150
Toluene	0.0100	0.01019		mg/L		102	70 - 130
trans-1,2-Dichloroethene	0.0100	0.009637		mg/L		96	68 - 131
trans-1,3-Dichloropropene	0.0100	0.008914		mg/L		89	60 - 130
Trichloroethene	0.0100	0.008966		mg/L		90	70 - 130
Vinyl chloride	0.0100	0.01023		mg/L		102	33 - 150
Xylenes, Total	0.0200	0.01875		mg/L		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*79*		*50 - 134*
4-Bromofluorobenzene	*113*		*67 - 139*
Dibromofluoromethane	*89*		*62 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: LCSD 600-276870/4
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.0100	0.01103		mg/L		110	70 - 136	13	20
1,1,2,2-Tetrachloroethane	0.0100	0.01288		mg/L		129	58 - 133	4	20
1,1,2-Trichloroethane	0.0100	0.009328		mg/L		93	70 - 130	4	20
1,1-Dichloroethane	0.0100	0.01151		mg/L		115	70 - 140	9	20
1,1-Dichloroethene	0.0100	0.01151		mg/L		115	58 - 148	12	20
1,2,4-Trimethylbenzene	0.0100	0.01025		mg/L		103	70 - 130	6	20
1,2-Dichloroethane	0.0100	0.009475		mg/L		95	67 - 134	9	20
1,2-Dichloroethene, Total	0.0200	0.02139		mg/L		107	69 - 130	11	20
1,2-Dichloropropane	0.0100	0.01143		mg/L		114	70 - 130	8	20
1,3,5-Trimethylbenzene	0.0100	0.01069		mg/L		107	69 - 130	6	20
2-Butanone (MEK)	0.0200	0.01866		mg/L		93	41 - 141	5	20
2-Hexanone	0.0200	0.01470		mg/L		73	56 - 130	3	20
4-Methyl-2-pentanone (MIBK)	0.0200	0.01551		mg/L		78	62 - 136	7	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276870/4
Matrix: Water
Analysis Batch: 276870

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone			0.0200	0.01358		mg/L		68	18 - 144	2	20
Benzene			0.0100	0.01098		mg/L		110	70 - 130	10	20
Bromodichloromethane			0.0100	0.01024		mg/L		102	70 - 131	10	20
Bromoform			0.0100	0.006997		mg/L		70	54 - 133	6	20
Bromomethane			0.0100	0.009979		mg/L		100	25 - 150	4	20
Carbon disulfide			0.0100	0.01024		mg/L		102	55 - 150	9	20
Carbon tetrachloride			0.0100	0.01081		mg/L		108	70 - 144	10	20
Chlorobenzene			0.0100	0.009664		mg/L		97	69 - 130	6	20
Chloroethane			0.0100	0.006705		mg/L		67	47 - 150	5	20
Chloroform			0.0100	0.01163		mg/L		116	70 - 130	10	20
Chloromethane			0.0100	0.007024		mg/L		70	10 - 150	5	20
cis-1,2-Dichloroethene			0.0100	0.01066		mg/L		107	68 - 130	11	20
cis-1,3-Dichloropropene			0.0100	0.01026		mg/L		103	57 - 130	4	20
Dibromochloromethane			0.0100	0.008243		mg/L		82	62 - 130	5	20
Ethylbenzene			0.0100	0.01028		mg/L		103	70 - 130	8	20
Methyl tert-butyl ether			0.0100	0.009201		mg/L		92	56 - 132	8	20
Methylene Chloride			0.0100	0.01124		mg/L		112	55 - 147	8	20
m-Xylene & p-Xylene			0.0100	0.01020		mg/L		102	70 - 130	7	20
Naphthalene			0.0100	0.008719		mg/L		87	10 - 150	7	20
n-Butylbenzene			0.0100	0.01099		mg/L		110	70 - 130	6	20
o-Xylene			0.0100	0.01004		mg/L		100	70 - 130	8	20
sec-Butylbenzene			0.0100	0.01113		mg/L		111	68 - 130	6	20
Styrene			0.0100	0.009223		mg/L		92	70 - 130	8	20
Tetrachloroethene			0.0100	0.01044		mg/L		104	47 - 150	7	20
Toluene			0.0100	0.01078		mg/L		108	70 - 130	6	20
trans-1,2-Dichloroethene			0.0100	0.01073		mg/L		107	68 - 131	11	20
trans-1,3-Dichloropropene			0.0100	0.009400		mg/L		94	60 - 130	5	20
Trichloroethene			0.0100	0.01012		mg/L		101	70 - 130	12	20
Vinyl chloride			0.0100	0.01032		mg/L		103	33 - 150	1	20
Xylenes, Total			0.0200	0.02024		mg/L		101	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*82*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*92*		*62 - 130*
Toluene-d8 (Surr)	*106*		*70 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.000730	U	0.00150	0.000730	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,5-Trichlorophenol	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,6-Trichlorophenol	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dichlorophenol	0.000260	U	0.00250	0.000260	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dimethylphenol	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	0.000400	U	0.00500	0.000400	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrotoluene	0.000320	U	0.00150	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,6-Dinitrotoluene	0.000290	U	0.00100	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chloronaphthalene	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chlorophenol	0.000220	U	0.00200	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylnaphthalene	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylphenol	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitroaniline	0.000350	U	0.00250	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitrophenol	0.000220	U	0.00100	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
3 & 4 Methylphenol	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
3,3'-Dichlorobenzidine	0.000320	U	0.00500	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
3-Nitroaniline	0.000130	U	0.00250	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
4,6-Dinitro-2-methylphenol	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Bromophenyl phenyl ether	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloro-3-methylphenol	0.000250	U	0.00100	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloroaniline	0.000110	U	0.00100	0.000110	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chlorophenyl phenyl ether	0.000230	U	0.00150	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitroaniline	0.000230	U	0.00250	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitrophenol	0.000330	U	0.00250	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthylene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acetophenone	0.000680	U	0.00150	0.000680	mg/L		10/08/19 16:26	10/09/19 12:46	1
Anthracene	0.000440	U	0.00150	0.000440	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]anthracene	0.000250	U	0.00200	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]pyrene	0.000130	U	0.00150	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[b]fluoranthene	0.000180	U	0.00200	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[g,h,i]perylene	0.000350	U	0.00200	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[k]fluoranthene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
bis (2-Chloroisopropyl) ether	0.000180	U	0.00100	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethoxy)methane	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethyl)ether	0.000180	U	0.00150	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-ethylhexyl) phthalate	0.000590	U	0.00250	0.000590	mg/L		10/08/19 16:26	10/09/19 12:46	1
Butyl benzyl phthalate	0.000850	U	0.00250	0.000850	mg/L		10/08/19 16:26	10/09/19 12:46	1
Carbazole	0.000350	U	0.00500	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Chrysene	0.000240	U	0.00150	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenz(a,h)anthracene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenzofuran	0.000160	U	0.00150	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Diethyl phthalate	0.00419	U	0.00500	0.00419	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dimethyl phthalate	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-butyl phthalate	0.00187	U	0.00500	0.00187	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-octyl phthalate	0.000160	U	0.00500	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluoranthene	0.000310	U	0.00200	0.000310	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluorene	0.000120	U	0.00150	0.000120	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobenzene	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobutadiene	0.000190	U	0.00200	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorocyclopentadiene	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachloroethane	0.000170	U	0.00200	0.000170	mg/L		10/08/19 16:26	10/09/19 12:46	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Isophorone	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Nitrobenzene	0.000200	U	0.00150	0.000200	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodi-n-propylamine	0.000240	U	0.00250	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodiphenylamine	0.000330	U	0.00150	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pentachlorophenol	0.000960	U	0.00250	0.000960	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenanthrene	0.000290	U	0.00150	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenol	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pyrene	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*17 - 137*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorobiphenyl	*77*		*36 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorophenol	*59*		*12 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Nitrobenzene-d5	*86*		*40 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Phenol-d5 (Surr)	*51*		*10 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Terphenyl-d14	*90*		*52 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	0.00800	0.005004		mg/L		63	41 - 130
2,4,5-Trichlorophenol	0.00800	0.005148		mg/L		64	38 - 140
2,4,6-Trichlorophenol	0.00800	0.004856		mg/L		61	34 - 148
2,4-Dichlorophenol	0.00800	0.005080		mg/L		64	45 - 134
2,4-Dimethylphenol	0.00800	0.005130		mg/L		64	23 - 150
2,4-Dinitrophenol	0.0160	0.009369		mg/L		59	10 - 144
2,4-Dinitrotoluene	0.00800	0.005235		mg/L		65	17 - 150
2,6-Dinitrotoluene	0.00800	0.005281		mg/L		66	34 - 150
2-Chloronaphthalene	0.00800	0.005007		mg/L		63	38 - 135
2-Chlorophenol	0.00800	0.004753		mg/L		59	40 - 134
2-Methylnaphthalene	0.00800	0.005024		mg/L		63	23 - 150
2-Methylphenol	0.00800	0.004686		mg/L		59	31 - 150
2-Nitroaniline	0.00800	0.005204		mg/L		65	31 - 142
2-Nitrophenol	0.00800	0.005163		mg/L		65	40 - 134
3 & 4 Methylphenol	0.00800	0.005158		mg/L		64	25 - 146
3,3'-Dichlorobenzidine	0.00800	0.008607		mg/L		108	15 - 162
3-Nitroaniline	0.00800	0.009391		mg/L		117	10 - 150
4,6-Dinitro-2-methylphenol	0.0160	0.01104		mg/L		69	25 - 140
4-Bromophenyl phenyl ether	0.00800	0.005610		mg/L		70	42 - 138
4-Chloro-3-methylphenol	0.00800	0.005821		mg/L		73	34 - 145
4-Chloroaniline	0.00800	0.005883		mg/L		74	10 - 150
4-Chlorophenyl phenyl ether	0.00800	0.005015		mg/L		63	39 - 137
4-Nitroaniline	0.00800	0.004741		mg/L		59	10 - 150
4-Nitrophenol	0.0160	0.005890		mg/L		37	10 - 140
Acenaphthene	0.00800	0.004803		mg/L		60	41 - 130
Acenaphthylene	0.00800	0.004826		mg/L		60	42 - 130

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetophenone	0.00800	0.004647		mg/L		58	33 - 133
Anthracene	0.00800	0.005512		mg/L		69	42 - 136
Benzo[a]anthracene	0.00800	0.005461		mg/L		68	41 - 150
Benzo[a]pyrene	0.00800	0.006224		mg/L		78	35 - 150
Benzo[b]fluoranthene	0.00800	0.005040		mg/L		63	35 - 150
Benzo[g,h,i]perylene	0.00800	0.006445		mg/L		81	10 - 150
Benzo[k]fluoranthene	0.00800	0.007044		mg/L		88	35 - 150
bis (2-Chloroisopropyl) ether	0.00800	0.005042		mg/L		63	20 - 138
Bis(2-chloroethoxy)methane	0.00800	0.005629		mg/L		70	33 - 135
Bis(2-chloroethyl)ether	0.00800	0.004401		mg/L		55	29 - 138
Bis(2-ethylhexyl) phthalate	0.00800	0.006462		mg/L		81	40 - 150
Butyl benzyl phthalate	0.00800	0.005298		mg/L		66	35 - 150
Carbazole	0.00800	0.003365	J	mg/L		42	10 - 150
Chrysene	0.00800	0.006572		mg/L		82	43 - 142
Dibenz(a,h)anthracene	0.00800	0.006584		mg/L		82	10 - 150
Dibenzofuran	0.00800	0.005178		mg/L		65	42 - 130
Diethyl phthalate	0.00800	0.005080		mg/L		63	20 - 150
Dimethyl phthalate	0.00800	0.005519		mg/L		69	33 - 144
Di-n-butyl phthalate	0.00800	0.005216		mg/L		65	34 - 150
Di-n-octyl phthalate	0.00800	0.005851		mg/L		73	40 - 150
Fluoranthene	0.00800	0.004489		mg/L		56	42 - 146
Fluorene	0.00800	0.005521		mg/L		69	40 - 138
Hexachlorobenzene	0.00800	0.004726		mg/L		59	35 - 138
Hexachlorobutadiene	0.00800	0.003605		mg/L		45	31 - 136
Hexachlorocyclopentadiene	0.00800	0.003746		mg/L		47	10 - 130
Hexachloroethane	0.00800	0.003935		mg/L		49	25 - 141
Indeno[1,2,3-cd]pyrene	0.00800	0.006617		mg/L		83	10 - 150
Isophorone	0.00800	0.005126		mg/L		64	28 - 134
Naphthalene	0.00800	0.005149		mg/L		64	21 - 150
Nitrobenzene	0.00800	0.005261		mg/L		66	38 - 134
N-Nitrosodi-n-propylamine	0.00800	0.005015		mg/L		63	26 - 146
N-Nitrosodiphenylamine	0.00800	0.005154		mg/L		64	50 - 150
Pentachlorophenol	0.0160	0.004484		mg/L		28	10 - 130
Phenanthrene	0.00800	0.004919		mg/L		61	38 - 138
Phenol	0.00800	0.003826		mg/L		48	10 - 150
Pyrene	0.00800	0.005213		mg/L		65	36 - 146

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*79*		*17 - 137*
2-Fluorobiphenyl	*66*		*36 - 130*
2-Fluorophenol	*58*		*12 - 130*
Nitrobenzene-d5	*73*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*83*		*52 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl	0.00800	0.004801		mg/L		60	41 - 130	4	20
2,4,5-Trichlorophenol	0.00800	0.005317		mg/L		66	38 - 140	3	20
2,4,6-Trichlorophenol	0.00800	0.005406		mg/L		68	34 - 148	11	20
2,4-Dichlorophenol	0.00800	0.004865		mg/L		61	45 - 134	4	20
2,4-Dimethylphenol	0.00800	0.005577		mg/L		70	23 - 150	8	20
2,4-Dinitrophenol	0.0160	0.003335	J *	mg/L		21	10 - 144	95	20
2,4-Dinitrotoluene	0.00800	0.005803		mg/L		73	17 - 150	10	20
2,6-Dinitrotoluene	0.00800	0.005759		mg/L		72	34 - 150	9	20
2-Chloronaphthalene	0.00800	0.004738		mg/L		59	38 - 135	6	20
2-Chlorophenol	0.00800	0.005032		mg/L		63	40 - 134	6	20
2-Methylnaphthalene	0.00800	0.004860		mg/L		61	23 - 150	3	20
2-Methylphenol	0.00800	0.004493		mg/L		56	31 - 150	4	20
2-Nitroaniline	0.00800	0.004753		mg/L		59	31 - 142	9	20
2-Nitrophenol	0.00800	0.004692		mg/L		59	40 - 134	10	20
3 & 4 Methylphenol	0.00800	0.005126		mg/L		64	25 - 146	1	20
3,3'-Dichlorobenzidine	0.00800	0.01259		mg/L		157	15 - 162	38	40
3-Nitroaniline	0.00800	0.01095		mg/L		137	10 - 150	15	20
4,6-Dinitro-2-methylphenol	0.0160	0.008923	*	mg/L		56	25 - 140	21	20
4-Bromophenyl phenyl ether	0.00800	0.004860		mg/L		61	42 - 138	14	20
4-Chloro-3-methylphenol	0.00800	0.004846		mg/L		61	34 - 145	18	20
4-Chloroaniline	0.00800	0.007410	*	mg/L		93	10 - 150	23	20
4-Chlorophenyl phenyl ether	0.00800	0.005296		mg/L		66	39 - 137	5	20
4-Nitroaniline	0.00800	0.005516		mg/L		69	10 - 150	15	20
4-Nitrophenol	0.0160	0.007471	*	mg/L		47	10 - 140	24	20
Acenaphthene	0.00800	0.004795		mg/L		60	41 - 130	0	20
Acenaphthylene	0.00800	0.005051		mg/L		63	42 - 130	5	20
Acetophenone	0.00800	0.005104		mg/L		64	33 - 133	9	20
Anthracene	0.00800	0.005571		mg/L		70	42 - 136	1	20
Benzo[a]anthracene	0.00800	0.005332		mg/L		67	41 - 150	2	20
Benzo[a]pyrene	0.00800	0.006314		mg/L		79	35 - 150	1	20
Benzo[b]fluoranthene	0.00800	0.005557		mg/L		69	35 - 150	10	20
Benzo[g,h,i]perylene	0.00800	0.007142		mg/L		89	10 - 150	10	20
Benzo[k]fluoranthene	0.00800	0.006642		mg/L		83	35 - 150	6	20
bis (2-Chloroisopropyl) ether	0.00800	0.005358		mg/L		67	20 - 138	6	20
Bis(2-chloroethoxy)methane	0.00800	0.005762		mg/L		72	33 - 135	2	20
Bis(2-chloroethyl)ether	0.00800	0.004481		mg/L		56	29 - 138	2	20
Bis(2-ethylhexyl) phthalate	0.00800	0.006568		mg/L		82	40 - 150	2	20
Butyl benzyl phthalate	0.00800	0.004765		mg/L		60	35 - 150	11	20
Carbazole	0.00800	0.005335	*	mg/L		67	10 - 150	45	20
Chrysene	0.00800	0.007077		mg/L		88	43 - 142	7	20
Dibenz(a,h)anthracene	0.00800	0.007325		mg/L		92	10 - 150	11	20
Dibenzofuran	0.00800	0.005709		mg/L		71	42 - 130	10	20
Diethyl phthalate	0.00800	0.005682		mg/L		71	20 - 150	11	20
Dimethyl phthalate	0.00800	0.005367		mg/L		67	33 - 144	3	20
Di-n-butyl phthalate	0.00800	0.005930		mg/L		74	34 - 150	13	20
Di-n-octyl phthalate	0.00800	0.006273		mg/L		78	40 - 150	7	20
Fluoranthene	0.00800	0.005377		mg/L		67	42 - 146	18	20
Fluorene	0.00800	0.005909		mg/L		74	40 - 138	7	20

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexachlorobenzene			0.00800	0.004774		mg/L		60	35 - 138	1	20
Hexachlorobutadiene			0.00800	0.003437		mg/L		43	31 - 136	5	20
Hexachlorocyclopentadiene			0.00800	0.003872		mg/L		48	10 - 130	3	20
Hexachloroethane			0.00800	0.004043		mg/L		51	25 - 141	3	20
Indeno[1,2,3-cd]pyrene			0.00800	0.006811		mg/L		85	10 - 150	3	20
Isophorone			0.00800	0.005551		mg/L		69	28 - 134	8	20
Naphthalene			0.00800	0.004691		mg/L		59	21 - 150	9	20
Nitrobenzene			0.00800	0.005894		mg/L		74	38 - 134	11	20
N-Nitrosodi-n-propylamine			0.00800	0.005412		mg/L		68	26 - 146	8	20
N-Nitrosodiphenylamine			0.00800	0.005296		mg/L		66	50 - 150	3	20
Pentachlorophenol			0.0160	0.004127		mg/L		26	10 - 130	8	20
Phenanthrene			0.00800	0.004696		mg/L		59	38 - 138	5	20
Phenol			0.00800	0.004106		mg/L		51	10 - 150	7	20
Pyrene			0.00800	0.004895		mg/L		61	36 - 146	6	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*73*		*17 - 137*
2-Fluorobiphenyl	*62*		*36 - 130*
2-Fluorophenol	*53*		*12 - 130*
Nitrobenzene-d5	*67*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*72*		*52 - 130*

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 3 10-03-19

Job ID: 600-193268-1

GC/MS VOA

Analysis Batch: 276735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193268-1	3	Total/NA	Water	8260B	
MB 600-276735/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276735/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276735/4	Lab Control Sample Dup	Total/NA	Water	8260B	

Analysis Batch: 276870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193268-1 - DL	3	Total/NA	Water	8260B	
MB 600-276870/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276870/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276870/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 276931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193268-1	3	Total/NA	Water	3510C LVI	
MB 600-276931/1-A	Method Blank	Total/NA	Water	3510C LVI	
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	3510C LVI	
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	3510C LVI	

Analysis Batch: 276980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-276931/1-A	Method Blank	Total/NA	Water	8270C LL	276931
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	8270C LL	276931
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	276931

Analysis Batch: 277050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193268-1	3	Total/NA	Water	8270C LL	276931

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 3 10-03-19

Job ID: 600-193268-1

Client Sample ID: 3

Date Collected: 10/03/19 10:10
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193268-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	276735	10/07/19 15:39	YX1	TAL HOU
Total/NA	Analysis	8260B	DL	100	20 mL	20 mL	276870	10/08/19 16:10	YX1	TAL HOU
Total/NA	Prep	3510C LVI			245 mL	1 mL	276931	10/08/19 16:26	ARS	TAL HOU
Total/NA	Analysis	8270C LL		20	1 mL	1.0 mL	277050	10/09/19 23:22	PXS	TAL HOU

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193268-1
Project/Site: Terracon Site 3 10-03-19

Laboratory: Eurofins TestAmerica, Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-18-23	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,2-Dichloroethene, Total
8270C LL	3510C LVI	Water	3 & 4 Methylphenol

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins

Client Information	Sampler: R Calvino	Lab PM: Joiner, Dean A	Carrier Tracking No(s):	COC No: 600-71021-19427.1
Client Contact: ~~Meg Haile~~ Ralph Calvino	Phone: 832 783 8332	E-Mail: dean.joiner@testamericainc.com		Page: Page 1 of 1
Company: Terracon Consulting Eng & Scientists				Job #: 9219 7619
Address: 11555 Clay Road Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days): ~~5 WD TAT Level 3a~~ Standard TAT			
State, Zip: TX, 77043				
Phone: ~~713-329-2566(Tel)~~ 832 235 3936	PO #: Purchase Order Requested			
Email: ~~Meg.Haile~~@terracon.com ralph.calvino@Terracon.com	WO #:			
Project Name: Water Analysis	Project #: 60011379 Analytical Grp: Water 2019			
Site: 3	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_LL VOCs	8270C_LL SVOCs	Total Number of containers	Special Instructions/Note:
Preservation Code:							A	N		
3	10/3/19	1010	G	Water			X	X	5	

600-193268 Chain of Custody

10/3/19

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained long
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ months

Deliverable Requested: I, II, III, IV, Other (specify) Standard

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 10/3/19 1324	Company: Terracon	Received by: Sandra Jones
Relinquished by:	Date/Time:	Company	Received by:
Relinquished by:	Date/Time:	Company	Received by:

Date/Time	Company	Date/Time	Company
10/3/19 13:24	TAT		

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Loc: 600
193268

eurofins | Environment Testing TestAmerica

19OCT 3 13:24

Eurofins TestAmerica Houston

Sample Receipt Checklist

JOB NUMBER: 193268 | Date/Time Received: _____

UNPACKED BY: LD | CLIENT: Terracon

CARRIER/DRIVER: client

Custody Seal Present: ☐YES ☐NO | Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
SBW	Y / N	Y / (N)	4.5	678	-0.3	4.2
SBW	Y / N	Y / (N)	4.3	678	-0.3	4.0
SBW	Y / N	Y / (N)	3.0	678	-0.3	2.7
* SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8
SBW	Y / N	Y / (N)	3.8	678	-0.3	3.5
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8

CF = correction factor

Samples received on ice? ☑YES ☐NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑NO ☐YES

Base samples are>pH 12: ☐YES ☐NO | Acid preserved are<pH 2: ☐YES ☐NO

TX1005 samples frozen upon receipt: ☐ YES | DATE & TIME PUT IN FREEZER: _____

pH paper Lot #_____ | VOA headspace acceptable (5-6mm): ☑YES ☐NO ☐NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☑YES	☐ NO

COMMENTS:

HS-SA-WI-013 Rev. 4A: 08/26/2019

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 600-193268-1

Login Number: 193268

List Source: Eurofins TestAmerica, Houston

List Number: 1

Creator: Taylor, Jacquelyn R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-193267-1
Client Project/Site: Terracon Site 4 10-03-19

For:
Terracon Consulting Eng & Scientists
11555 Clay Road
Suite 100
Houston, Texas 77043

Attn: Meg Haile

Dean A. Joiner

Authorized for release by:
10/11/2019 4:42:12 PM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Job ID: 600-193267-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-193267-1

Comments
No additional comments.

Receipt
The sample was received on 10/3/2019 1:24 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7º C.

GC/MS VOA
Method(s) 8260B: The method blank for analytical batch 600-276735 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 600-276735: Naphthalene (-44.4%). These compounds are not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. The D% of the compound is outside 35% limits but within 50% in house limits. Therefore; the data is valid and reportable.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270C LL: The continuing calibration verification (CCV) associated with batch 600-276980 recovered above the upper control limit for 4-Chloro-3-methylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 600-276980/2).

Method(s) 8270C LL: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 600-276931 and analytical batch 600-276980 recovered outside control limits for the following analytes: 2,4-Dinitrophenol, 4-Nitrophenol, 4-Chloroaniline, 4,6-Dinitro-2-methylphenol and Carbazole.

Method(s) 8270C LL: The following sample required a dilution due to the nature of the sample matrix: 4 (600-193267-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C LL: The following sample was diluted due to the nature of the sample matrix: 4 (600-193267-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL HOU
3510C LVI	Liquid-Liquid Extraction (Separatory Funnel) LVI	SW846	TAL HOU
5030B	Purge and Trap	SW846	TAL HOU

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-193267-1	4	Water	10/03/19 10:40	10/03/19 13:24	

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Client Sample ID: 4
Date Collected: 10/03/19 10:40
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193267-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 15:13	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 15:13	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 15:13	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 15:13	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 15:13	1
1,2,4-Trimethylbenzene	**0.00316**		0.00100	0.000215	mg/L			10/07/19 15:13	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 15:13	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 15:13	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 15:13	1
1,3,5-Trimethylbenzene	**0.00169**		0.00100	0.000210	mg/L			10/07/19 15:13	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 15:13	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 15:13	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 15:13	1
Acetone	**0.00303**	**J**	0.00500	0.000447	mg/L			10/07/19 15:13	1
Benzene	**0.0104**		0.00100	0.000176	mg/L			10/07/19 15:13	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 15:13	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 15:13	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 15:13	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 15:13	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 15:13	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 15:13	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 15:13	1
Chloroform	**0.000452**	**J**	0.00100	0.000151	mg/L			10/07/19 15:13	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 15:13	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 15:13	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 15:13	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 15:13	1
Ethylbenzene	**0.00518**		0.00100	0.000212	mg/L			10/07/19 15:13	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 15:13	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 15:13	1
m-Xylene & p-Xylene	**0.00725**		0.00100	0.000205	mg/L			10/07/19 15:13	1
Naphthalene	**0.0352**	**B**	0.00200	0.000129	mg/L			10/07/19 15:13	1
n-Butylbenzene	**0.000227**	**J**	0.00100	0.000212	mg/L			10/07/19 15:13	1
o-Xylene	**0.00331**		0.00100	0.000192	mg/L			10/07/19 15:13	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 15:13	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 15:13	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 15:13	1
Toluene	**0.00641**		0.00100	0.000198	mg/L			10/07/19 15:13	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 15:13	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 15:13	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 15:13	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 15:13	1
Xylenes, Total	**0.0106**		0.00100	0.000366	mg/L			10/07/19 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*50 - 134*		*10/07/19 15:13*	*1*
4-Bromofluorobenzene	*112*		*67 - 139*		*10/07/19 15:13*	*1*
Dibromofluoromethane	*91*		*62 - 130*		*10/07/19 15:13*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*10/07/19 15:13*	*1*

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Client Sample ID: 4
Date Collected: 10/03/19 10:40
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193267-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.0146	U	0.0300	0.0146	mg/L		10/08/19 16:26	10/09/19 22:58	20
2,4,5-Trichlorophenol	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 22:58	20
2,4,6-Trichlorophenol	0.00660	U	0.0400	0.00660	mg/L		10/08/19 16:26	10/09/19 22:58	20
2,4-Dichlorophenol	0.00520	U	0.0500	0.00520	mg/L		10/08/19 16:26	10/09/19 22:58	20
2,4-Dimethylphenol	**0.0343**	**J**	0.0500	0.00360	mg/L		10/08/19 16:26	10/09/19 22:58	20
2,4-Dinitrophenol	0.00800	U *	0.100	0.00800	mg/L		10/08/19 16:26	10/09/19 22:58	20
2,4-Dinitrotoluene	0.00640	U	0.0300	0.00640	mg/L		10/08/19 16:26	10/09/19 22:58	20
2,6-Dinitrotoluene	0.00580	U	0.0200	0.00580	mg/L		10/08/19 16:26	10/09/19 22:58	20
2-Chloronaphthalene	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 22:58	20
2-Chlorophenol	0.00440	U	0.0400	0.00440	mg/L		10/08/19 16:26	10/09/19 22:58	20
2-Methylnaphthalene	0.00280	U	0.0300	0.00280	mg/L		10/08/19 16:26	10/09/19 22:58	20
2-Methylphenol	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 22:58	20
2-Nitroaniline	0.00700	U	0.0500	0.00700	mg/L		10/08/19 16:26	10/09/19 22:58	20
2-Nitrophenol	0.00440	U	0.0200	0.00440	mg/L		10/08/19 16:26	10/09/19 22:58	20
3 & 4 Methylphenol	0.00320	U	0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 22:58	20
3,3'-Dichlorobenzidine	0.00640	U	0.100	0.00640	mg/L		10/08/19 16:26	10/09/19 22:58	20
3-Nitroaniline	0.00260	U	0.0500	0.00260	mg/L		10/08/19 16:26	10/09/19 22:58	20
4,6-Dinitro-2-methylphenol	0.00320	U *	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 22:58	20
4-Bromophenyl phenyl ether	0.00500	U	0.0300	0.00500	mg/L		10/08/19 16:26	10/09/19 22:58	20
4-Chloro-3-methylphenol	0.00500	U	0.0200	0.00500	mg/L		10/08/19 16:26	10/09/19 22:58	20
4-Chloroaniline	0.00220	U *	0.0200	0.00220	mg/L		10/08/19 16:26	10/09/19 22:58	20
4-Chlorophenyl phenyl ether	0.00460	U	0.0300	0.00460	mg/L		10/08/19 16:26	10/09/19 22:58	20
4-Nitroaniline	0.00460	U	0.0500	0.00460	mg/L		10/08/19 16:26	10/09/19 22:58	20
4-Nitrophenol	0.00660	U *	0.0500	0.00660	mg/L		10/08/19 16:26	10/09/19 22:58	20
Acenaphthene	**0.0209**		0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 22:58	20
Acenaphthylene	0.00320	U	0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 22:58	20
Acetophenone	0.0136	U	0.0300	0.0136	mg/L		10/08/19 16:26	10/09/19 22:58	20
Anthracene	0.00880	U	0.0300	0.00880	mg/L		10/08/19 16:26	10/09/19 22:58	20
Benzo[a]anthracene	0.00500	U	0.0400	0.00500	mg/L		10/08/19 16:26	10/09/19 22:58	20
Benzo[a]pyrene	0.00260	U	0.0300	0.00260	mg/L		10/08/19 16:26	10/09/19 22:58	20
Benzo[b]fluoranthene	0.00360	U	0.0400	0.00360	mg/L		10/08/19 16:26	10/09/19 22:58	20
Benzo[g,h,i]perylene	0.00700	U	0.0400	0.00700	mg/L		10/08/19 16:26	10/09/19 22:58	20
Benzo[k]fluoranthene	0.00320	U	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 22:58	20
bis (2-Chloroisopropyl) ether	0.00360	U	0.0200	0.00360	mg/L		10/08/19 16:26	10/09/19 22:58	20
Bis(2-chloroethoxy)methane	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 22:58	20
Bis(2-chloroethyl)ether	0.00360	U	0.0300	0.00360	mg/L		10/08/19 16:26	10/09/19 22:58	20
Bis(2-ethylhexyl) phthalate	0.0118	U	0.0500	0.0118	mg/L		10/08/19 16:26	10/09/19 22:58	20
Butyl benzyl phthalate	0.0170	U	0.0500	0.0170	mg/L		10/08/19 16:26	10/09/19 22:58	20
Carbazole	**0.0163**	**J ***	0.100	0.00700	mg/L		10/08/19 16:26	10/09/19 22:58	20
Chrysene	0.00480	U	0.0300	0.00480	mg/L		10/08/19 16:26	10/09/19 22:58	20
Dibenz(a,h)anthracene	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 22:58	20
Dibenzofuran	**0.00774**	**J**	0.0300	0.00320	mg/L		10/08/19 16:26	10/09/19 22:58	20
Diethyl phthalate	0.0838	U	0.100	0.0838	mg/L		10/08/19 16:26	10/09/19 22:58	20
Dimethyl phthalate	0.00360	U	0.0500	0.00360	mg/L		10/08/19 16:26	10/09/19 22:58	20
Di-n-butyl phthalate	0.0374	U	0.100	0.0374	mg/L		10/08/19 16:26	10/09/19 22:58	20
Di-n-octyl phthalate	0.00320	U	0.100	0.00320	mg/L		10/08/19 16:26	10/09/19 22:58	20
Fluoranthene	0.00620	U	0.0400	0.00620	mg/L		10/08/19 16:26	10/09/19 22:58	20
Fluorene	**0.0107**	**J**	0.0300	0.00240	mg/L		10/08/19 16:26	10/09/19 22:58	20
Hexachlorobenzene	0.00500	U	0.0300	0.00500	mg/L		10/08/19 16:26	10/09/19 22:58	20

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Client Sample ID: 4
Date Collected: 10/03/19 10:40
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193267-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	0.00380	U	0.0400	0.00380	mg/L		10/08/19 16:26	10/09/19 22:58	20
Hexachlorocyclopentadiene	0.00300	U	0.0300	0.00300	mg/L		10/08/19 16:26	10/09/19 22:58	20
Hexachloroethane	0.00340	U	0.0400	0.00340	mg/L		10/08/19 16:26	10/09/19 22:58	20
Indeno[1,2,3-cd]pyrene	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 22:58	20
Isophorone	0.00300	U	0.0300	0.00300	mg/L		10/08/19 16:26	10/09/19 22:58	20
Naphthalene	0.00320	U	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 22:58	20
Nitrobenzene	0.00400	U	0.0300	0.00400	mg/L		10/08/19 16:26	10/09/19 22:58	20
N-Nitrosodi-n-propylamine	0.00480	U	0.0500	0.00480	mg/L		10/08/19 16:26	10/09/19 22:58	20
N-Nitrosodiphenylamine	0.00660	U	0.0300	0.00660	mg/L		10/08/19 16:26	10/09/19 22:58	20
Pentachlorophenol	0.0192	U	0.0500	0.0192	mg/L		10/08/19 16:26	10/09/19 22:58	20
Phenanthrene	0.00580	U	0.0300	0.00580	mg/L		10/08/19 16:26	10/09/19 22:58	20
Phenol	0.00280	U	0.0300	0.00280	mg/L		10/08/19 16:26	10/09/19 22:58	20
Pyrene	0.00660	U	0.0400	0.00660	mg/L		10/08/19 16:26	10/09/19 22:58	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*79*		*17 - 137*	*10/08/19 16:26*	*10/09/19 22:58*	*20*
2-Fluorobiphenyl	*82*		*36 - 130*	*10/08/19 16:26*	*10/09/19 22:58*	*20*
2-Fluorophenol	*50*		*12 - 130*	*10/08/19 16:26*	*10/09/19 22:58*	*20*
Nitrobenzene-d5	*61*		*40 - 130*	*10/08/19 16:26*	*10/09/19 22:58*	*20*
Phenol-d5 (Surr)	*34*		*10 - 130*	*10/08/19 16:26*	*10/09/19 22:58*	*20*
Terphenyl-d14	*71*		*52 - 130*	*10/08/19 16:26*	*10/09/19 22:58*	*20*

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193267-1
Project/Site: Terracon Site 4 10-03-19

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(50-134)	(67-139)	(62-130)	(70-130)
600-193267-1	4	88	112	91	106
LCS 600-276735/3	Lab Control Sample	87	111	91	105
LCSD 600-276735/4	Lab Control Sample Dup	83	110	93	104
MB 600-276735/6	Method Blank	96	113	96	106

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(17-137)	(36-130)	(12-130)	(40-130)	(10-130)	(52-130)
600-193267-1	4	79	82	50	61	34	71
LCS 600-276931/2-A	Lab Control Sample	79	66	58	73	50	83
LCSD 600-276931/3-A	Lab Control Sample Dup	73	62	53	67	50	72
MB 600-276931/1-A	Method Blank	74	77	59	86	51	90

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 13:55	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 13:55	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 13:55	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 13:55	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 13:55	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 13:55	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 13:55	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 13:55	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 13:55	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 13:55	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 13:55	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 13:55	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 13:55	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 13:55	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 13:55	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 13:55	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 13:55	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 13:55	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 13:55	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 13:55	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 13:55	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 13:55	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 13:55	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 13:55	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/07/19 13:55	1
Naphthalene	0.0005119	J	0.00200	0.000129	mg/L			10/07/19 13:55	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 13:55	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 13:55	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 13:55	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 13:55	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 13:55	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 13:55	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 13:55	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*50 - 134*		*10/07/19 13:55*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/07/19 13:55*	*1*
Dibromofluoromethane	*96*		*62 - 130*		*10/07/19 13:55*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		70 - 130		10/07/19 13:55	1

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009939		mg/L		99	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01161		mg/L		116	58 - 133
1,1,2-Trichloroethane	0.0100	0.008432		mg/L		84	70 - 130
1,1-Dichloroethane	0.0100	0.01117		mg/L		112	70 - 140
1,1-Dichloroethene	0.0100	0.01047		mg/L		105	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009523		mg/L		95	70 - 130
1,2-Dichloroethane	0.0100	0.008545		mg/L		85	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01940		mg/L		97	69 - 130
1,2-Dichloropropane	0.0100	0.01015		mg/L		102	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.009964		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01683		mg/L		84	41 - 141
2-Hexanone	0.0200	0.01294		mg/L		65	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01389		mg/L		69	62 - 136
Acetone	0.0200	0.01300		mg/L		65	18 - 144
Benzene	0.0100	0.01007		mg/L		101	70 - 130
Bromodichloromethane	0.0100	0.009399		mg/L		94	70 - 131
Bromoform	0.0100	0.006534		mg/L		65	54 - 133
Bromomethane	0.0100	0.007027		mg/L		70	25 - 150
Carbon disulfide	0.0100	0.01070		mg/L		107	55 - 150
Carbon tetrachloride	0.0100	0.009915		mg/L		99	70 - 144
Chlorobenzene	0.0100	0.008985		mg/L		90	69 - 130
Chloroethane	0.0100	0.006654		mg/L		67	47 - 150
Chloroform	0.0100	0.01062		mg/L		106	70 - 130
Chloromethane	0.0100	0.006610		mg/L		66	10 - 150
cis-1,2-Dichloroethene	0.0100	0.009690		mg/L		97	68 - 130
cis-1,3-Dichloropropene	0.0100	0.009382		mg/L		94	57 - 130
Dibromochloromethane	0.0100	0.007488		mg/L		75	62 - 130
Ethylbenzene	0.0100	0.009466		mg/L		95	70 - 130
Methyl tert-butyl ether	0.0100	0.008257		mg/L		83	56 - 132
Methylene Chloride	0.0100	0.01102		mg/L		110	55 - 147
m-Xylene & p-Xylene	0.0100	0.009305		mg/L		93	70 - 130
Naphthalene	0.0100	0.007379		mg/L		74	10 - 150
n-Butylbenzene	0.0100	0.01044		mg/L		104	70 - 130
o-Xylene	0.0100	0.009219		mg/L		92	70 - 130
sec-Butylbenzene	0.0100	0.01057		mg/L		106	68 - 130
Styrene	0.0100	0.008290		mg/L		83	70 - 130
Tetrachloroethene	0.0100	0.009626		mg/L		96	47 - 150
Toluene	0.0100	0.01003		mg/L		100	70 - 130
trans-1,2-Dichloroethene	0.0100	0.009712		mg/L		97	68 - 131
trans-1,3-Dichloropropene	0.0100	0.008328		mg/L		83	60 - 130
Trichloroethene	0.0100	0.009269		mg/L		93	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			0.0100	0.009980		mg/L		100	33 - 150		
Xylenes, Total			0.0200	0.01852		mg/L		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*91*		*62 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			0.0100	0.01039		mg/L		104	70 - 136	4	20
1,1,2,2-Tetrachloroethane			0.0100	0.01261		mg/L		126	58 - 133	8	20
1,1,2-Trichloroethane			0.0100	0.009221		mg/L		92	70 - 130	9	20
1,1-Dichloroethane			0.0100	0.01108		mg/L		111	70 - 140	1	20
1,1-Dichloroethene			0.0100	0.01103		mg/L		110	58 - 148	5	20
1,2,4-Trimethylbenzene			0.0100	0.009707		mg/L		97	70 - 130	2	20
1,2-Dichloroethane			0.0100	0.009452		mg/L		95	67 - 134	10	20
1,2-Dichloroethene, Total			0.0200	0.02053		mg/L		103	69 - 130	6	20
1,2-Dichloropropane			0.0100	0.01129		mg/L		113	70 - 130	11	20
1,3,5-Trimethylbenzene			0.0100	0.01003		mg/L		100	69 - 130	1	20
2-Butanone (MEK)			0.0200	0.01906		mg/L		95	41 - 141	12	20
2-Hexanone			0.0200	0.01480		mg/L		74	56 - 130	13	20
4-Methyl-2-pentanone (MIBK)			0.0200	0.01580		mg/L		79	62 - 136	13	20
Acetone			0.0200	0.01439		mg/L		72	18 - 144	10	20
Benzene			0.0100	0.01057		mg/L		106	70 - 130	5	20
Bromodichloromethane			0.0100	0.01008		mg/L		101	70 - 131	7	20
Bromoform			0.0100	0.007023		mg/L		70	54 - 133	7	20
Bromomethane			0.0100	0.007279		mg/L		73	25 - 150	4	20
Carbon disulfide			0.0100	0.01109		mg/L		111	55 - 150	4	20
Carbon tetrachloride			0.0100	0.01040		mg/L		104	70 - 144	5	20
Chlorobenzene			0.0100	0.009318		mg/L		93	69 - 130	4	20
Chloroethane			0.0100	0.007113		mg/L		71	47 - 150	7	20
Chloroform			0.0100	0.01123		mg/L		112	70 - 130	6	20
Chloromethane			0.0100	0.007335		mg/L		73	10 - 150	10	20
cis-1,2-Dichloroethene			0.0100	0.01033		mg/L		103	68 - 130	6	20
cis-1,3-Dichloropropene			0.0100	0.009876		mg/L		99	57 - 130	5	20
Dibromochloromethane			0.0100	0.008131		mg/L		81	62 - 130	8	20
Ethylbenzene			0.0100	0.009659		mg/L		97	70 - 130	2	20
Methyl tert-butyl ether			0.0100	0.009296		mg/L		93	56 - 132	12	20
Methylene Chloride			0.0100	0.01097		mg/L		110	55 - 147	0	20
m-Xylene & p-Xylene			0.0100	0.009732		mg/L		97	70 - 130	4	20
Naphthalene			0.0100	0.008643		mg/L		86	10 - 150	16	20
n-Butylbenzene			0.0100	0.01046		mg/L		105	70 - 130	0	20
o-Xylene			0.0100	0.009587		mg/L		96	70 - 130	4	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
sec-Butylbenzene			0.0100	0.01039		mg/L		104	68 - 130	2	20
Styrene			0.0100	0.008882		mg/L		89	70 - 130	7	20
Tetrachloroethene			0.0100	0.009852		mg/L		99	47 - 150	2	20
Toluene			0.0100	0.01027		mg/L		103	70 - 130	2	20
trans-1,2-Dichloroethene			0.0100	0.01020		mg/L		102	68 - 131	5	20
trans-1,3-Dichloropropene			0.0100	0.009137		mg/L		91	60 - 130	9	20
Trichloroethene			0.0100	0.009859		mg/L		99	70 - 130	6	20
Vinyl chloride			0.0100	0.01087		mg/L		109	33 - 150	8	20
Xylenes, Total			0.0200	0.01932		mg/L		97	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*50 - 134*
4-Bromofluorobenzene	*110*		*67 - 139*
Dibromofluoromethane	*93*		*62 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.000730	U	0.00150	0.000730	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,5-Trichlorophenol	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,6-Trichlorophenol	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dichlorophenol	0.000260	U	0.00250	0.000260	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dimethylphenol	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrophenol	0.000400	U	0.00500	0.000400	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrotoluene	0.000320	U	0.00150	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,6-Dinitrotoluene	0.000290	U	0.00100	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chloronaphthalene	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chlorophenol	0.000220	U	0.00200	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylnaphthalene	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylphenol	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitroaniline	0.000350	U	0.00250	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitrophenol	0.000220	U	0.00100	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
3 & 4 Methylphenol	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
3,3'-Dichlorobenzidine	0.000320	U	0.00500	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
3-Nitroaniline	0.000130	U	0.00250	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
4,6-Dinitro-2-methylphenol	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Bromophenyl phenyl ether	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloro-3-methylphenol	0.000250	U	0.00100	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloroaniline	0.000110	U	0.00100	0.000110	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chlorophenyl phenyl ether	0.000230	U	0.00150	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitroaniline	0.000230	U	0.00250	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitrophenol	0.000330	U	0.00250	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthylene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	0.000680	U	0.00150	0.000680	mg/L		10/08/19 16:26	10/09/19 12:46	1
Anthracene	0.000440	U	0.00150	0.000440	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]anthracene	0.000250	U	0.00200	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]pyrene	0.000130	U	0.00150	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[b]fluoranthene	0.000180	U	0.00200	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[g,h,i]perylene	0.000350	U	0.00200	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[k]fluoranthene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
bis (2-Chloroisopropyl) ether	0.000180	U	0.00100	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethoxy)methane	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethyl)ether	0.000180	U	0.00150	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-ethylhexyl) phthalate	0.000590	U	0.00250	0.000590	mg/L		10/08/19 16:26	10/09/19 12:46	1
Butyl benzyl phthalate	0.000850	U	0.00250	0.000850	mg/L		10/08/19 16:26	10/09/19 12:46	1
Carbazole	0.000350	U	0.00500	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Chrysene	0.000240	U	0.00150	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenz(a,h)anthracene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenzofuran	0.000160	U	0.00150	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Diethyl phthalate	0.00419	U	0.00500	0.00419	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dimethyl phthalate	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-butyl phthalate	0.00187	U	0.00500	0.00187	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-octyl phthalate	0.000160	U	0.00500	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluoranthene	0.000310	U	0.00200	0.000310	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluorene	0.000120	U	0.00150	0.000120	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobenzene	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobutadiene	0.000190	U	0.00200	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorocyclopentadiene	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachloroethane	0.000170	U	0.00200	0.000170	mg/L		10/08/19 16:26	10/09/19 12:46	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Isophorone	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Naphthalene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Nitrobenzene	0.000200	U	0.00150	0.000200	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodi-n-propylamine	0.000240	U	0.00250	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodiphenylamine	0.000330	U	0.00150	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pentachlorophenol	0.000960	U	0.00250	0.000960	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenanthrene	0.000290	U	0.00150	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenol	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pyrene	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*17 - 137*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorobiphenyl	*77*		*36 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorophenol	*59*		*12 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Nitrobenzene-d5	*86*		*40 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Phenol-d5 (Surr)	*51*		*10 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Terphenyl-d14	*90*		*52 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	0.00800	0.005004		mg/L		63	41 - 130
2,4,5-Trichlorophenol	0.00800	0.005148		mg/L		64	38 - 140
2,4,6-Trichlorophenol	0.00800	0.004856		mg/L		61	34 - 148
2,4-Dichlorophenol	0.00800	0.005080		mg/L		64	45 - 134
2,4-Dimethylphenol	0.00800	0.005130		mg/L		64	23 - 150
2,4-Dinitrophenol	0.0160	0.009369		mg/L		59	10 - 144
2,4-Dinitrotoluene	0.00800	0.005235		mg/L		65	17 - 150
2,6-Dinitrotoluene	0.00800	0.005281		mg/L		66	34 - 150
2-Chloronaphthalene	0.00800	0.005007		mg/L		63	38 - 135
2-Chlorophenol	0.00800	0.004753		mg/L		59	40 - 134
2-Methylnaphthalene	0.00800	0.005024		mg/L		63	23 - 150
2-Methylphenol	0.00800	0.004686		mg/L		59	31 - 150
2-Nitroaniline	0.00800	0.005204		mg/L		65	31 - 142
2-Nitrophenol	0.00800	0.005163		mg/L		65	40 - 134
3 & 4 Methylphenol	0.00800	0.005158		mg/L		64	25 - 146
3,3'-Dichlorobenzidine	0.00800	0.008607		mg/L		108	15 - 162
3-Nitroaniline	0.00800	0.009391		mg/L		117	10 - 150
4,6-Dinitro-2-methylphenol	0.0160	0.01104		mg/L		69	25 - 140
4-Bromophenyl phenyl ether	0.00800	0.005610		mg/L		70	42 - 138
4-Chloro-3-methylphenol	0.00800	0.005821		mg/L		73	34 - 145
4-Chloroaniline	0.00800	0.005883		mg/L		74	10 - 150
4-Chlorophenyl phenyl ether	0.00800	0.005015		mg/L		63	39 - 137
4-Nitroaniline	0.00800	0.004741		mg/L		59	10 - 150
4-Nitrophenol	0.0160	0.005890		mg/L		37	10 - 140
Acenaphthene	0.00800	0.004803		mg/L		60	41 - 130
Acenaphthylene	0.00800	0.004826		mg/L		60	42 - 130
Acetophenone	0.00800	0.004647		mg/L		58	33 - 133
Anthracene	0.00800	0.005512		mg/L		69	42 - 136
Benzo[a]anthracene	0.00800	0.005461		mg/L		68	41 - 150
Benzo[a]pyrene	0.00800	0.006224		mg/L		78	35 - 150
Benzo[b]fluoranthene	0.00800	0.005040		mg/L		63	35 - 150
Benzo[g,h,i]perylene	0.00800	0.006445		mg/L		81	10 - 150
Benzo[k]fluoranthene	0.00800	0.007044		mg/L		88	35 - 150
bis (2-Chloroisopropyl) ether	0.00800	0.005042		mg/L		63	20 - 138
Bis(2-chloroethoxy)methane	0.00800	0.005629		mg/L		70	33 - 135
Bis(2-chloroethyl)ether	0.00800	0.004401		mg/L		55	29 - 138
Bis(2-ethylhexyl) phthalate	0.00800	0.006462		mg/L		81	40 - 150
Butyl benzyl phthalate	0.00800	0.005298		mg/L		66	35 - 150
Carbazole	0.00800	0.003365	J	mg/L		42	10 - 150
Chrysene	0.00800	0.006572		mg/L		82	43 - 142
Dibenz(a,h)anthracene	0.00800	0.006584		mg/L		82	10 - 150
Dibenzofuran	0.00800	0.005178		mg/L		65	42 - 130
Diethyl phthalate	0.00800	0.005080		mg/L		63	20 - 150
Dimethyl phthalate	0.00800	0.005519		mg/L		69	33 - 144
Di-n-butyl phthalate	0.00800	0.005216		mg/L		65	34 - 150
Di-n-octyl phthalate	0.00800	0.005851		mg/L		73	40 - 150
Fluoranthene	0.00800	0.004489		mg/L		56	42 - 146
Fluorene	0.00800	0.005521		mg/L		69	40 - 138

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hexachlorobenzene			0.00800	0.004726		mg/L		59	35 - 138		
Hexachlorobutadiene			0.00800	0.003605		mg/L		45	31 - 136		
Hexachlorocyclopentadiene			0.00800	0.003746		mg/L		47	10 - 130		
Hexachloroethane			0.00800	0.003935		mg/L		49	25 - 141		
Indeno[1,2,3-cd]pyrene			0.00800	0.006617		mg/L		83	10 - 150		
Isophorone			0.00800	0.005126		mg/L		64	28 - 134		
Naphthalene			0.00800	0.005149		mg/L		64	21 - 150		
Nitrobenzene			0.00800	0.005261		mg/L		66	38 - 134		
N-Nitrosodi-n-propylamine			0.00800	0.005015		mg/L		63	26 - 146		
N-Nitrosodiphenylamine			0.00800	0.005154		mg/L		64	50 - 150		
Pentachlorophenol			0.0160	0.004484		mg/L		28	10 - 130		
Phenanthrene			0.00800	0.004919		mg/L		61	38 - 138		
Phenol			0.00800	0.003826		mg/L		48	10 - 150		
Pyrene			0.00800	0.005213		mg/L		65	36 - 146		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*79*		*17 - 137*
2-Fluorobiphenyl	*66*		*36 - 130*
2-Fluorophenol	*58*		*12 - 130*
Nitrobenzene-d5	*73*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*83*		*52 - 130*

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl			0.00800	0.004801		mg/L		60	41 - 130	4	20
2,4,5-Trichlorophenol			0.00800	0.005317		mg/L		66	38 - 140	3	20
2,4,6-Trichlorophenol			0.00800	0.005406		mg/L		68	34 - 148	11	20
2,4-Dichlorophenol			0.00800	0.004865		mg/L		61	45 - 134	4	20
2,4-Dimethylphenol			0.00800	0.005577		mg/L		70	23 - 150	8	20
2,4-Dinitrophenol			0.0160	0.003335	J *	mg/L		21	10 - 144	95	20
2,4-Dinitrotoluene			0.00800	0.005803		mg/L		73	17 - 150	10	20
2,6-Dinitrotoluene			0.00800	0.005759		mg/L		72	34 - 150	9	20
2-Chloronaphthalene			0.00800	0.004738		mg/L		59	38 - 135	6	20
2-Chlorophenol			0.00800	0.005032		mg/L		63	40 - 134	6	20
2-Methylnaphthalene			0.00800	0.004860		mg/L		61	23 - 150	3	20
2-Methylphenol			0.00800	0.004493		mg/L		56	31 - 150	4	20
2-Nitroaniline			0.00800	0.004753		mg/L		59	31 - 142	9	20
2-Nitrophenol			0.00800	0.004692		mg/L		59	40 - 134	10	20
3 & 4 Methylphenol			0.00800	0.005126		mg/L		64	25 - 146	1	20
3,3'-Dichlorobenzidine			0.00800	0.01259		mg/L		157	15 - 162	38	40
3-Nitroaniline			0.00800	0.01095		mg/L		137	10 - 150	15	20
4,6-Dinitro-2-methylphenol			0.0160	0.008923	*	mg/L		56	25 - 140	21	20
4-Bromophenyl phenyl ether			0.00800	0.004860		mg/L		61	42 - 138	14	20
4-Chloro-3-methylphenol			0.00800	0.004846		mg/L		61	34 - 145	18	20

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline			0.00800	0.007410	*	mg/L		93	10 - 150	23	20
4-Chlorophenyl phenyl ether			0.00800	0.005296		mg/L		66	39 - 137	5	20
4-Nitroaniline			0.00800	0.005516		mg/L		69	10 - 150	15	20
4-Nitrophenol			0.0160	0.007471	*	mg/L		47	10 - 140	24	20
Acenaphthene			0.00800	0.004795		mg/L		60	41 - 130	0	20
Acenaphthylene			0.00800	0.005051		mg/L		63	42 - 130	5	20
Acetophenone			0.00800	0.005104		mg/L		64	33 - 133	9	20
Anthracene			0.00800	0.005571		mg/L		70	42 - 136	1	20
Benzo[a]anthracene			0.00800	0.005332		mg/L		67	41 - 150	2	20
Benzo[a]pyrene			0.00800	0.006314		mg/L		79	35 - 150	1	20
Benzo[b]fluoranthene			0.00800	0.005557		mg/L		69	35 - 150	10	20
Benzo[g,h,i]perylene			0.00800	0.007142		mg/L		89	10 - 150	10	20
Benzo[k]fluoranthene			0.00800	0.006642		mg/L		83	35 - 150	6	20
bis (2-Chloroisopropyl) ether			0.00800	0.005358		mg/L		67	20 - 138	6	20
Bis(2-chloroethoxy)methane			0.00800	0.005762		mg/L		72	33 - 135	2	20
Bis(2-chloroethyl)ether			0.00800	0.004481		mg/L		56	29 - 138	2	20
Bis(2-ethylhexyl) phthalate			0.00800	0.006568		mg/L		82	40 - 150	2	20
Butyl benzyl phthalate			0.00800	0.004765		mg/L		60	35 - 150	11	20
Carbazole			0.00800	0.005335	*	mg/L		67	10 - 150	45	20
Chrysene			0.00800	0.007077		mg/L		88	43 - 142	7	20
Dibenz(a,h)anthracene			0.00800	0.007325		mg/L		92	10 - 150	11	20
Dibenzofuran			0.00800	0.005709		mg/L		71	42 - 130	10	20
Diethyl phthalate			0.00800	0.005682		mg/L		71	20 - 150	11	20
Dimethyl phthalate			0.00800	0.005367		mg/L		67	33 - 144	3	20
Di-n-butyl phthalate			0.00800	0.005930		mg/L		74	34 - 150	13	20
Di-n-octyl phthalate			0.00800	0.006273		mg/L		78	40 - 150	7	20
Fluoranthene			0.00800	0.005377		mg/L		67	42 - 146	18	20
Fluorene			0.00800	0.005909		mg/L		74	40 - 138	7	20
Hexachlorobenzene			0.00800	0.004774		mg/L		60	35 - 138	1	20
Hexachlorobutadiene			0.00800	0.003437		mg/L		43	31 - 136	5	20
Hexachlorocyclopentadiene			0.00800	0.003872		mg/L		48	10 - 130	3	20
Hexachloroethane			0.00800	0.004043		mg/L		51	25 - 141	3	20
Indeno[1,2,3-cd]pyrene			0.00800	0.006811		mg/L		85	10 - 150	3	20
Isophorone			0.00800	0.005551		mg/L		69	28 - 134	8	20
Naphthalene			0.00800	0.004691		mg/L		59	21 - 150	9	20
Nitrobenzene			0.00800	0.005894		mg/L		74	38 - 134	11	20
N-Nitrosodi-n-propylamine			0.00800	0.005412		mg/L		68	26 - 146	8	20
N-Nitrosodiphenylamine			0.00800	0.005296		mg/L		66	50 - 150	3	20
Pentachlorophenol			0.0160	0.004127		mg/L		26	10 - 130	8	20
Phenanthrene			0.00800	0.004696		mg/L		59	38 - 138	5	20
Phenol			0.00800	0.004106		mg/L		51	10 - 150	7	20
Pyrene			0.00800	0.004895		mg/L		61	36 - 146	6	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*73*		*17 - 137*
2-Fluorobiphenyl	*62*		*36 - 130*
2-Fluorophenol	*53*		*12 - 130*
Nitrobenzene-d5	*67*		*40 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Phenol-d5 (Surr)	50		10 - 130
Terphenyl-d14	72		52 - 130

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

GC/MS VOA

Analysis Batch: 276735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193267-1	4	Total/NA	Water	8260B	
MB 600-276735/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276735/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276735/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 276931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193267-1	4	Total/NA	Water	3510C LVI	
MB 600-276931/1-A	Method Blank	Total/NA	Water	3510C LVI	
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	3510C LVI	
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	3510C LVI	

Analysis Batch: 276980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-276931/1-A	Method Blank	Total/NA	Water	8270C LL	276931
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	8270C LL	276931
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	276931

Analysis Batch: 277050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193267-1	4	Total/NA	Water	8270C LL	276931

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 4 10-03-19

Job ID: 600-193267-1

Client Sample ID: 4

Date Collected: 10/03/19 10:40
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193267-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	276735	10/07/19 15:13	YX1	TAL HOU
Total/NA	Prep	3510C LVI			250 mL	1 mL	276931	10/08/19 16:26	ARS	TAL HOU
Total/NA	Analysis	8270C LL		20	1 mL	1.0 mL	277050	10/09/19 22:58	PXS	TAL HOU

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193267-1
Project/Site: Terracon Site 4 10-03-19

Laboratory: Eurofins TestAmerica, Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-18-23	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,2-Dichloroethene, Total
8270C LL	3510C LVI	Water	3 & 4 Methylphenol

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins

Client Information	Sampler: R. Calvino	Lab PM: Joiner, Dean A	Carrier Tracking No(s):	COC No: 600-71021-19427.1
Client Contact: ~~Meg Haile~~ Ralph Calvino	Phone: 832-783-8332	E-Mail: dean.joiner@testamericainc.com		Page: Page 1 of 1
Company: Terracon Consulting Eng & Scientists				Job #: 92197619
Address: 11555 Clay Road Suite 100	Due Date Requested:			
City: Houston	TAT Requested (days): ~~5 WD TAT Level 3e~~ Standard TAT			
State, Zip: TX, 77043				
Phone: ~~713-329-2566(Tel)~~ 832-235-3936	PO #: Purchase Order Requested			
Email: ~~Meg.Haile@terracon.com~~ Ralph.Calvino@terracon.com	WO #:			
Project Name: Water Analysis	Project #: 60011379 Analytical Grp: Water 2019			
Site: 4	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_LL VOCs	8270C_LL SVOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N		
4	10/3/19	1040	G	Water			X	X	5	

600-193267 Chain of Custody

RC 10/3/19

Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological	**Sample Disposal (A fee may be assessed if samples are retained lon** ☐ Return To Client ☐ Disposal By Lab ☐ Archive For
Deliverable Requested: I, II, III, IV, Other (specify) Standard	Special Instructions/QC Requirements:
Empty Kit Relinquished by:	Date: Time: Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/3/19 1324	Terracon	Santa Jones	10/3/19 13:24	TAT
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Eurofins TestAmerica Houston

Loc: 600
193267

eurofins | Environment Testing TestAmerica

19OCT 3 13:24

Sample Receipt Checklis

Date/Time Received: _____

JOB NUMBER: 193267

CLIENT: Terracon

UNPACKED BY: LD

CARRIER/DRIVER: client

Custody Seal Present: ☐YES ☐NO

Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
SBW	Y / N	Y / (N)	4.5	678	-0.3	4.2
SBW	Y / N	Y / (N)	4.3	678	-0.3	4.0
* SBW	Y / N	Y / (N)	3.0	678	-0.3	2.7
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8
SBW	Y / N	Y / (N)	3.8	678	-0.3	3.5
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8

CF = correction factor

Samples received on ice? ☑YES ☐NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑NO ☐YES

Base samples are>pH 12: ☐YES ☐NO

Acid preserved are<pH 2: ☐YES ☐NO

TX1005 samples frozen upon receipt: ☐ YES

DATE & TIME PUT IN FREEZER: _____

pH paper Lot #_____

VOA headspace acceptable (5-6mm): ☑YES ☐NO ☐NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☑YES	☐ NO

COMMENTS:

HS-SA-WI-013

Rev. 4A: 08/26/2019

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 600-193267-1

Login Number: 193267

List Source: Eurofins TestAmerica, Houston

List Number: 1

Creator: Taylor, Jacquelyn R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-193265-1
Client Project/Site: Terracon Reg. Compliance - Site # 5
Revision: 1

For:
Terracon Consulting Eng & Scientists
11555 Clay Road
Suite 100
Houston, Texas 77043

Attn: Meg Haile

Dean A. Joiner

Authorized for release by:
10/22/2019 10:40:44 AM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Case Narrative

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193265-1
Project/Site: Terracon Reg. Compliance - Site # 5

Job ID: 600-193265-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-193265-1

Comments
No additional comments.

Receipt
The sample was received on 10/3/2019 1:24 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.2º C.

GC/MS VOA
Method 8260B: The following samples were diluted due to the nature of the sample matrix: 5 (600-193265-1), (600-193265-B-1-B MS), (600-193456-A-1-C), (600-193456-A-1-D MS) and (600-193456-A-1-C MSD). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C LL: The following sample required a dilution due to the nature of the sample matrix: 5 (600-193265-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8270C LL: The following sample was diluted due to the nature of the sample matrix: 5 (600-193265-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193265-1
Project/Site: Terracon Reg. Compliance - Site # 5

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL HOU
3510C LVI	Liquid-Liquid Extraction (Separatory Funnel) LVI	SW846	TAL HOU
5030B	Purge and Trap	SW846	TAL HOU

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193265-1
Project/Site: Terracon Reg. Compliance - Site # 5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-193265-1	5	Water	10/03/19 11:00	10/03/19 13:24	

Client Sample ID: 5
Lab Sample ID: 600-193265-1

Date Collected: 10/03/19 11:00
Matrix: Water

Date Received: 10/03/19 13:24

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 14:21	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 14:21	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 14:21	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 14:21	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 14:21	1
1,2,4-Trimethylbenzene	**0.00130**		0.00100	0.000215	mg/L			10/07/19 14:21	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 14:21	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 14:21	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 14:21	1
1,3,5-Trimethylbenzene	**0.00107**		0.00100	0.000210	mg/L			10/07/19 14:21	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 14:21	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 14:21	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 14:21	1
Acetone	**0.00935**		0.00500	0.000447	mg/L			10/07/19 14:21	1
Benzene	**0.00267**		0.00100	0.000176	mg/L			10/07/19 14:21	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 14:21	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 14:21	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 14:21	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 14:21	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 14:21	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 14:21	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 14:21	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 14:21	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 14:21	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 14:21	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 14:21	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 14:21	1
Ethylbenzene	**0.00217**		0.00100	0.000212	mg/L			10/07/19 14:21	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 14:21	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 14:21	1
m-Xylene & p-Xylene	**0.00342**		0.00100	0.000205	mg/L			10/07/19 14:21	1
Naphthalene	**0.00119**	**J B**	0.00200	0.000129	mg/L			10/07/19 14:21	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 14:21	1
o-Xylene	**0.00130**		0.00100	0.000192	mg/L			10/07/19 14:21	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 14:21	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 14:21	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 14:21	1
Toluene	**0.00185**		0.00100	0.000198	mg/L			10/07/19 14:21	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 14:21	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 14:21	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 14:21	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 14:21	1
Xylenes, Total	**0.00472**		0.00100	0.000366	mg/L			10/07/19 14:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*50 - 134*		*10/07/19 14:21*	*1*
4-Bromofluorobenzene	*111*		*67 - 139*		*10/07/19 14:21*	*1*
Dibromofluoromethane	*89*		*62 - 130*		*10/07/19 14:21*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*10/07/19 14:21*	*1*

Client Sample ID: 5
Date Collected: 10/03/19 11:00
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193265-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.0365	U	0.0750	0.0365	mg/L		10/08/19 16:26	10/10/19 10:24	50
2,4,5-Trichlorophenol	0.0145	U	0.100	0.0145	mg/L		10/08/19 16:26	10/10/19 10:24	50
2,4,6-Trichlorophenol	0.0165	U	0.100	0.0165	mg/L		10/08/19 16:26	10/10/19 10:24	50
2,4-Dichlorophenol	0.0130	U	0.125	0.0130	mg/L		10/08/19 16:26	10/10/19 10:24	50
2,4-Dimethylphenol	0.00900	U	0.125	0.00900	mg/L		10/08/19 16:26	10/10/19 10:24	50
2,4-Dinitrophenol	0.0200	U *	0.250	0.0200	mg/L		10/08/19 16:26	10/10/19 10:24	50
2,4-Dinitrotoluene	0.0160	U	0.0750	0.0160	mg/L		10/08/19 16:26	10/10/19 10:24	50
2,6-Dinitrotoluene	0.0145	U	0.0500	0.0145	mg/L		10/08/19 16:26	10/10/19 10:24	50
2-Chloronaphthalene	0.00950	U	0.0750	0.00950	mg/L		10/08/19 16:26	10/10/19 10:24	50
2-Chlorophenol	0.0110	U	0.100	0.0110	mg/L		10/08/19 16:26	10/10/19 10:24	50
2-Methylnaphthalene	0.00700	U	0.0750	0.00700	mg/L		10/08/19 16:26	10/10/19 10:24	50
2-Methylphenol	0.00950	U	0.0750	0.00950	mg/L		10/08/19 16:26	10/10/19 10:24	50
2-Nitroaniline	0.0175	U	0.125	0.0175	mg/L		10/08/19 16:26	10/10/19 10:24	50
2-Nitrophenol	0.0110	U	0.0500	0.0110	mg/L		10/08/19 16:26	10/10/19 10:24	50
3 & 4 Methylphenol	0.00800	U	0.0500	0.00800	mg/L		10/08/19 16:26	10/10/19 10:24	50
3,3'-Dichlorobenzidine	0.0160	U	0.250	0.0160	mg/L		10/08/19 16:26	10/10/19 10:24	50
3-Nitroaniline	0.00650	U	0.125	0.00650	mg/L		10/08/19 16:26	10/10/19 10:24	50
4,6-Dinitro-2-methylphenol	0.00800	U *	0.100	0.00800	mg/L		10/08/19 16:26	10/10/19 10:24	50
4-Bromophenyl phenyl ether	0.0125	U	0.0750	0.0125	mg/L		10/08/19 16:26	10/10/19 10:24	50
4-Chloro-3-methylphenol	0.0125	U	0.0500	0.0125	mg/L		10/08/19 16:26	10/10/19 10:24	50
4-Chloroaniline	0.00550	U *	0.0500	0.00550	mg/L		10/08/19 16:26	10/10/19 10:24	50
4-Chlorophenyl phenyl ether	0.0115	U	0.0750	0.0115	mg/L		10/08/19 16:26	10/10/19 10:24	50
4-Nitroaniline	0.0115	U	0.125	0.0115	mg/L		10/08/19 16:26	10/10/19 10:24	50
4-Nitrophenol	0.0165	U *	0.125	0.0165	mg/L		10/08/19 16:26	10/10/19 10:24	50
Acenaphthene	0.00800	U	0.0500	0.00800	mg/L		10/08/19 16:26	10/10/19 10:24	50
Acenaphthylene	0.00800	U	0.0500	0.00800	mg/L		10/08/19 16:26	10/10/19 10:24	50
Acetophenone	0.0340	U	0.0750	0.0340	mg/L		10/08/19 16:26	10/10/19 10:24	50
Anthracene	0.0220	U	0.0750	0.0220	mg/L		10/08/19 16:26	10/10/19 10:24	50
Benzo[a]anthracene	0.0125	U	0.100	0.0125	mg/L		10/08/19 16:26	10/10/19 10:24	50
Benzo[a]pyrene	0.00650	U	0.0750	0.00650	mg/L		10/08/19 16:26	10/10/19 10:24	50
Benzo[b]fluoranthene	0.00900	U	0.100	0.00900	mg/L		10/08/19 16:26	10/10/19 10:24	50
Benzo[g,h,i]perylene	0.0175	U	0.100	0.0175	mg/L		10/08/19 16:26	10/10/19 10:24	50
Benzo[k]fluoranthene	0.00800	U	0.100	0.00800	mg/L		10/08/19 16:26	10/10/19 10:24	50
bis (2-Chloroisopropyl) ether	0.00900	U	0.0500	0.00900	mg/L		10/08/19 16:26	10/10/19 10:24	50
Bis(2-chloroethoxy)methane	0.00950	U	0.0750	0.00950	mg/L		10/08/19 16:26	10/10/19 10:24	50
Bis(2-chloroethyl)ether	0.00900	U	0.0750	0.00900	mg/L		10/08/19 16:26	10/10/19 10:24	50
Bis(2-ethylhexyl) phthalate	0.0295	U	0.125	0.0295	mg/L		10/08/19 16:26	10/10/19 10:24	50
Butyl benzyl phthalate	0.0425	U	0.125	0.0425	mg/L		10/08/19 16:26	10/10/19 10:24	50
Carbazole	0.0175	U *	0.250	0.0175	mg/L		10/08/19 16:26	10/10/19 10:24	50
Chrysene	0.0120	U	0.0750	0.0120	mg/L		10/08/19 16:26	10/10/19 10:24	50
Dibenz(a,h)anthracene	0.0145	U	0.100	0.0145	mg/L		10/08/19 16:26	10/10/19 10:24	50
Dibenzofuran	0.00800	U	0.0750	0.00800	mg/L		10/08/19 16:26	10/10/19 10:24	50
Diethyl phthalate	0.210	U	0.250	0.210	mg/L		10/08/19 16:26	10/10/19 10:24	50
Dimethyl phthalate	0.00900	U	0.125	0.00900	mg/L		10/08/19 16:26	10/10/19 10:24	50
Di-n-butyl phthalate	0.0935	U	0.250	0.0935	mg/L		10/08/19 16:26	10/10/19 10:24	50
Di-n-octyl phthalate	0.00800	U	0.250	0.00800	mg/L		10/08/19 16:26	10/10/19 10:24	50
Fluoranthene	0.0155	U	0.100	0.0155	mg/L		10/08/19 16:26	10/10/19 10:24	50
Fluorene	0.00600	U	0.0750	0.00600	mg/L		10/08/19 16:26	10/10/19 10:24	50
Hexachlorobenzene	0.0125	U	0.0750	0.0125	mg/L		10/08/19 16:26	10/10/19 10:24	50

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Reg. Compliance - Site # 5

Job ID: 600-193265-1

Client Sample ID: 5
Date Collected: 10/03/19 11:00
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193265-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	0.00950	U	0.100	0.00950	mg/L		10/08/19 16:26	10/10/19 10:24	50
Hexachlorocyclopentadiene	0.00750	U	0.0750	0.00750	mg/L		10/08/19 16:26	10/10/19 10:24	50
Hexachloroethane	0.00850	U	0.100	0.00850	mg/L		10/08/19 16:26	10/10/19 10:24	50
Indeno[1,2,3-cd]pyrene	0.0145	U	0.100	0.0145	mg/L		10/08/19 16:26	10/10/19 10:24	50
Isophorone	0.00750	U	0.0750	0.00750	mg/L		10/08/19 16:26	10/10/19 10:24	50
Naphthalene	0.00800	U	0.100	0.00800	mg/L		10/08/19 16:26	10/10/19 10:24	50
Nitrobenzene	0.0100	U	0.0750	0.0100	mg/L		10/08/19 16:26	10/10/19 10:24	50
N-Nitrosodi-n-propylamine	0.0120	U	0.125	0.0120	mg/L		10/08/19 16:26	10/10/19 10:24	50
N-Nitrosodiphenylamine	0.0165	U	0.0750	0.0165	mg/L		10/08/19 16:26	10/10/19 10:24	50
Pentachlorophenol	0.0480	U	0.125	0.0480	mg/L		10/08/19 16:26	10/10/19 10:24	50
Phenanthrene	0.0145	U	0.0750	0.0145	mg/L		10/08/19 16:26	10/10/19 10:24	50
Phenol	0.00700	U	0.0750	0.00700	mg/L		10/08/19 16:26	10/10/19 10:24	50
Pyrene	0.0165	U	0.100	0.0165	mg/L		10/08/19 16:26	10/10/19 10:24	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*0*	*X*	*17 - 137*	*10/08/19 16:26*	*10/10/19 10:24*	*50*
2-Fluorobiphenyl	*0*	*X*	*36 - 130*	*10/08/19 16:26*	*10/10/19 10:24*	*50*
2-Fluorophenol	*0*	*X*	*12 - 130*	*10/08/19 16:26*	*10/10/19 10:24*	*50*
Nitrobenzene-d5	*0*	*X*	*40 - 130*	*10/08/19 16:26*	*10/10/19 10:24*	*50*
Phenol-d5 (Surr)	*0*	*X*	*10 - 130*	*10/08/19 16:26*	*10/10/19 10:24*	*50*
Terphenyl-d14	*0*	*X*	*52 - 130*	*10/08/19 16:26*	*10/10/19 10:24*	*50*

Definitions/Glossary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193265-1
Project/Site: Terracon Reg. Compliance - Site # 5

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Reg. Compliance - Site # 5

Job ID: 600-193265-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (50-134)	BFB (67-139)	DBFM (62-130)	TOL (70-130)
600-193265-1	5	89	111	89	106
LCS 600-276735/3	Lab Control Sample	87	111	91	105
LCSD 600-276735/4	Lab Control Sample Dup	83	110	93	104
MB 600-276735/6	Method Blank	96	113	96	106

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	TBP (17-137)	FBP (36-130)	2FP (12-130)	NBZ (40-130)	PHL (10-130)	TPHL (52-130)
600-193265-1	5	0 X	0 X	0 X	0 X	0 X	0 X
LCS 600-276931/2-A	Lab Control Sample	79	66	58	73	50	83
LCSD 600-276931/3-A	Lab Control Sample Dup	73	62	53	67	50	72
MB 600-276931/1-A	Method Blank	74	77	59	86	51	90

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 13:55	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 13:55	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 13:55	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 13:55	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 13:55	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 13:55	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 13:55	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 13:55	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 13:55	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 13:55	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 13:55	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 13:55	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 13:55	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 13:55	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 13:55	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 13:55	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 13:55	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 13:55	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 13:55	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 13:55	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 13:55	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 13:55	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 13:55	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 13:55	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/07/19 13:55	1
Naphthalene	0.0005119	J	0.00200	0.000129	mg/L			10/07/19 13:55	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 13:55	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 13:55	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 13:55	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 13:55	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 13:55	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 13:55	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 13:55	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*50 - 134*		*10/07/19 13:55*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/07/19 13:55*	*1*
Dibromofluoromethane	*96*		*62 - 130*		*10/07/19 13:55*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		70 - 130		10/07/19 13:55	1

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009939		mg/L		99	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01161		mg/L		116	58 - 133
1,1,2-Trichloroethane	0.0100	0.008432		mg/L		84	70 - 130
1,1-Dichloroethane	0.0100	0.01117		mg/L		112	70 - 140
1,1-Dichloroethene	0.0100	0.01047		mg/L		105	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009523		mg/L		95	70 - 130
1,2-Dichloroethane	0.0100	0.008545		mg/L		85	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01940		mg/L		97	69 - 130
1,2-Dichloropropane	0.0100	0.01015		mg/L		102	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.009964		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01683		mg/L		84	41 - 141
2-Hexanone	0.0200	0.01294		mg/L		65	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01389		mg/L		69	62 - 136
Acetone	0.0200	0.01300		mg/L		65	18 - 144
Benzene	0.0100	0.01007		mg/L		101	70 - 130
Bromodichloromethane	0.0100	0.009399		mg/L		94	70 - 131
Bromoform	0.0100	0.006534		mg/L		65	54 - 133
Bromomethane	0.0100	0.007027		mg/L		70	25 - 150
Carbon disulfide	0.0100	0.01070		mg/L		107	55 - 150
Carbon tetrachloride	0.0100	0.009915		mg/L		99	70 - 144
Chlorobenzene	0.0100	0.008985		mg/L		90	69 - 130
Chloroethane	0.0100	0.006654		mg/L		67	47 - 150
Chloroform	0.0100	0.01062		mg/L		106	70 - 130
Chloromethane	0.0100	0.006610		mg/L		66	10 - 150
cis-1,2-Dichloroethene	0.0100	0.009690		mg/L		97	68 - 130
cis-1,3-Dichloropropene	0.0100	0.009382		mg/L		94	57 - 130
Dibromochloromethane	0.0100	0.007488		mg/L		75	62 - 130
Ethylbenzene	0.0100	0.009466		mg/L		95	70 - 130
Methyl tert-butyl ether	0.0100	0.008257		mg/L		83	56 - 132
Methylene Chloride	0.0100	0.01102		mg/L		110	55 - 147
m-Xylene & p-Xylene	0.0100	0.009305		mg/L		93	70 - 130
Naphthalene	0.0100	0.007379		mg/L		74	10 - 150
n-Butylbenzene	0.0100	0.01044		mg/L		104	70 - 130
o-Xylene	0.0100	0.009219		mg/L		92	70 - 130
sec-Butylbenzene	0.0100	0.01057		mg/L		106	68 - 130
Styrene	0.0100	0.008290		mg/L		83	70 - 130
Tetrachloroethene	0.0100	0.009626		mg/L		96	47 - 150
Toluene	0.0100	0.01003		mg/L		100	70 - 130
trans-1,2-Dichloroethene	0.0100	0.009712		mg/L		97	68 - 131
trans-1,3-Dichloropropene	0.0100	0.008328		mg/L		83	60 - 130
Trichloroethene	0.0100	0.009269		mg/L		93	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			0.0100	0.009980		mg/L		100	33 - 150		
Xylenes, Total			0.0200	0.01852		mg/L		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*91*		*62 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			0.0100	0.01039		mg/L		104	70 - 136	4	20
1,1,2,2-Tetrachloroethane			0.0100	0.01261		mg/L		126	58 - 133	8	20
1,1,2-Trichloroethane			0.0100	0.009221		mg/L		92	70 - 130	9	20
1,1-Dichloroethane			0.0100	0.01108		mg/L		111	70 - 140	1	20
1,1-Dichloroethene			0.0100	0.01103		mg/L		110	58 - 148	5	20
1,2,4-Trimethylbenzene			0.0100	0.009707		mg/L		97	70 - 130	2	20
1,2-Dichloroethane			0.0100	0.009452		mg/L		95	67 - 134	10	20
1,2-Dichloroethene, Total			0.0200	0.02053		mg/L		103	69 - 130	6	20
1,2-Dichloropropane			0.0100	0.01129		mg/L		113	70 - 130	11	20
1,3,5-Trimethylbenzene			0.0100	0.01003		mg/L		100	69 - 130	1	20
2-Butanone (MEK)			0.0200	0.01906		mg/L		95	41 - 141	12	20
2-Hexanone			0.0200	0.01480		mg/L		74	56 - 130	13	20
4-Methyl-2-pentanone (MIBK)			0.0200	0.01580		mg/L		79	62 - 136	13	20
Acetone			0.0200	0.01439		mg/L		72	18 - 144	10	20
Benzene			0.0100	0.01057		mg/L		106	70 - 130	5	20
Bromodichloromethane			0.0100	0.01008		mg/L		101	70 - 131	7	20
Bromoform			0.0100	0.007023		mg/L		70	54 - 133	7	20
Bromomethane			0.0100	0.007279		mg/L		73	25 - 150	4	20
Carbon disulfide			0.0100	0.01109		mg/L		111	55 - 150	4	20
Carbon tetrachloride			0.0100	0.01040		mg/L		104	70 - 144	5	20
Chlorobenzene			0.0100	0.009318		mg/L		93	69 - 130	4	20
Chloroethane			0.0100	0.007113		mg/L		71	47 - 150	7	20
Chloroform			0.0100	0.01123		mg/L		112	70 - 130	6	20
Chloromethane			0.0100	0.007335		mg/L		73	10 - 150	10	20
cis-1,2-Dichloroethene			0.0100	0.01033		mg/L		103	68 - 130	6	20
cis-1,3-Dichloropropene			0.0100	0.009876		mg/L		99	57 - 130	5	20
Dibromochloromethane			0.0100	0.008131		mg/L		81	62 - 130	8	20
Ethylbenzene			0.0100	0.009659		mg/L		97	70 - 130	2	20
Methyl tert-butyl ether			0.0100	0.009296		mg/L		93	56 - 132	12	20
Methylene Chloride			0.0100	0.01097		mg/L		110	55 - 147	0	20
m-Xylene & p-Xylene			0.0100	0.009732		mg/L		97	70 - 130	4	20
Naphthalene			0.0100	0.008643		mg/L		86	10 - 150	16	20
n-Butylbenzene			0.0100	0.01046		mg/L		105	70 - 130	0	20
o-Xylene			0.0100	0.009587		mg/L		96	70 - 130	4	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
sec-Butylbenzene			0.0100	0.01039		mg/L		104	68 - 130	2	20
Styrene			0.0100	0.008882		mg/L		89	70 - 130	7	20
Tetrachloroethene			0.0100	0.009852		mg/L		99	47 - 150	2	20
Toluene			0.0100	0.01027		mg/L		103	70 - 130	2	20
trans-1,2-Dichloroethene			0.0100	0.01020		mg/L		102	68 - 131	5	20
trans-1,3-Dichloropropene			0.0100	0.009137		mg/L		91	60 - 130	9	20
Trichloroethene			0.0100	0.009859		mg/L		99	70 - 130	6	20
Vinyl chloride			0.0100	0.01087		mg/L		109	33 - 150	8	20
Xylenes, Total			0.0200	0.01932		mg/L		97	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*50 - 134*
4-Bromofluorobenzene	*110*		*67 - 139*
Dibromofluoromethane	*93*		*62 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.000730	U	0.00150	0.000730	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,5-Trichlorophenol	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,6-Trichlorophenol	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dichlorophenol	0.000260	U	0.00250	0.000260	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dimethylphenol	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrophenol	0.000400	U	0.00500	0.000400	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrotoluene	0.000320	U	0.00150	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,6-Dinitrotoluene	0.000290	U	0.00100	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chloronaphthalene	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chlorophenol	0.000220	U	0.00200	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylnaphthalene	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylphenol	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitroaniline	0.000350	U	0.00250	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitrophenol	0.000220	U	0.00100	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
3 & 4 Methylphenol	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
3,3'-Dichlorobenzidine	0.000320	U	0.00500	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
3-Nitroaniline	0.000130	U	0.00250	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
4,6-Dinitro-2-methylphenol	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Bromophenyl phenyl ether	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloro-3-methylphenol	0.000250	U	0.00100	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloroaniline	0.000110	U	0.00100	0.000110	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chlorophenyl phenyl ether	0.000230	U	0.00150	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitroaniline	0.000230	U	0.00250	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitrophenol	0.000330	U	0.00250	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthylene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	0.000680	U	0.00150	0.000680	mg/L		10/08/19 16:26	10/09/19 12:46	1
Anthracene	0.000440	U	0.00150	0.000440	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]anthracene	0.000250	U	0.00200	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]pyrene	0.000130	U	0.00150	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[b]fluoranthene	0.000180	U	0.00200	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[g,h,i]perylene	0.000350	U	0.00200	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[k]fluoranthene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
bis (2-Chloroisopropyl) ether	0.000180	U	0.00100	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethoxy)methane	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethyl)ether	0.000180	U	0.00150	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-ethylhexyl) phthalate	0.000590	U	0.00250	0.000590	mg/L		10/08/19 16:26	10/09/19 12:46	1
Butyl benzyl phthalate	0.000850	U	0.00250	0.000850	mg/L		10/08/19 16:26	10/09/19 12:46	1
Carbazole	0.000350	U	0.00500	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Chrysene	0.000240	U	0.00150	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenz(a,h)anthracene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenzofuran	0.000160	U	0.00150	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Diethyl phthalate	0.00419	U	0.00500	0.00419	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dimethyl phthalate	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-butyl phthalate	0.00187	U	0.00500	0.00187	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-octyl phthalate	0.000160	U	0.00500	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluoranthene	0.000310	U	0.00200	0.000310	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluorene	0.000120	U	0.00150	0.000120	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobenzene	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobutadiene	0.000190	U	0.00200	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorocyclopentadiene	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachloroethane	0.000170	U	0.00200	0.000170	mg/L		10/08/19 16:26	10/09/19 12:46	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Isophorone	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Naphthalene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Nitrobenzene	0.000200	U	0.00150	0.000200	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodi-n-propylamine	0.000240	U	0.00250	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodiphenylamine	0.000330	U	0.00150	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pentachlorophenol	0.000960	U	0.00250	0.000960	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenanthrene	0.000290	U	0.00150	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenol	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pyrene	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*17 - 137*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorobiphenyl	*77*		*36 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorophenol	*59*		*12 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Nitrobenzene-d5	*86*		*40 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Phenol-d5 (Surr)	*51*		*10 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Terphenyl-d14	*90*		*52 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	0.00800	0.005004		mg/L		63	41 - 130
2,4,5-Trichlorophenol	0.00800	0.005148		mg/L		64	38 - 140
2,4,6-Trichlorophenol	0.00800	0.004856		mg/L		61	34 - 148
2,4-Dichlorophenol	0.00800	0.005080		mg/L		64	45 - 134
2,4-Dimethylphenol	0.00800	0.005130		mg/L		64	23 - 150
2,4-Dinitrophenol	0.0160	0.009369		mg/L		59	10 - 144
2,4-Dinitrotoluene	0.00800	0.005235		mg/L		65	17 - 150
2,6-Dinitrotoluene	0.00800	0.005281		mg/L		66	34 - 150
2-Chloronaphthalene	0.00800	0.005007		mg/L		63	38 - 135
2-Chlorophenol	0.00800	0.004753		mg/L		59	40 - 134
2-Methylnaphthalene	0.00800	0.005024		mg/L		63	23 - 150
2-Methylphenol	0.00800	0.004686		mg/L		59	31 - 150
2-Nitroaniline	0.00800	0.005204		mg/L		65	31 - 142
2-Nitrophenol	0.00800	0.005163		mg/L		65	40 - 134
3 & 4 Methylphenol	0.00800	0.005158		mg/L		64	25 - 146
3,3'-Dichlorobenzidine	0.00800	0.008607		mg/L		108	15 - 162
3-Nitroaniline	0.00800	0.009391		mg/L		117	10 - 150
4,6-Dinitro-2-methylphenol	0.0160	0.01104		mg/L		69	25 - 140
4-Bromophenyl phenyl ether	0.00800	0.005610		mg/L		70	42 - 138
4-Chloro-3-methylphenol	0.00800	0.005821		mg/L		73	34 - 145
4-Chloroaniline	0.00800	0.005883		mg/L		74	10 - 150
4-Chlorophenyl phenyl ether	0.00800	0.005015		mg/L		63	39 - 137
4-Nitroaniline	0.00800	0.004741		mg/L		59	10 - 150
4-Nitrophenol	0.0160	0.005890		mg/L		37	10 - 140
Acenaphthene	0.00800	0.004803		mg/L		60	41 - 130
Acenaphthylene	0.00800	0.004826		mg/L		60	42 - 130
Acetophenone	0.00800	0.004647		mg/L		58	33 - 133
Anthracene	0.00800	0.005512		mg/L		69	42 - 136
Benzo[a]anthracene	0.00800	0.005461		mg/L		68	41 - 150
Benzo[a]pyrene	0.00800	0.006224		mg/L		78	35 - 150
Benzo[b]fluoranthene	0.00800	0.005040		mg/L		63	35 - 150
Benzo[g,h,i]perylene	0.00800	0.006445		mg/L		81	10 - 150
Benzo[k]fluoranthene	0.00800	0.007044		mg/L		88	35 - 150
bis (2-Chloroisopropyl) ether	0.00800	0.005042		mg/L		63	20 - 138
Bis(2-chloroethoxy)methane	0.00800	0.005629		mg/L		70	33 - 135
Bis(2-chloroethyl)ether	0.00800	0.004401		mg/L		55	29 - 138
Bis(2-ethylhexyl) phthalate	0.00800	0.006462		mg/L		81	40 - 150
Butyl benzyl phthalate	0.00800	0.005298		mg/L		66	35 - 150
Carbazole	0.00800	0.003365	J	mg/L		42	10 - 150
Chrysene	0.00800	0.006572		mg/L		82	43 - 142
Dibenz(a,h)anthracene	0.00800	0.006584		mg/L		82	10 - 150
Dibenzofuran	0.00800	0.005178		mg/L		65	42 - 130
Diethyl phthalate	0.00800	0.005080		mg/L		63	20 - 150
Dimethyl phthalate	0.00800	0.005519		mg/L		69	33 - 144
Di-n-butyl phthalate	0.00800	0.005216		mg/L		65	34 - 150
Di-n-octyl phthalate	0.00800	0.005851		mg/L		73	40 - 150
Fluoranthene	0.00800	0.004489		mg/L		56	42 - 146
Fluorene	0.00800	0.005521		mg/L		69	40 - 138

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hexachlorobenzene			0.00800	0.004726		mg/L		59	35 - 138		
Hexachlorobutadiene			0.00800	0.003605		mg/L		45	31 - 136		
Hexachlorocyclopentadiene			0.00800	0.003746		mg/L		47	10 - 130		
Hexachloroethane			0.00800	0.003935		mg/L		49	25 - 141		
Indeno[1,2,3-cd]pyrene			0.00800	0.006617		mg/L		83	10 - 150		
Isophorone			0.00800	0.005126		mg/L		64	28 - 134		
Naphthalene			0.00800	0.005149		mg/L		64	21 - 150		
Nitrobenzene			0.00800	0.005261		mg/L		66	38 - 134		
N-Nitrosodi-n-propylamine			0.00800	0.005015		mg/L		63	26 - 146		
N-Nitrosodiphenylamine			0.00800	0.005154		mg/L		64	50 - 150		
Pentachlorophenol			0.0160	0.004484		mg/L		28	10 - 130		
Phenanthrene			0.00800	0.004919		mg/L		61	38 - 138		
Phenol			0.00800	0.003826		mg/L		48	10 - 150		
Pyrene			0.00800	0.005213		mg/L		65	36 - 146		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*79*		*17 - 137*
2-Fluorobiphenyl	*66*		*36 - 130*
2-Fluorophenol	*58*		*12 - 130*
Nitrobenzene-d5	*73*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*83*		*52 - 130*

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl			0.00800	0.004801		mg/L		60	41 - 130	4	20
2,4,5-Trichlorophenol			0.00800	0.005317		mg/L		66	38 - 140	3	20
2,4,6-Trichlorophenol			0.00800	0.005406		mg/L		68	34 - 148	11	20
2,4-Dichlorophenol			0.00800	0.004865		mg/L		61	45 - 134	4	20
2,4-Dimethylphenol			0.00800	0.005577		mg/L		70	23 - 150	8	20
2,4-Dinitrophenol			0.0160	0.003335	J *	mg/L		21	10 - 144	95	20
2,4-Dinitrotoluene			0.00800	0.005803		mg/L		73	17 - 150	10	20
2,6-Dinitrotoluene			0.00800	0.005759		mg/L		72	34 - 150	9	20
2-Chloronaphthalene			0.00800	0.004738		mg/L		59	38 - 135	6	20
2-Chlorophenol			0.00800	0.005032		mg/L		63	40 - 134	6	20
2-Methylnaphthalene			0.00800	0.004860		mg/L		61	23 - 150	3	20
2-Methylphenol			0.00800	0.004493		mg/L		56	31 - 150	4	20
2-Nitroaniline			0.00800	0.004753		mg/L		59	31 - 142	9	20
2-Nitrophenol			0.00800	0.004692		mg/L		59	40 - 134	10	20
3 & 4 Methylphenol			0.00800	0.005126		mg/L		64	25 - 146	1	20
3,3'-Dichlorobenzidine			0.00800	0.01259		mg/L		157	15 - 162	38	40
3-Nitroaniline			0.00800	0.01095		mg/L		137	10 - 150	15	20
4,6-Dinitro-2-methylphenol			0.0160	0.008923	*	mg/L		56	25 - 140	21	20
4-Bromophenyl phenyl ether			0.00800	0.004860		mg/L		61	42 - 138	14	20
4-Chloro-3-methylphenol			0.00800	0.004846		mg/L		61	34 - 145	18	20

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Client Sample ID: Lab Control Sample Dup
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 276980
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline			0.00800	0.007410	*	mg/L		93	10 - 150	23	20
4-Chlorophenyl phenyl ether			0.00800	0.005296		mg/L		66	39 - 137	5	20
4-Nitroaniline			0.00800	0.005516		mg/L		69	10 - 150	15	20
4-Nitrophenol			0.0160	0.007471	*	mg/L		47	10 - 140	24	20
Acenaphthene			0.00800	0.004795		mg/L		60	41 - 130	0	20
Acenaphthylene			0.00800	0.005051		mg/L		63	42 - 130	5	20
Acetophenone			0.00800	0.005104		mg/L		64	33 - 133	9	20
Anthracene			0.00800	0.005571		mg/L		70	42 - 136	1	20
Benzo[a]anthracene			0.00800	0.005332		mg/L		67	41 - 150	2	20
Benzo[a]pyrene			0.00800	0.006314		mg/L		79	35 - 150	1	20
Benzo[b]fluoranthene			0.00800	0.005557		mg/L		69	35 - 150	10	20
Benzo[g,h,i]perylene			0.00800	0.007142		mg/L		89	10 - 150	10	20
Benzo[k]fluoranthene			0.00800	0.006642		mg/L		83	35 - 150	6	20
bis (2-Chloroisopropyl) ether			0.00800	0.005358		mg/L		67	20 - 138	6	20
Bis(2-chloroethoxy)methane			0.00800	0.005762		mg/L		72	33 - 135	2	20
Bis(2-chloroethyl)ether			0.00800	0.004481		mg/L		56	29 - 138	2	20
Bis(2-ethylhexyl) phthalate			0.00800	0.006568		mg/L		82	40 - 150	2	20
Butyl benzyl phthalate			0.00800	0.004765		mg/L		60	35 - 150	11	20
Carbazole			0.00800	0.005335	*	mg/L		67	10 - 150	45	20
Chrysene			0.00800	0.007077		mg/L		88	43 - 142	7	20
Dibenz(a,h)anthracene			0.00800	0.007325		mg/L		92	10 - 150	11	20
Dibenzofuran			0.00800	0.005709		mg/L		71	42 - 130	10	20
Diethyl phthalate			0.00800	0.005682		mg/L		71	20 - 150	11	20
Dimethyl phthalate			0.00800	0.005367		mg/L		67	33 - 144	3	20
Di-n-butyl phthalate			0.00800	0.005930		mg/L		74	34 - 150	13	20
Di-n-octyl phthalate			0.00800	0.006273		mg/L		78	40 - 150	7	20
Fluoranthene			0.00800	0.005377		mg/L		67	42 - 146	18	20
Fluorene			0.00800	0.005909		mg/L		74	40 - 138	7	20
Hexachlorobenzene			0.00800	0.004774		mg/L		60	35 - 138	1	20
Hexachlorobutadiene			0.00800	0.003437		mg/L		43	31 - 136	5	20
Hexachlorocyclopentadiene			0.00800	0.003872		mg/L		48	10 - 130	3	20
Hexachloroethane			0.00800	0.004043		mg/L		51	25 - 141	3	20
Indeno[1,2,3-cd]pyrene			0.00800	0.006811		mg/L		85	10 - 150	3	20
Isophorone			0.00800	0.005551		mg/L		69	28 - 134	8	20
Naphthalene			0.00800	0.004691		mg/L		59	21 - 150	9	20
Nitrobenzene			0.00800	0.005894		mg/L		74	38 - 134	11	20
N-Nitrosodi-n-propylamine			0.00800	0.005412		mg/L		68	26 - 146	8	20
N-Nitrosodiphenylamine			0.00800	0.005296		mg/L		66	50 - 150	3	20
Pentachlorophenol			0.0160	0.004127		mg/L		26	10 - 130	8	20
Phenanthrene			0.00800	0.004696		mg/L		59	38 - 138	5	20
Phenol			0.00800	0.004106		mg/L		51	10 - 150	7	20
Pyrene			0.00800	0.004895		mg/L		61	36 - 146	6	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*73*		*17 - 137*
2-Fluorobiphenyl	*62*		*36 - 130*
2-Fluorophenol	*53*		*12 - 130*
Nitrobenzene-d5	*67*		*40 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Phenol-d5 (Surr)	50		10 - 130
Terphenyl-d14	72		52 - 130

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193265-1
Project/Site: Terracon Reg. Compliance - Site # 5

GC/MS VOA

Analysis Batch: 276735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193265-1	5	Total/NA	Water	8260B	
MB 600-276735/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276735/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276735/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 276931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193265-1	5	Total/NA	Water	3510C LVI	
MB 600-276931/1-A	Method Blank	Total/NA	Water	3510C LVI	
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	3510C LVI	
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	3510C LVI	

Analysis Batch: 276980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-276931/1-A	Method Blank	Total/NA	Water	8270C LL	276931
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	8270C LL	276931
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	276931

Analysis Batch: 277099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193265-1	5	Total/NA	Water	8270C LL	276931

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Reg. Compliance - Site # 5

Job ID: 600-193265-1

Client Sample ID: 5

Date Collected: 10/03/19 11:00
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193265-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	276735	10/07/19 14:21	YX1	TAL HOU
Total/NA	Prep	3510C LVI			250 mL	1 mL	276931	10/08/19 16:26	ARS	TAL HOU
Total/NA	Analysis	8270C LL		50	1 mL	1.0 mL	277099	10/10/19 10:24	EC1	TAL HOU

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193265-1
Project/Site: Terracon Reg. Compliance - Site # 5

Laboratory: Eurofins TestAmerica, Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-18-23	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,2-Dichloroethene, Total
8270C LL	3510C LVI	Water	3 & 4 Methylphenol

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins

Client Information	Sampler: R. Calvino	Lab PM: Joiner, Dean A	Carrier Tracking No(s):	COC No: 600-71021-19427.1
Client Contact: ~~Meg Heile~~ Ralph Calvino	Phone: 832-783-8332	E-Mail: dean.joiner@testamericainc.com		Page: Page 1 of 1
Company: Terracon Consulting Eng & Scientists				Job #: 9219 7619
Address: 11555 Clay Road Suite 100	Due Date Requested:	Analysis Requested		Preservation Codes:
City: Houston	TAT Requested (days): ~~5 WD TAT Level 3e~~ Standard TAT			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: TX, 77043				
Phone: ~~713-329-2500(Tel)~~ 832-783-8332	PO #: Purchase Order Requested			
Email: ~~Meg.Heile~~@terracon.com ralph.calvino@terracon.com	WO #:			Other:
Project Name: Waste Characterization	Project #: 60011379 Analytical Grp: TCLP 2019			
Site: ~~4~~ 5	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	TCLP BTEX	8270 LL PAH	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N		
5	10/3/19	1100	G	Water			X	X	3	

RC 10/3/19

600-193265 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) Standard

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	10/3/19 1324	Terracon	Sandra Joiner	10/3/19 13:24	TAT
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Loc: 600
193265

eurofins | Environment Testing TestAmerica

190CT 3 13:24

Eurofins TestAmerica Houston

Sample Receipt Checklist

Date/Time Received: _____

JOB NUMBER: 193265 CLIENT: Terracon

UNPACKED BY: LD CARRIER/DRIVER: client

Custody Seal Present: ☐YES ☐NO Number of Coolers Received: ~~4~~ 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
* SBW	Y / N	Y / (N)	4.5	678	-0.3	4.2
SBW	Y / N	Y / (N)	4.3	678	-0.3	4.0
SBW	Y / N	Y / (N)	3.0	678	-0.3	2.7
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8
SBW	Y / N	Y / (N)	3.8	678	-0.3	3.5
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8

CF = correction factor

Samples received on ice? ☑YES ☐NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑NO ☐YES

Base samples are>pH 12: ☐YES ☐NO Acid preserved are<pH 2: ☐YES ☐NO

TX1005 samples frozen upon receipt: ☐ YES DATE & TIME PUT IN FREEZER: _____

pH paper Lot #_____ VOA headspace acceptable (5-6mm): ☑YES ☐NO ☐NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☑YES	☐ NO

COMMENTS:

HS-SA-WI-013 Rev. 4A: 08/26/2019

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 600-193265-1

Login Number: 193265
List Number: 1
Creator: Taylor, Jacquelyn R

List Source: Eurofins TestAmerica, Houston

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Tel: (713)690-4444

Laboratory Job ID: 600-193266-1
Client Project/Site: Terracon Site 6 10-03-19

For:
Terracon Consulting Eng & Scientists
11555 Clay Road
Suite 100
Houston, Texas 77043

Attn: Meg Haile

Dean A. Joiner

Authorized for release by:
10/11/2019 4:41:57 PM

Dean Joiner, Project Manager II
(713)690-4444
dean.joiner@testamericainc.com

Table of Contents

Case Narrative

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 6 10-03-19

Job ID: 600-193266-1

Job ID: 600-193266-1

Laboratory: Eurofins TestAmerica, Houston

Narrative

Job Narrative
600-193266-1

Comments
No additional comments.

Receipt
The sample was received on 10/3/2019 1:24 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0º C.

GC/MS VOA
Method(s) 8260B: The method blank for analytical batch 600-276735 contained Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260B: The following compounds were outside control limits in the continuing calibration verification (CCV) associated with batch 600-276735: Naphthalene (-44.4%). These compounds are not classified as Calibration Check Compounds (CCCs) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. The D% of the compound is outside 35% limits but within 50% in house limits. Therefore; the data is valid and reportable.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method(s) 8270C LL: The continuing calibration verification (CCV) associated with batch 600-276980 recovered above the upper control limit for 4-Chloro-3-methylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 600-276980/2).

Method(s) 8270C LL: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 600-276931 and analytical batch 600-276980 recovered outside control limits for the following analytes: 2,4-Dinitrophenol, 4-Nitrophenol, 4-Chloroaniline, 4,6-Dinitro-2-methylphenol and Carbazole.

Method(s) 8270C LL: The following sample required a dilution due to the nature of the sample matrix: 6 (600-193266-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C LL: The following sample was diluted due to the nature of the sample matrix: 6 (600-193266-1). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Method Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193266-1
Project/Site: Terracon Site 6 10-03-19

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL HOU
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL HOU
3510C LVI	Liquid-Liquid Extraction (Separatory Funnel) LVI	SW846	TAL HOU
5030B	Purge and Trap	SW846	TAL HOU

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Sample Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 6 10-03-19

Job ID: 600-193266-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
600-193266-1	6	Water	10/03/19 11:30	10/03/19 13:24	

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 6 10-03-19

Job ID: 600-193266-1

Client Sample ID: 6
Date Collected: 10/03/19 11:30
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193266-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 14:47	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 14:47	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 14:47	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 14:47	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 14:47	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 14:47	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 14:47	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 14:47	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 14:47	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 14:47	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 14:47	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 14:47	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 14:47	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 14:47	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 14:47	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 14:47	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 14:47	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 14:47	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 14:47	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 14:47	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 14:47	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 14:47	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 14:47	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 14:47	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 14:47	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 14:47	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 14:47	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 14:47	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 14:47	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 14:47	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/07/19 14:47	1
Naphthalene	**0.000367**	**J B**	0.00200	0.000129	mg/L			10/07/19 14:47	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 14:47	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 14:47	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 14:47	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 14:47	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 14:47	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 14:47	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 14:47	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 14:47	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 14:47	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 14:47	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*50 - 134*		*10/07/19 14:47*	*1*
4-Bromofluorobenzene	*114*		*67 - 139*		*10/07/19 14:47*	*1*
Dibromofluoromethane	*92*		*62 - 130*		*10/07/19 14:47*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*10/07/19 14:47*	*1*

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 6 10-03-19

Job ID: 600-193266-1

Client Sample ID: 6
Date Collected: 10/03/19 11:30
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193266-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.0146	U	0.0300	0.0146	mg/L		10/08/19 16:26	10/09/19 22:34	20
2,4,5-Trichlorophenol	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 22:34	20
2,4,6-Trichlorophenol	0.00660	U	0.0400	0.00660	mg/L		10/08/19 16:26	10/09/19 22:34	20
2,4-Dichlorophenol	0.00520	U	0.0500	0.00520	mg/L		10/08/19 16:26	10/09/19 22:34	20
2,4-Dimethylphenol	0.00360	U	0.0500	0.00360	mg/L		10/08/19 16:26	10/09/19 22:34	20
2,4-Dinitrophenol	0.00800	U *	0.100	0.00800	mg/L		10/08/19 16:26	10/09/19 22:34	20
2,4-Dinitrotoluene	0.00640	U	0.0300	0.00640	mg/L		10/08/19 16:26	10/09/19 22:34	20
2,6-Dinitrotoluene	0.00580	U	0.0200	0.00580	mg/L		10/08/19 16:26	10/09/19 22:34	20
2-Chloronaphthalene	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 22:34	20
2-Chlorophenol	0.00440	U	0.0400	0.00440	mg/L		10/08/19 16:26	10/09/19 22:34	20
2-Methylnaphthalene	0.00280	U	0.0300	0.00280	mg/L		10/08/19 16:26	10/09/19 22:34	20
2-Methylphenol	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 22:34	20
2-Nitroaniline	0.00700	U	0.0500	0.00700	mg/L		10/08/19 16:26	10/09/19 22:34	20
2-Nitrophenol	0.00440	U	0.0200	0.00440	mg/L		10/08/19 16:26	10/09/19 22:34	20
3 & 4 Methylphenol	0.00320	U	0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 22:34	20
3,3'-Dichlorobenzidine	0.00640	U	0.100	0.00640	mg/L		10/08/19 16:26	10/09/19 22:34	20
3-Nitroaniline	0.00260	U	0.0500	0.00260	mg/L		10/08/19 16:26	10/09/19 22:34	20
4,6-Dinitro-2-methylphenol	0.00320	U *	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 22:34	20
4-Bromophenyl phenyl ether	0.00500	U	0.0300	0.00500	mg/L		10/08/19 16:26	10/09/19 22:34	20
4-Chloro-3-methylphenol	0.00500	U	0.0200	0.00500	mg/L		10/08/19 16:26	10/09/19 22:34	20
4-Chloroaniline	0.00220	U *	0.0200	0.00220	mg/L		10/08/19 16:26	10/09/19 22:34	20
4-Chlorophenyl phenyl ether	0.00460	U	0.0300	0.00460	mg/L		10/08/19 16:26	10/09/19 22:34	20
4-Nitroaniline	0.00460	U	0.0500	0.00460	mg/L		10/08/19 16:26	10/09/19 22:34	20
4-Nitrophenol	0.00660	U *	0.0500	0.00660	mg/L		10/08/19 16:26	10/09/19 22:34	20
Acenaphthene	0.00320	U	0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 22:34	20
Acenaphthylene	0.00320	U	0.0200	0.00320	mg/L		10/08/19 16:26	10/09/19 22:34	20
Acetophenone	0.0136	U	0.0300	0.0136	mg/L		10/08/19 16:26	10/09/19 22:34	20
Anthracene	0.00880	U	0.0300	0.00880	mg/L		10/08/19 16:26	10/09/19 22:34	20
Benzo[a]anthracene	0.00500	U	0.0400	0.00500	mg/L		10/08/19 16:26	10/09/19 22:34	20
Benzo[a]pyrene	0.00260	U	0.0300	0.00260	mg/L		10/08/19 16:26	10/09/19 22:34	20
Benzo[b]fluoranthene	0.00360	U	0.0400	0.00360	mg/L		10/08/19 16:26	10/09/19 22:34	20
Benzo[g,h,i]perylene	0.00700	U	0.0400	0.00700	mg/L		10/08/19 16:26	10/09/19 22:34	20
Benzo[k]fluoranthene	0.00320	U	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 22:34	20
bis (2-Chloroisopropyl) ether	0.00360	U	0.0200	0.00360	mg/L		10/08/19 16:26	10/09/19 22:34	20
Bis(2-chloroethoxy)methane	0.00380	U	0.0300	0.00380	mg/L		10/08/19 16:26	10/09/19 22:34	20
Bis(2-chloroethyl)ether	0.00360	U	0.0300	0.00360	mg/L		10/08/19 16:26	10/09/19 22:34	20
Bis(2-ethylhexyl) phthalate	0.0118	U	0.0500	0.0118	mg/L		10/08/19 16:26	10/09/19 22:34	20
Butyl benzyl phthalate	0.0170	U	0.0500	0.0170	mg/L		10/08/19 16:26	10/09/19 22:34	20
Carbazole	0.00700	U *	0.100	0.00700	mg/L		10/08/19 16:26	10/09/19 22:34	20
Chrysene	0.00480	U	0.0300	0.00480	mg/L		10/08/19 16:26	10/09/19 22:34	20
Dibenz(a,h)anthracene	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 22:34	20
Dibenzofuran	0.00320	U	0.0300	0.00320	mg/L		10/08/19 16:26	10/09/19 22:34	20
Diethyl phthalate	0.0838	U	0.100	0.0838	mg/L		10/08/19 16:26	10/09/19 22:34	20
Dimethyl phthalate	0.00360	U	0.0500	0.00360	mg/L		10/08/19 16:26	10/09/19 22:34	20
Di-n-butyl phthalate	0.0374	U	0.100	0.0374	mg/L		10/08/19 16:26	10/09/19 22:34	20
Di-n-octyl phthalate	0.00320	U	0.100	0.00320	mg/L		10/08/19 16:26	10/09/19 22:34	20
Fluoranthene	0.00620	U	0.0400	0.00620	mg/L		10/08/19 16:26	10/09/19 22:34	20
Fluorene	0.00240	U	0.0300	0.00240	mg/L		10/08/19 16:26	10/09/19 22:34	20
Hexachlorobenzene	0.00500	U	0.0300	0.00500	mg/L		10/08/19 16:26	10/09/19 22:34	20

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 6 10-03-19

Job ID: 600-193266-1

Client Sample ID: 6
Date Collected: 10/03/19 11:30
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193266-1
Matrix: Water

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	0.00380	U	0.0400	0.00380	mg/L		10/08/19 16:26	10/09/19 22:34	20
Hexachlorocyclopentadiene	0.00300	U	0.0300	0.00300	mg/L		10/08/19 16:26	10/09/19 22:34	20
Hexachloroethane	0.00340	U	0.0400	0.00340	mg/L		10/08/19 16:26	10/09/19 22:34	20
Indeno[1,2,3-cd]pyrene	0.00580	U	0.0400	0.00580	mg/L		10/08/19 16:26	10/09/19 22:34	20
Isophorone	0.00300	U	0.0300	0.00300	mg/L		10/08/19 16:26	10/09/19 22:34	20
Naphthalene	0.00320	U	0.0400	0.00320	mg/L		10/08/19 16:26	10/09/19 22:34	20
Nitrobenzene	0.00400	U	0.0300	0.00400	mg/L		10/08/19 16:26	10/09/19 22:34	20
N-Nitrosodi-n-propylamine	0.00480	U	0.0500	0.00480	mg/L		10/08/19 16:26	10/09/19 22:34	20
N-Nitrosodiphenylamine	0.00660	U	0.0300	0.00660	mg/L		10/08/19 16:26	10/09/19 22:34	20
Pentachlorophenol	0.0192	U	0.0500	0.0192	mg/L		10/08/19 16:26	10/09/19 22:34	20
Phenanthrene	0.00580	U	0.0300	0.00580	mg/L		10/08/19 16:26	10/09/19 22:34	20
Phenol	0.00280	U	0.0300	0.00280	mg/L		10/08/19 16:26	10/09/19 22:34	20
Pyrene	0.00660	U	0.0400	0.00660	mg/L		10/08/19 16:26	10/09/19 22:34	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*37*		*17 - 137*	*10/08/19 16:26*	*10/09/19 22:34*	*20*
2-Fluorobiphenyl	*61*		*36 - 130*	*10/08/19 16:26*	*10/09/19 22:34*	*20*
2-Fluorophenol	*25*		*12 - 130*	*10/08/19 16:26*	*10/09/19 22:34*	*20*
Nitrobenzene-d5	*60*		*40 - 130*	*10/08/19 16:26*	*10/09/19 22:34*	*20*
Phenol-d5 (Surr)	*32*		*10 - 130*	*10/08/19 16:26*	*10/09/19 22:34*	*20*
Terphenyl-d14	*80*		*52 - 130*	*10/08/19 16:26*	*10/09/19 22:34*	*20*

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193266-1
Project/Site: Terracon Site 6 10-03-19

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Surrogate Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 6 10-03-19

Job ID: 600-193266-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(50-134)	(67-139)	(62-130)	(70-130)
600-193266-1	6	88	114	92	106
LCS 600-276735/3	Lab Control Sample	87	111	91	105
LCSD 600-276735/4	Lab Control Sample Dup	83	110	93	104
MB 600-276735/6	Method Blank	96	113	96	106

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(17-137)	(36-130)	(12-130)	(40-130)	(10-130)	(52-130)
600-193266-1	6	37	61	25	60	32	80
LCS 600-276931/2-A	Lab Control Sample	79	66	58	73	50	83
LCSD 600-276931/3-A	Lab Control Sample Dup	73	62	53	67	50	72
MB 600-276931/1-A	Method Blank	74	77	59	86	51	90

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1,2,2-Tetrachloroethane	0.000197	U	0.00100	0.000197	mg/L			10/07/19 13:55	1
1,1,2-Trichloroethane	0.000209	U	0.00100	0.000209	mg/L			10/07/19 13:55	1
1,1-Dichloroethane	0.000168	U	0.00100	0.000168	mg/L			10/07/19 13:55	1
1,1-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
1,2,4-Trimethylbenzene	0.000215	U	0.00100	0.000215	mg/L			10/07/19 13:55	1
1,2-Dichloroethane	0.000116	U	0.00100	0.000116	mg/L			10/07/19 13:55	1
1,2-Dichloroethene, Total	0.000355	U	0.00200	0.000355	mg/L			10/07/19 13:55	1
1,2-Dichloropropane	0.000136	U	0.00100	0.000136	mg/L			10/07/19 13:55	1
1,3,5-Trimethylbenzene	0.000210	U	0.00100	0.000210	mg/L			10/07/19 13:55	1
2-Butanone (MEK)	0.000760	U	0.00200	0.000760	mg/L			10/07/19 13:55	1
2-Hexanone	0.000265	U	0.00200	0.000265	mg/L			10/07/19 13:55	1
4-Methyl-2-pentanone (MIBK)	0.000348	U	0.00200	0.000348	mg/L			10/07/19 13:55	1
Acetone	0.000447	U	0.00500	0.000447	mg/L			10/07/19 13:55	1
Benzene	0.000176	U	0.00100	0.000176	mg/L			10/07/19 13:55	1
Bromodichloromethane	0.000153	U	0.00100	0.000153	mg/L			10/07/19 13:55	1
Bromoform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Bromomethane	0.000250	U	0.00200	0.000250	mg/L			10/07/19 13:55	1
Carbon disulfide	0.000216	U	0.00200	0.000216	mg/L			10/07/19 13:55	1
Carbon tetrachloride	0.000183	U	0.00100	0.000183	mg/L			10/07/19 13:55	1
Chlorobenzene	0.000185	U	0.00100	0.000185	mg/L			10/07/19 13:55	1
Chloroethane	0.000240	U	0.00200	0.000240	mg/L			10/07/19 13:55	1
Chloroform	0.000151	U	0.00100	0.000151	mg/L			10/07/19 13:55	1
Chloromethane	0.000209	U	0.00200	0.000209	mg/L			10/07/19 13:55	1
cis-1,2-Dichloroethene	0.000157	U	0.00100	0.000157	mg/L			10/07/19 13:55	1
cis-1,3-Dichloropropene	0.000160	U	0.00100	0.000160	mg/L			10/07/19 13:55	1
Dibromochloromethane	0.000119	U	0.00100	0.000119	mg/L			10/07/19 13:55	1
Ethylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
Methyl tert-butyl ether	0.000105	U	0.00100	0.000105	mg/L			10/07/19 13:55	1
Methylene Chloride	0.000176	U	0.00500	0.000176	mg/L			10/07/19 13:55	1
m-Xylene & p-Xylene	0.000205	U	0.00100	0.000205	mg/L			10/07/19 13:55	1
Naphthalene	0.0005119	J	0.00200	0.000129	mg/L			10/07/19 13:55	1
n-Butylbenzene	0.000212	U	0.00100	0.000212	mg/L			10/07/19 13:55	1
o-Xylene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
sec-Butylbenzene	0.000224	U	0.00100	0.000224	mg/L			10/07/19 13:55	1
Styrene	0.000175	U	0.00100	0.000175	mg/L			10/07/19 13:55	1
Tetrachloroethene	0.000333	U	0.00100	0.000333	mg/L			10/07/19 13:55	1
Toluene	0.000198	U	0.00100	0.000198	mg/L			10/07/19 13:55	1
trans-1,2-Dichloroethene	0.000192	U	0.00100	0.000192	mg/L			10/07/19 13:55	1
trans-1,3-Dichloropropene	0.000137	U	0.00100	0.000137	mg/L			10/07/19 13:55	1
Trichloroethene	0.000138	U	0.00100	0.000138	mg/L			10/07/19 13:55	1
Vinyl chloride	0.000248	U	0.00200	0.000248	mg/L			10/07/19 13:55	1
Xylenes, Total	0.000366	U	0.00100	0.000366	mg/L			10/07/19 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*50 - 134*		*10/07/19 13:55*	*1*
4-Bromofluorobenzene	*113*		*67 - 139*		*10/07/19 13:55*	*1*
Dibromofluoromethane	*96*		*62 - 130*		*10/07/19 13:55*	*1*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 600-276735/6
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Method Blank
Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		70 - 130		10/07/19 13:55	1

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.0100	0.009939		mg/L		99	70 - 136
1,1,2,2-Tetrachloroethane	0.0100	0.01161		mg/L		116	58 - 133
1,1,2-Trichloroethane	0.0100	0.008432		mg/L		84	70 - 130
1,1-Dichloroethane	0.0100	0.01117		mg/L		112	70 - 140
1,1-Dichloroethene	0.0100	0.01047		mg/L		105	58 - 148
1,2,4-Trimethylbenzene	0.0100	0.009523		mg/L		95	70 - 130
1,2-Dichloroethane	0.0100	0.008545		mg/L		85	67 - 134
1,2-Dichloroethene, Total	0.0200	0.01940		mg/L		97	69 - 130
1,2-Dichloropropane	0.0100	0.01015		mg/L		102	70 - 130
1,3,5-Trimethylbenzene	0.0100	0.009964		mg/L		100	69 - 130
2-Butanone (MEK)	0.0200	0.01683		mg/L		84	41 - 141
2-Hexanone	0.0200	0.01294		mg/L		65	56 - 130
4-Methyl-2-pentanone (MIBK)	0.0200	0.01389		mg/L		69	62 - 136
Acetone	0.0200	0.01300		mg/L		65	18 - 144
Benzene	0.0100	0.01007		mg/L		101	70 - 130
Bromodichloromethane	0.0100	0.009399		mg/L		94	70 - 131
Bromoform	0.0100	0.006534		mg/L		65	54 - 133
Bromomethane	0.0100	0.007027		mg/L		70	25 - 150
Carbon disulfide	0.0100	0.01070		mg/L		107	55 - 150
Carbon tetrachloride	0.0100	0.009915		mg/L		99	70 - 144
Chlorobenzene	0.0100	0.008985		mg/L		90	69 - 130
Chloroethane	0.0100	0.006654		mg/L		67	47 - 150
Chloroform	0.0100	0.01062		mg/L		106	70 - 130
Chloromethane	0.0100	0.006610		mg/L		66	10 - 150
cis-1,2-Dichloroethene	0.0100	0.009690		mg/L		97	68 - 130
cis-1,3-Dichloropropene	0.0100	0.009382		mg/L		94	57 - 130
Dibromochloromethane	0.0100	0.007488		mg/L		75	62 - 130
Ethylbenzene	0.0100	0.009466		mg/L		95	70 - 130
Methyl tert-butyl ether	0.0100	0.008257		mg/L		83	56 - 132
Methylene Chloride	0.0100	0.01102		mg/L		110	55 - 147
m-Xylene & p-Xylene	0.0100	0.009305		mg/L		93	70 - 130
Naphthalene	0.0100	0.007379		mg/L		74	10 - 150
n-Butylbenzene	0.0100	0.01044		mg/L		104	70 - 130
o-Xylene	0.0100	0.009219		mg/L		92	70 - 130
sec-Butylbenzene	0.0100	0.01057		mg/L		106	68 - 130
Styrene	0.0100	0.008290		mg/L		83	70 - 130
Tetrachloroethene	0.0100	0.009626		mg/L		96	47 - 150
Toluene	0.0100	0.01003		mg/L		100	70 - 130
trans-1,2-Dichloroethene	0.0100	0.009712		mg/L		97	68 - 131
trans-1,3-Dichloropropene	0.0100	0.008328		mg/L		83	60 - 130
Trichloroethene	0.0100	0.009269		mg/L		93	70 - 130

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 600-276735/3
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Vinyl chloride			0.0100	0.009980		mg/L		100	33 - 150		
Xylenes, Total			0.0200	0.01852		mg/L		93	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*50 - 134*
4-Bromofluorobenzene	*111*		*67 - 139*
Dibromofluoromethane	*91*		*62 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane			0.0100	0.01039		mg/L		104	70 - 136	4	20
1,1,2,2-Tetrachloroethane			0.0100	0.01261		mg/L		126	58 - 133	8	20
1,1,2-Trichloroethane			0.0100	0.009221		mg/L		92	70 - 130	9	20
1,1-Dichloroethane			0.0100	0.01108		mg/L		111	70 - 140	1	20
1,1-Dichloroethene			0.0100	0.01103		mg/L		110	58 - 148	5	20
1,2,4-Trimethylbenzene			0.0100	0.009707		mg/L		97	70 - 130	2	20
1,2-Dichloroethane			0.0100	0.009452		mg/L		95	67 - 134	10	20
1,2-Dichloroethene, Total			0.0200	0.02053		mg/L		103	69 - 130	6	20
1,2-Dichloropropane			0.0100	0.01129		mg/L		113	70 - 130	11	20
1,3,5-Trimethylbenzene			0.0100	0.01003		mg/L		100	69 - 130	1	20
2-Butanone (MEK)			0.0200	0.01906		mg/L		95	41 - 141	12	20
2-Hexanone			0.0200	0.01480		mg/L		74	56 - 130	13	20
4-Methyl-2-pentanone (MIBK)			0.0200	0.01580		mg/L		79	62 - 136	13	20
Acetone			0.0200	0.01439		mg/L		72	18 - 144	10	20
Benzene			0.0100	0.01057		mg/L		106	70 - 130	5	20
Bromodichloromethane			0.0100	0.01008		mg/L		101	70 - 131	7	20
Bromoform			0.0100	0.007023		mg/L		70	54 - 133	7	20
Bromomethane			0.0100	0.007279		mg/L		73	25 - 150	4	20
Carbon disulfide			0.0100	0.01109		mg/L		111	55 - 150	4	20
Carbon tetrachloride			0.0100	0.01040		mg/L		104	70 - 144	5	20
Chlorobenzene			0.0100	0.009318		mg/L		93	69 - 130	4	20
Chloroethane			0.0100	0.007113		mg/L		71	47 - 150	7	20
Chloroform			0.0100	0.01123		mg/L		112	70 - 130	6	20
Chloromethane			0.0100	0.007335		mg/L		73	10 - 150	10	20
cis-1,2-Dichloroethene			0.0100	0.01033		mg/L		103	68 - 130	6	20
cis-1,3-Dichloropropene			0.0100	0.009876		mg/L		99	57 - 130	5	20
Dibromochloromethane			0.0100	0.008131		mg/L		81	62 - 130	8	20
Ethylbenzene			0.0100	0.009659		mg/L		97	70 - 130	2	20
Methyl tert-butyl ether			0.0100	0.009296		mg/L		93	56 - 132	12	20
Methylene Chloride			0.0100	0.01097		mg/L		110	55 - 147	0	20
m-Xylene & p-Xylene			0.0100	0.009732		mg/L		97	70 - 130	4	20
Naphthalene			0.0100	0.008643		mg/L		86	10 - 150	16	20
n-Butylbenzene			0.0100	0.01046		mg/L		105	70 - 130	0	20
o-Xylene			0.0100	0.009587		mg/L		96	70 - 130	4	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 600-276735/4
Matrix: Water
Analysis Batch: 276735

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
sec-Butylbenzene			0.0100	0.01039		mg/L		104	68 - 130	2	20
Styrene			0.0100	0.008882		mg/L		89	70 - 130	7	20
Tetrachloroethene			0.0100	0.009852		mg/L		99	47 - 150	2	20
Toluene			0.0100	0.01027		mg/L		103	70 - 130	2	20
trans-1,2-Dichloroethene			0.0100	0.01020		mg/L		102	68 - 131	5	20
trans-1,3-Dichloropropene			0.0100	0.009137		mg/L		91	60 - 130	9	20
Trichloroethene			0.0100	0.009859		mg/L		99	70 - 130	6	20
Vinyl chloride			0.0100	0.01087		mg/L		109	33 - 150	8	20
Xylenes, Total			0.0200	0.01932		mg/L		97	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*50 - 134*
4-Bromofluorobenzene	*110*		*67 - 139*
Dibromofluoromethane	*93*		*62 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	0.000730	U	0.00150	0.000730	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,5-Trichlorophenol	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4,6-Trichlorophenol	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dichlorophenol	0.000260	U	0.00250	0.000260	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dimethylphenol	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrophenol	0.000400	U	0.00500	0.000400	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,4-Dinitrotoluene	0.000320	U	0.00150	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
2,6-Dinitrotoluene	0.000290	U	0.00100	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chloronaphthalene	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Chlorophenol	0.000220	U	0.00200	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylnaphthalene	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Methylphenol	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitroaniline	0.000350	U	0.00250	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
2-Nitrophenol	0.000220	U	0.00100	0.000220	mg/L		10/08/19 16:26	10/09/19 12:46	1
3 & 4 Methylphenol	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
3,3'-Dichlorobenzidine	0.000320	U	0.00500	0.000320	mg/L		10/08/19 16:26	10/09/19 12:46	1
3-Nitroaniline	0.000130	U	0.00250	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
4,6-Dinitro-2-methylphenol	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Bromophenyl phenyl ether	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloro-3-methylphenol	0.000250	U	0.00100	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chloroaniline	0.000110	U	0.00100	0.000110	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Chlorophenyl phenyl ether	0.000230	U	0.00150	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitroaniline	0.000230	U	0.00250	0.000230	mg/L		10/08/19 16:26	10/09/19 12:46	1
4-Nitrophenol	0.000330	U	0.00250	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Acenaphthylene	0.000160	U	0.00100	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: MB 600-276931/1-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276931

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetophenone	0.000680	U	0.00150	0.000680	mg/L		10/08/19 16:26	10/09/19 12:46	1
Anthracene	0.000440	U	0.00150	0.000440	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]anthracene	0.000250	U	0.00200	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[a]pyrene	0.000130	U	0.00150	0.000130	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[b]fluoranthene	0.000180	U	0.00200	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[g,h,i]perylene	0.000350	U	0.00200	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Benzo[k]fluoranthene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
bis (2-Chloroisopropyl) ether	0.000180	U	0.00100	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethoxy)methane	0.000190	U	0.00150	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-chloroethyl)ether	0.000180	U	0.00150	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Bis(2-ethylhexyl) phthalate	0.000590	U	0.00250	0.000590	mg/L		10/08/19 16:26	10/09/19 12:46	1
Butyl benzyl phthalate	0.000850	U	0.00250	0.000850	mg/L		10/08/19 16:26	10/09/19 12:46	1
Carbazole	0.000350	U	0.00500	0.000350	mg/L		10/08/19 16:26	10/09/19 12:46	1
Chrysene	0.000240	U	0.00150	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenz(a,h)anthracene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dibenzofuran	0.000160	U	0.00150	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Diethyl phthalate	0.00419	U	0.00500	0.00419	mg/L		10/08/19 16:26	10/09/19 12:46	1
Dimethyl phthalate	0.000180	U	0.00250	0.000180	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-butyl phthalate	0.00187	U	0.00500	0.00187	mg/L		10/08/19 16:26	10/09/19 12:46	1
Di-n-octyl phthalate	0.000160	U	0.00500	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluoranthene	0.000310	U	0.00200	0.000310	mg/L		10/08/19 16:26	10/09/19 12:46	1
Fluorene	0.000120	U	0.00150	0.000120	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobenzene	0.000250	U	0.00150	0.000250	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorobutadiene	0.000190	U	0.00200	0.000190	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachlorocyclopentadiene	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Hexachloroethane	0.000170	U	0.00200	0.000170	mg/L		10/08/19 16:26	10/09/19 12:46	1
Indeno[1,2,3-cd]pyrene	0.000290	U	0.00200	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Isophorone	0.000150	U	0.00150	0.000150	mg/L		10/08/19 16:26	10/09/19 12:46	1
Naphthalene	0.000160	U	0.00200	0.000160	mg/L		10/08/19 16:26	10/09/19 12:46	1
Nitrobenzene	0.000200	U	0.00150	0.000200	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodi-n-propylamine	0.000240	U	0.00250	0.000240	mg/L		10/08/19 16:26	10/09/19 12:46	1
N-Nitrosodiphenylamine	0.000330	U	0.00150	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pentachlorophenol	0.000960	U	0.00250	0.000960	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenanthrene	0.000290	U	0.00150	0.000290	mg/L		10/08/19 16:26	10/09/19 12:46	1
Phenol	0.000140	U	0.00150	0.000140	mg/L		10/08/19 16:26	10/09/19 12:46	1
Pyrene	0.000330	U	0.00200	0.000330	mg/L		10/08/19 16:26	10/09/19 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*74*		*17 - 137*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorobiphenyl	*77*		*36 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
2-Fluorophenol	*59*		*12 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Nitrobenzene-d5	*86*		*40 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Phenol-d5 (Surr)	*51*		*10 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*
Terphenyl-d14	*90*		*52 - 130*	*10/08/19 16:26*	*10/09/19 12:46*	*1*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1'-Biphenyl	0.00800	0.005004		mg/L		63	41 - 130
2,4,5-Trichlorophenol	0.00800	0.005148		mg/L		64	38 - 140
2,4,6-Trichlorophenol	0.00800	0.004856		mg/L		61	34 - 148
2,4-Dichlorophenol	0.00800	0.005080		mg/L		64	45 - 134
2,4-Dimethylphenol	0.00800	0.005130		mg/L		64	23 - 150
2,4-Dinitrophenol	0.0160	0.009369		mg/L		59	10 - 144
2,4-Dinitrotoluene	0.00800	0.005235		mg/L		65	17 - 150
2,6-Dinitrotoluene	0.00800	0.005281		mg/L		66	34 - 150
2-Chloronaphthalene	0.00800	0.005007		mg/L		63	38 - 135
2-Chlorophenol	0.00800	0.004753		mg/L		59	40 - 134
2-Methylnaphthalene	0.00800	0.005024		mg/L		63	23 - 150
2-Methylphenol	0.00800	0.004686		mg/L		59	31 - 150
2-Nitroaniline	0.00800	0.005204		mg/L		65	31 - 142
2-Nitrophenol	0.00800	0.005163		mg/L		65	40 - 134
3 & 4 Methylphenol	0.00800	0.005158		mg/L		64	25 - 146
3,3'-Dichlorobenzidine	0.00800	0.008607		mg/L		108	15 - 162
3-Nitroaniline	0.00800	0.009391		mg/L		117	10 - 150
4,6-Dinitro-2-methylphenol	0.0160	0.01104		mg/L		69	25 - 140
4-Bromophenyl phenyl ether	0.00800	0.005610		mg/L		70	42 - 138
4-Chloro-3-methylphenol	0.00800	0.005821		mg/L		73	34 - 145
4-Chloroaniline	0.00800	0.005883		mg/L		74	10 - 150
4-Chlorophenyl phenyl ether	0.00800	0.005015		mg/L		63	39 - 137
4-Nitroaniline	0.00800	0.004741		mg/L		59	10 - 150
4-Nitrophenol	0.0160	0.005890		mg/L		37	10 - 140
Acenaphthene	0.00800	0.004803		mg/L		60	41 - 130
Acenaphthylene	0.00800	0.004826		mg/L		60	42 - 130
Acetophenone	0.00800	0.004647		mg/L		58	33 - 133
Anthracene	0.00800	0.005512		mg/L		69	42 - 136
Benzo[a]anthracene	0.00800	0.005461		mg/L		68	41 - 150
Benzo[a]pyrene	0.00800	0.006224		mg/L		78	35 - 150
Benzo[b]fluoranthene	0.00800	0.005040		mg/L		63	35 - 150
Benzo[g,h,i]perylene	0.00800	0.006445		mg/L		81	10 - 150
Benzo[k]fluoranthene	0.00800	0.007044		mg/L		88	35 - 150
bis (2-Chloroisopropyl) ether	0.00800	0.005042		mg/L		63	20 - 138
Bis(2-chloroethoxy)methane	0.00800	0.005629		mg/L		70	33 - 135
Bis(2-chloroethyl)ether	0.00800	0.004401		mg/L		55	29 - 138
Bis(2-ethylhexyl) phthalate	0.00800	0.006462		mg/L		81	40 - 150
Butyl benzyl phthalate	0.00800	0.005298		mg/L		66	35 - 150
Carbazole	0.00800	0.003365	J	mg/L		42	10 - 150
Chrysene	0.00800	0.006572		mg/L		82	43 - 142
Dibenz(a,h)anthracene	0.00800	0.006584		mg/L		82	10 - 150
Dibenzofuran	0.00800	0.005178		mg/L		65	42 - 130
Diethyl phthalate	0.00800	0.005080		mg/L		63	20 - 150
Dimethyl phthalate	0.00800	0.005519		mg/L		69	33 - 144
Di-n-butyl phthalate	0.00800	0.005216		mg/L		65	34 - 150
Di-n-octyl phthalate	0.00800	0.005851		mg/L		73	40 - 150
Fluoranthene	0.00800	0.004489		mg/L		56	42 - 146
Fluorene	0.00800	0.005521		mg/L		69	40 - 138

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCS 600-276931/2-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hexachlorobenzene			0.00800	0.004726		mg/L		59	35 - 138		
Hexachlorobutadiene			0.00800	0.003605		mg/L		45	31 - 136		
Hexachlorocyclopentadiene			0.00800	0.003746		mg/L		47	10 - 130		
Hexachloroethane			0.00800	0.003935		mg/L		49	25 - 141		
Indeno[1,2,3-cd]pyrene			0.00800	0.006617		mg/L		83	10 - 150		
Isophorone			0.00800	0.005126		mg/L		64	28 - 134		
Naphthalene			0.00800	0.005149		mg/L		64	21 - 150		
Nitrobenzene			0.00800	0.005261		mg/L		66	38 - 134		
N-Nitrosodi-n-propylamine			0.00800	0.005015		mg/L		63	26 - 146		
N-Nitrosodiphenylamine			0.00800	0.005154		mg/L		64	50 - 150		
Pentachlorophenol			0.0160	0.004484		mg/L		28	10 - 130		
Phenanthrene			0.00800	0.004919		mg/L		61	38 - 138		
Phenol			0.00800	0.003826		mg/L		48	10 - 150		
Pyrene			0.00800	0.005213		mg/L		65	36 - 146		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*79*		*17 - 137*
2-Fluorobiphenyl	*66*		*36 - 130*
2-Fluorophenol	*58*		*12 - 130*
Nitrobenzene-d5	*73*		*40 - 130*
Phenol-d5 (Surr)	*50*		*10 - 130*
Terphenyl-d14	*83*		*52 - 130*

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1'-Biphenyl			0.00800	0.004801		mg/L		60	41 - 130	4	20
2,4,5-Trichlorophenol			0.00800	0.005317		mg/L		66	38 - 140	3	20
2,4,6-Trichlorophenol			0.00800	0.005406		mg/L		68	34 - 148	11	20
2,4-Dichlorophenol			0.00800	0.004865		mg/L		61	45 - 134	4	20
2,4-Dimethylphenol			0.00800	0.005577		mg/L		70	23 - 150	8	20
2,4-Dinitrophenol			0.0160	0.003335	J *	mg/L		21	10 - 144	95	20
2,4-Dinitrotoluene			0.00800	0.005803		mg/L		73	17 - 150	10	20
2,6-Dinitrotoluene			0.00800	0.005759		mg/L		72	34 - 150	9	20
2-Chloronaphthalene			0.00800	0.004738		mg/L		59	38 - 135	6	20
2-Chlorophenol			0.00800	0.005032		mg/L		63	40 - 134	6	20
2-Methylnaphthalene			0.00800	0.004860		mg/L		61	23 - 150	3	20
2-Methylphenol			0.00800	0.004493		mg/L		56	31 - 150	4	20
2-Nitroaniline			0.00800	0.004753		mg/L		59	31 - 142	9	20
2-Nitrophenol			0.00800	0.004692		mg/L		59	40 - 134	10	20
3 & 4 Methylphenol			0.00800	0.005126		mg/L		64	25 - 146	1	20
3,3'-Dichlorobenzidine			0.00800	0.01259		mg/L		157	15 - 162	38	40
3-Nitroaniline			0.00800	0.01095		mg/L		137	10 - 150	15	20
4,6-Dinitro-2-methylphenol			0.0160	0.008923	*	mg/L		56	25 - 140	21	20
4-Bromophenyl phenyl ether			0.00800	0.004860		mg/L		61	42 - 138	14	20
4-Chloro-3-methylphenol			0.00800	0.004846		mg/L		61	34 - 145	18	20

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline			0.00800	0.007410	*	mg/L		93	10 - 150	23	20
4-Chlorophenyl phenyl ether			0.00800	0.005296		mg/L		66	39 - 137	5	20
4-Nitroaniline			0.00800	0.005516		mg/L		69	10 - 150	15	20
4-Nitrophenol			0.0160	0.007471	*	mg/L		47	10 - 140	24	20
Acenaphthene			0.00800	0.004795		mg/L		60	41 - 130	0	20
Acenaphthylene			0.00800	0.005051		mg/L		63	42 - 130	5	20
Acetophenone			0.00800	0.005104		mg/L		64	33 - 133	9	20
Anthracene			0.00800	0.005571		mg/L		70	42 - 136	1	20
Benzo[a]anthracene			0.00800	0.005332		mg/L		67	41 - 150	2	20
Benzo[a]pyrene			0.00800	0.006314		mg/L		79	35 - 150	1	20
Benzo[b]fluoranthene			0.00800	0.005557		mg/L		69	35 - 150	10	20
Benzo[g,h,i]perylene			0.00800	0.007142		mg/L		89	10 - 150	10	20
Benzo[k]fluoranthene			0.00800	0.006642		mg/L		83	35 - 150	6	20
bis (2-Chloroisopropyl) ether			0.00800	0.005358		mg/L		67	20 - 138	6	20
Bis(2-chloroethoxy)methane			0.00800	0.005762		mg/L		72	33 - 135	2	20
Bis(2-chloroethyl)ether			0.00800	0.004481		mg/L		56	29 - 138	2	20
Bis(2-ethylhexyl) phthalate			0.00800	0.006568		mg/L		82	40 - 150	2	20
Butyl benzyl phthalate			0.00800	0.004765		mg/L		60	35 - 150	11	20
Carbazole			0.00800	0.005335	*	mg/L		67	10 - 150	45	20
Chrysene			0.00800	0.007077		mg/L		88	43 - 142	7	20
Dibenz(a,h)anthracene			0.00800	0.007325		mg/L		92	10 - 150	11	20
Dibenzofuran			0.00800	0.005709		mg/L		71	42 - 130	10	20
Diethyl phthalate			0.00800	0.005682		mg/L		71	20 - 150	11	20
Dimethyl phthalate			0.00800	0.005367		mg/L		67	33 - 144	3	20
Di-n-butyl phthalate			0.00800	0.005930		mg/L		74	34 - 150	13	20
Di-n-octyl phthalate			0.00800	0.006273		mg/L		78	40 - 150	7	20
Fluoranthene			0.00800	0.005377		mg/L		67	42 - 146	18	20
Fluorene			0.00800	0.005909		mg/L		74	40 - 138	7	20
Hexachlorobenzene			0.00800	0.004774		mg/L		60	35 - 138	1	20
Hexachlorobutadiene			0.00800	0.003437		mg/L		43	31 - 136	5	20
Hexachlorocyclopentadiene			0.00800	0.003872		mg/L		48	10 - 130	3	20
Hexachloroethane			0.00800	0.004043		mg/L		51	25 - 141	3	20
Indeno[1,2,3-cd]pyrene			0.00800	0.006811		mg/L		85	10 - 150	3	20
Isophorone			0.00800	0.005551		mg/L		69	28 - 134	8	20
Naphthalene			0.00800	0.004691		mg/L		59	21 - 150	9	20
Nitrobenzene			0.00800	0.005894		mg/L		74	38 - 134	11	20
N-Nitrosodi-n-propylamine			0.00800	0.005412		mg/L		68	26 - 146	8	20
N-Nitrosodiphenylamine			0.00800	0.005296		mg/L		66	50 - 150	3	20
Pentachlorophenol			0.0160	0.004127		mg/L		26	10 - 130	8	20
Phenanthrene			0.00800	0.004696		mg/L		59	38 - 138	5	20
Phenol			0.00800	0.004106		mg/L		51	10 - 150	7	20
Pyrene			0.00800	0.004895		mg/L		61	36 - 146	6	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*73*		*17 - 137*
2-Fluorobiphenyl	*62*		*36 - 130*
2-Fluorophenol	*53*		*12 - 130*
Nitrobenzene-d5	*67*		*40 - 130*

Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Lab Sample ID: LCSD 600-276931/3-A
Matrix: Water
Analysis Batch: 276980

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 276931

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Phenol-d5 (Surr)	50		10 - 130
Terphenyl-d14	72		52 - 130

QC Association Summary

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 6 10-03-19

Job ID: 600-193266-1

GC/MS VOA

Analysis Batch: 276735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193266-1	6	Total/NA	Water	8260B	
MB 600-276735/6	Method Blank	Total/NA	Water	8260B	
LCS 600-276735/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 600-276735/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 276931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193266-1	6	Total/NA	Water	3510C LVI	
MB 600-276931/1-A	Method Blank	Total/NA	Water	3510C LVI	
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	3510C LVI	
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	3510C LVI	

Analysis Batch: 276980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 600-276931/1-A	Method Blank	Total/NA	Water	8270C LL	276931
LCS 600-276931/2-A	Lab Control Sample	Total/NA	Water	8270C LL	276931
LCSD 600-276931/3-A	Lab Control Sample Dup	Total/NA	Water	8270C LL	276931

Analysis Batch: 277050

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
600-193266-1	6	Total/NA	Water	8270C LL	276931

Lab Chronicle

Client: Terracon Consulting Eng & Scientists
Project/Site: Terracon Site 6 10-03-19

Job ID: 600-193266-1

Client Sample ID: 6

Date Collected: 10/03/19 11:30
Date Received: 10/03/19 13:24

Lab Sample ID: 600-193266-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	276735	10/07/19 14:47	YX1	TAL HOU
Total/NA	Prep	3510C LVI			250 mL	1 mL	276931	10/08/19 16:26	ARS	TAL HOU
Total/NA	Analysis	8270C LL		20	1 mL	1.0 mL	277050	10/09/19 22:34	PXS	TAL HOU

Laboratory References:

TAL HOU = Eurofins TestAmerica, Houston, 6310 Rothway Street, Houston, TX 77040, TEL (713)690-4444

Accreditation/Certification Summary

Client: Terracon Consulting Eng & Scientists
Job ID: 600-193266-1
Project/Site: Terracon Site 6 10-03-19

Laboratory: Eurofins TestAmerica, Houston

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Texas	NELAP	T104704223-18-23	10-31-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,2-Dichloroethene, Total
8270C LL	3510C LVI	Water	3 & 4 Methylphenol

Eurofins TestAmerica, Houston
6310 Rothway Street
Houston, TX 77040
Phone (713) 690-4444 Fax (713) 690-5646

Chain of Custody Record

eurofins

Client Information	Sampler: R. Calvino	Lab PM: Joiner, Dean A	Carrier Tracking No(s):	COC No: 600-71021-19427.1
Client Contact: ~~Meg Haile~~ Ralph Calvino	Phone: 832-783-8332	E-Mail: dean.joiner@testamericainc.com		Page: Page 1 of 1
Company: Terracon Consulting Eng & Scientists				Job #: 92197619
Address: 11555 Clay Road Suite 100	Due Date Requested:		Analysis Requested	Preservation Codes:
City: Houston	TAT Requested (days): ~~5 WD TAT Level 3e~~ Standard TAT			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: TX, 77043				
Phone: ~~713-329-2568~~(Tel) 832-235-3936	PO #: Purchase Order Requested			Other:
Email: ~~Meg.Haile~~@terracon.com ralph.calvino@terracon.com	WO #:			
Project Name: Water Analysis	Project #: 60011379 Analytical Grp: Water 2019			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260B_LL VOCs	8270C_LL SVOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N		
6	10/3/19	1130	G	Water			X	X	5	

600-193266 Chain of Custody

RC 10/3/19

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained long
☐ Return To Client ☐ Disposal By Lab ☐ Archive For

Deliverable Requested: I, II, III, IV, Other (specify) Standard

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
		10/3/19 1324	Terracon		10/3/19 13:24	TAH
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

Loc: t00
193266

eurofins | Environment Testing TestAmerica

19OCT 3 13:24

Eurofins TestAmerica Houston

Sample Receipt Checklist

JOB NUMBER: 193200 Date/Time Received: _____

UNPACKED BY: LD CLIENT: Terracon

CARRIER/DRIVER: client

Custody Seal Present: ☐YES ☐NO Number of Coolers Received: 1

Cooler ID	Temp Blank	Trip Blank	Observed Temp (°C)	Therm ID	Therm CF	Corrected Temp (°C)
SBW	Y / N	Y / (N)	4.5	678	-0.3	4.2
* SBW	Y / N	Y / (N)	4.3	678	-0.3	4.0
SBW	Y / N	Y / (N)	3.0	678	-0.3	2.7
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8
SBW	Y / N	Y / (N)	3.8	678	-0.3	3.5
SBW	Y / N	Y / (N)	3.1	678	-0.3	2.8

CF = correction factor

Samples received on ice? ☑YES ☐NO

LABORATORY PRESERVATION OF SAMPLES REQUIRED: ☑NO ☐YES

Base samples are>pH 12: ☐YES ☐NO Acid preserved are<pH 2: ☐YES ☐NO

TX1005 samples frozen upon receipt: ☐ YES DATE & TIME PUT IN FREEZER: _____

pH paper Lot #_____ VOA headspace acceptable (5-6mm): ☑YES ☐NO ☐NA

Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	☑YES	☐ NO

COMMENTS:

HS-SA-WI-013 Rev. 4A: 08/26/2019

Login Sample Receipt Checklist

Client: Terracon Consulting Eng & Scientists

Job Number: 600-193266-1

Login Number: 193266

List Source: Eurofins TestAmerica, Houston

List Number: 1

Creator: Taylor, Jacquelyn R

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.