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ANALYTICAL REPORT

Eurofins TestAmerica, Edison
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Edison, NJ 08817
Tel: (732)549-3900

Laboratory Job ID: 460-186235-1
Client Project/Site: 60584654, Penn Yan Former MGP Phase 2

For:
AECOM
40 British American Blvd
Latham, New York 12110

Attn: Mr. Matt Thorpe

Authorized for release by:
7/16/2019 5:21:23 PM
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Definitions/Glossary

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance 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)

Job ID: 460-186235-1

Laboratory: Eurofins TestAmerica, Edison

Narrative

Job Narrative
460-186235-1

Receipt
The sample was received on 7/10/2019 9:11 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.5º C.

GC/MS VOA
Method(s) 8260C: TIC detection at RT=13.55 min. was due to carry-over from previous analysis and was deleted: PWFTWWNA088 (460-186235-1) and (MB 460-623935/9)

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) 8270D: The continuing calibration verification (CCV) analyzed in batch 460-623951 was outside the method criteria for the following analyte(s): Hexachlorocyclopentadiene. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method(s) 8270D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 460-623810 and analytical batch 460-623951 recovered outside control limits for the following analytes: Hexachlorobutadiene. The data have been reported.

Method(s) 8270D: A full list spike was utilized for this method. Due to the large number of spiked analytes, there is a high probability that one or more analytes will recover outside acceptance limits due to poor performance. The LCS/LCSD associated with batch 460-623810 had (Hexachloroethane) outside control limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

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.

General Chemistry
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.

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

Detection Summary

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Client Sample ID: PWFTWWNA088
Lab Sample ID: 460-186235-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Carbon disulfide	7.1		1.0	0.82	ug/L	1		8260C	Total/NA
Dibromochloromethane	3.1		1.0	0.28	ug/L	1		8260C	Total/NA
Chloroform	51		1.0	0.33	ug/L	1		8260C	Total/NA
Bromodichloromethane	13		1.0	0.34	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Client Sample ID: PWFTWWNA088
Lab Sample ID: 460-186235-1
Date Collected: 07/09/19 07:55
Matrix: Water
Date Received: 07/10/19 09:11

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			07/12/19 01:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			07/12/19 01:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/12/19 01:28	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			07/12/19 01:28	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			07/12/19 01:28	1
1,1-Dichloroethene	ND		1.0	0.26	ug/L			07/12/19 01:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.37	ug/L			07/12/19 01:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.38	ug/L			07/12/19 01:28	1
1,2-Dichlorobenzene	ND		1.0	0.43	ug/L			07/12/19 01:28	1
1,2-Dichloroethane	ND		1.0	0.43	ug/L			07/12/19 01:28	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			07/12/19 01:28	1
1,3-Dichlorobenzene	ND		1.0	0.34	ug/L			07/12/19 01:28	1
1,4-Dichlorobenzene	ND		1.0	0.33	ug/L			07/12/19 01:28	1
2-Butanone (MEK)	ND		5.0	1.9	ug/L			07/12/19 01:28	1
2-Hexanone	ND		5.0	1.1	ug/L			07/12/19 01:28	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	1.3	ug/L			07/12/19 01:28	1
Acetone	ND		5.0	4.4	ug/L			07/12/19 01:28	1
Benzene	ND		1.0	0.20	ug/L			07/12/19 01:28	1
Bromoform	ND		1.0	0.54	ug/L			07/12/19 01:28	1
Bromomethane	ND		1.0	0.55	ug/L			07/12/19 01:28	1
Carbon disulfide	**7.1**		1.0	0.82	ug/L			07/12/19 01:28	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			07/12/19 01:28	1
Chlorobenzene	ND		1.0	0.38	ug/L			07/12/19 01:28	1
Dibromochloromethane	**3.1**		1.0	0.28	ug/L			07/12/19 01:28	1
Chloroethane	ND		1.0	0.32	ug/L			07/12/19 01:28	1
Chloroform	**51**		1.0	0.33	ug/L			07/12/19 01:28	1
Chloromethane	ND		1.0	0.40	ug/L			07/12/19 01:28	1
cis-1,2-Dichloroethene	ND		1.0	0.22	ug/L			07/12/19 01:28	1
Cyclohexane	ND		1.0	0.32	ug/L			07/12/19 01:28	1
Bromodichloromethane	**13**		1.0	0.34	ug/L			07/12/19 01:28	1
Dichlorodifluoromethane	ND		1.0	0.31	ug/L			07/12/19 01:28	1
Ethylbenzene	ND		1.0	0.30	ug/L			07/12/19 01:28	1
1,2-Dibromoethane	ND		1.0	0.50	ug/L			07/12/19 01:28	1
Isopropylbenzene	ND		1.0	0.34	ug/L			07/12/19 01:28	1
Methyl acetate	ND		5.0	0.79	ug/L			07/12/19 01:28	1
Methyl tert-butyl ether	ND		1.0	0.47	ug/L			07/12/19 01:28	1
Methylcyclohexane	ND		1.0	0.26	ug/L			07/12/19 01:28	1
Methylene Chloride	ND		1.0	0.32	ug/L			07/12/19 01:28	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/12/19 01:28	1
Toluene	ND		1.0	0.38	ug/L			07/12/19 01:28	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/12/19 01:28	1
trans-1,3-Dichloropropene	ND		1.0	0.49	ug/L			07/12/19 01:28	1
Trichloroethene	ND		1.0	0.31	ug/L			07/12/19 01:28	1
Trichlorofluoromethane	ND		1.0	0.32	ug/L			07/12/19 01:28	1
Vinyl chloride	ND		1.0	0.17	ug/L			07/12/19 01:28	1
Xylenes, Total	ND		2.0	0.65	ug/L			07/12/19 01:28	1
cis-1,3-Dichloropropene	ND		1.0	0.22	ug/L			07/12/19 01:28	1
Styrene	ND		1.0	0.42	ug/L			07/12/19 01:28	1

Client Sample ID: PWFTWWNA088
Lab Sample ID: 460-186235-1

Date Collected: 07/09/19 07:55
Matrix: Water
Date Received: 07/10/19 09:11

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/12/19 01:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		74 - 132		07/12/19 01:28	1
Toluene-d8 (Surr)	97		80 - 120		07/12/19 01:28	1
Dibromofluoromethane (Surr)	103		72 - 131		07/12/19 01:28	1
4-Bromofluorobenzene	107		77 - 124		07/12/19 01:28	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		10	1.2	ug/L		07/11/19 09:38	07/12/19 01:37	1
bis (2-chloroisopropyl) ether	ND		10	0.63	ug/L		07/11/19 09:38	07/12/19 01:37	1
2,4,5-Trichlorophenol	ND		10	0.28	ug/L		07/11/19 09:38	07/12/19 01:37	1
2,4,6-Trichlorophenol	ND		10	0.30	ug/L		07/11/19 09:38	07/12/19 01:37	1
2,4-Dichlorophenol	ND		10	0.42	ug/L		07/11/19 09:38	07/12/19 01:37	1
2,4-Dimethylphenol	ND		10	0.24	ug/L		07/11/19 09:38	07/12/19 01:37	1
2,4-Dinitrophenol	ND		20	14	ug/L		07/11/19 09:38	07/12/19 01:37	1
2,4-Dinitrotoluene	ND		2.0	1.0	ug/L		07/11/19 09:38	07/12/19 01:37	1
2,6-Dinitrotoluene	ND		2.0	0.39	ug/L		07/11/19 09:38	07/12/19 01:37	1
2-Chloronaphthalene	ND		10	1.2	ug/L		07/11/19 09:38	07/12/19 01:37	1
2-Chlorophenol	ND		10	0.38	ug/L		07/11/19 09:38	07/12/19 01:37	1
2-Methylnaphthalene	ND		10	1.1	ug/L		07/11/19 09:38	07/12/19 01:37	1
2-Methylphenol	ND		10	0.26	ug/L		07/11/19 09:38	07/12/19 01:37	1
2-Nitroaniline	ND		10	0.47	ug/L		07/11/19 09:38	07/12/19 01:37	1
2-Nitrophenol	ND		10	0.75	ug/L		07/11/19 09:38	07/12/19 01:37	1
3,3'-Dichlorobenzidine	ND		10	1.4	ug/L		07/11/19 09:38	07/12/19 01:37	1
3-Nitroaniline	ND		10	0.96	ug/L		07/11/19 09:38	07/12/19 01:37	1
4,6-Dinitro-2-methylphenol	ND		20	13	ug/L		07/11/19 09:38	07/12/19 01:37	1
4-Bromophenyl phenyl ether	ND		10	0.75	ug/L		07/11/19 09:38	07/12/19 01:37	1
4-Chloro-3-methylphenol	ND		10	0.58	ug/L		07/11/19 09:38	07/12/19 01:37	1
4-Chloroaniline	ND		10	1.9	ug/L		07/11/19 09:38	07/12/19 01:37	1
4-Chlorophenyl phenyl ether	ND		10	1.3	ug/L		07/11/19 09:38	07/12/19 01:37	1
4-Methylphenol	ND		10	0.24	ug/L		07/11/19 09:38	07/12/19 01:37	1
4-Nitroaniline	ND		10	0.54	ug/L		07/11/19 09:38	07/12/19 01:37	1
4-Nitrophenol	ND		20	0.69	ug/L		07/11/19 09:38	07/12/19 01:37	1
Acenaphthene	ND		10	1.1	ug/L		07/11/19 09:38	07/12/19 01:37	1
Acenaphthylene	ND		10	0.82	ug/L		07/11/19 09:38	07/12/19 01:37	1
Acetophenone	ND		10	0.79	ug/L		07/11/19 09:38	07/12/19 01:37	1
Anthracene	ND		10	0.63	ug/L		07/11/19 09:38	07/12/19 01:37	1
Atrazine	ND		2.0	1.3	ug/L		07/11/19 09:38	07/12/19 01:37	1
Benzaldehyde	ND		10	0.59	ug/L		07/11/19 09:38	07/12/19 01:37	1
Benzo[a]anthracene	ND		1.0	0.59	ug/L		07/11/19 09:38	07/12/19 01:37	1
Benzo[a]pyrene	ND		1.0	0.41	ug/L		07/11/19 09:38	07/12/19 01:37	1
Benzo[b]fluoranthene	ND		2.0	1.1	ug/L		07/11/19 09:38	07/12/19 01:37	1
Benzo[g,h,i]perylene	ND		10	1.4	ug/L		07/11/19 09:38	07/12/19 01:37	1
Benzo[k]fluoranthene	ND		1.0	0.67	ug/L		07/11/19 09:38	07/12/19 01:37	1
Bis(2-chloroethoxy)methane	ND		10	0.24	ug/L		07/11/19 09:38	07/12/19 01:37	1
Bis(2-chloroethyl)ether	ND		1.0	0.30	ug/L		07/11/19 09:38	07/12/19 01:37	1
Bis(2-ethylhexyl) phthalate	ND		2.0	1.7	ug/L		07/11/19 09:38	07/12/19 01:37	1
Butyl benzyl phthalate	ND		10	0.85	ug/L		07/11/19 09:38	07/12/19 01:37	1

Client Sample ID: PWFTWWNA088
Lab Sample ID: 460-186235-1

Date Collected: 07/09/19 07:55
Matrix: Water
Date Received: 07/10/19 09:11

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Caprolactam	ND		10	0.68	ug/L		07/11/19 09:38	07/12/19 01:37	1
Carbazole	ND		10	0.68	ug/L		07/11/19 09:38	07/12/19 01:37	1
Chrysene	ND		2.0	0.91	ug/L		07/11/19 09:38	07/12/19 01:37	1
Dibenz(a,h)anthracene	ND		1.0	0.72	ug/L		07/11/19 09:38	07/12/19 01:37	1
Dibenzofuran	ND		10	1.1	ug/L		07/11/19 09:38	07/12/19 01:37	1
Diethyl phthalate	ND		10	0.98	ug/L		07/11/19 09:38	07/12/19 01:37	1
Dimethyl phthalate	ND		10	0.77	ug/L		07/11/19 09:38	07/12/19 01:37	1
Di-n-butyl phthalate	ND		10	0.84	ug/L		07/11/19 09:38	07/12/19 01:37	1
Di-n-octyl phthalate	ND		10	4.8	ug/L		07/11/19 09:38	07/12/19 01:37	1
Fluoranthene	ND		10	0.84	ug/L		07/11/19 09:38	07/12/19 01:37	1
Fluorene	ND		10	0.91	ug/L		07/11/19 09:38	07/12/19 01:37	1
Hexachlorobenzene	ND		1.0	0.40	ug/L		07/11/19 09:38	07/12/19 01:37	1
Hexachlorobutadiene	ND	*	1.0	0.78	ug/L		07/11/19 09:38	07/12/19 01:37	1
Hexachlorocyclopentadiene	ND		10	1.7	ug/L		07/11/19 09:38	07/12/19 01:37	1
Hexachloroethane	ND	*	2.0	1.2	ug/L		07/11/19 09:38	07/12/19 01:37	1
Indeno[1,2,3-cd]pyrene	ND		2.0	1.3	ug/L		07/11/19 09:38	07/12/19 01:37	1
Isophorone	ND		10	0.80	ug/L		07/11/19 09:38	07/12/19 01:37	1
Naphthalene	ND		10	1.1	ug/L		07/11/19 09:38	07/12/19 01:37	1
Nitrobenzene	ND		1.0	0.57	ug/L		07/11/19 09:38	07/12/19 01:37	1
N-Nitrosodi-n-propylamine	ND		1.0	0.43	ug/L		07/11/19 09:38	07/12/19 01:37	1
N-Nitrosodiphenylamine	ND		10	0.89	ug/L		07/11/19 09:38	07/12/19 01:37	1
Pentachlorophenol	ND		20	1.4	ug/L		07/11/19 09:38	07/12/19 01:37	1
Phenanthrene	ND		10	0.58	ug/L		07/11/19 09:38	07/12/19 01:37	1
Phenol	ND		10	0.29	ug/L		07/11/19 09:38	07/12/19 01:37	1
Pyrene	ND		10	1.6	ug/L		07/11/19 09:38	07/12/19 01:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.7*	*T J*	*ug/L*		*2.05*		*07/11/19 09:38*	*07/12/19 01:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*89*		*51 - 108*	*07/11/19 09:38*	*07/12/19 01:37*	*1*
Phenol-d5 (Surr)	*29*		*14 - 39*	*07/11/19 09:38*	*07/12/19 01:37*	*1*
2-Fluorophenol (Surr)	*42*		*25 - 58*	*07/11/19 09:38*	*07/12/19 01:37*	*1*
2,4,6-Tribromophenol (Surr)	*96*		*26 - 139*	*07/11/19 09:38*	*07/12/19 01:37*	*1*
2-Fluorobiphenyl (Surr)	*78*		*45 - 107*	*07/11/19 09:38*	*07/12/19 01:37*	*1*
Terphenyl-d14 (Surr)	*94*		*40 - 148*	*07/11/19 09:38*	*07/12/19 01:37*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.0042	mg/L		07/12/19 09:09	07/12/19 19:22	1
Cadmium	ND		0.0050	0.0021	mg/L		07/12/19 09:09	07/12/19 19:22	1
Chromium	ND		0.010	0.0059	mg/L		07/12/19 09:09	07/12/19 19:22	1
Copper	ND		0.025	0.0055	mg/L		07/12/19 09:09	07/12/19 19:22	1
Lead	ND		0.0050	0.0038	mg/L		07/12/19 09:09	07/12/19 19:22	1
Molybdenum	ND		0.020	0.0047	mg/L		07/12/19 09:09	07/12/19 19:22	1
Nickel	ND		0.040	0.0063	mg/L		07/12/19 09:09	07/12/19 19:22	1
Selenium	ND		0.0050	0.0042	mg/L		07/12/19 09:09	07/12/19 19:22	1
Zinc	ND		0.030	0.0054	mg/L		07/12/19 09:09	07/12/19 19:22	1

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Client Sample ID: PWFTWWNA088
Lab Sample ID: 460-186235-1
Date Collected: 07/09/19 07:55
Matrix: Water
Date Received: 07/10/19 09:11

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		07/11/19 12:39	07/11/19 14:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND	F1	0.010	0.0040	mg/L		07/12/19 09:45	07/12/19 14:54	1
Biochemical Oxygen Demand	ND		1.0	1.0	mg/L			07/10/19 19:30	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.5	2.5	mg/L			07/11/19 13:09	1

Surrogate Summary

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Method: 8260C - Volatile Organic Compounds by GC/MS

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

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	DBFM	BFB
Lab Sample ID	Client Sample ID	(74-132)	(80-120)	(72-131)	(77-124)
460-186235-1	PWFTWWNA088	91	97	103	107
LCS 460-623935/4	Lab Control Sample	89	98	95	106
LCS 460-624085/8	Lab Control Sample	91	100	100	104
MB 460-623935/9	Method Blank	90	97	99	105
MB 460-624085/7	Method Blank	95	96	101	103

Surrogate Legend

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

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)					
		NBZ	PHL	2FP	TBP	FBP	TPHL
Lab Sample ID	Client Sample ID	(51-108)	(14-39)	(25-58)	(26-139)	(45-107)	(40-148)
460-186235-1	PWFTWWNA088	89	29	42	96	78	94
LCS 460-623810/2-A	Lab Control Sample	88	33	47	103	79	105
LCS 460-623810/4-A	Lab Control Sample	87	32	46	94	79	101
LCSD 460-623810/3-A	Lab Control Sample Dup	97	34	51	107	91	109
LCSD 460-623810/5-A	Lab Control Sample Dup	68	26	37	69	61	90
MB 460-623810/1-A	Method Blank	93	36	51	104	79	108

Surrogate Legend

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

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 460-623935/9
Matrix: Water
Analysis Batch: 623935

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	ND		1.0	0.24	ug/L			07/11/19 20:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			07/11/19 20:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/11/19 20:41	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			07/11/19 20:41	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			07/11/19 20:41	1
1,1-Dichloroethene	ND		1.0	0.26	ug/L			07/11/19 20:41	1
1,2,4-Trichlorobenzene	ND		1.0	0.37	ug/L			07/11/19 20:41	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.38	ug/L			07/11/19 20:41	1
1,2-Dichlorobenzene	ND		1.0	0.43	ug/L			07/11/19 20:41	1
1,2-Dichloroethane	ND		1.0	0.43	ug/L			07/11/19 20:41	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			07/11/19 20:41	1
1,3-Dichlorobenzene	ND		1.0	0.34	ug/L			07/11/19 20:41	1
1,4-Dichlorobenzene	ND		1.0	0.33	ug/L			07/11/19 20:41	1
2-Butanone (MEK)	ND		5.0	1.9	ug/L			07/11/19 20:41	1
2-Hexanone	ND		5.0	1.1	ug/L			07/11/19 20:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	1.3	ug/L			07/11/19 20:41	1
Acetone	ND		5.0	4.4	ug/L			07/11/19 20:41	1
Benzene	ND		1.0	0.20	ug/L			07/11/19 20:41	1
Bromoform	ND		1.0	0.54	ug/L			07/11/19 20:41	1
Bromomethane	ND		1.0	0.55	ug/L			07/11/19 20:41	1
Carbon disulfide	ND		1.0	0.82	ug/L			07/11/19 20:41	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			07/11/19 20:41	1
Chlorobenzene	ND		1.0	0.38	ug/L			07/11/19 20:41	1
Dibromochloromethane	ND		1.0	0.28	ug/L			07/11/19 20:41	1
Chloroethane	ND		1.0	0.32	ug/L			07/11/19 20:41	1
Chloroform	ND		1.0	0.33	ug/L			07/11/19 20:41	1
Chloromethane	ND		1.0	0.40	ug/L			07/11/19 20:41	1
cis-1,2-Dichloroethene	ND		1.0	0.22	ug/L			07/11/19 20:41	1
Cyclohexane	ND		1.0	0.32	ug/L			07/11/19 20:41	1
Bromodichloromethane	ND		1.0	0.34	ug/L			07/11/19 20:41	1
Dichlorodifluoromethane	ND		1.0	0.31	ug/L			07/11/19 20:41	1
Ethylbenzene	ND		1.0	0.30	ug/L			07/11/19 20:41	1
1,2-Dibromoethane	ND		1.0	0.50	ug/L			07/11/19 20:41	1
Isopropylbenzene	ND		1.0	0.34	ug/L			07/11/19 20:41	1
Methyl acetate	ND		5.0	0.79	ug/L			07/11/19 20:41	1
Methyl tert-butyl ether	ND		1.0	0.47	ug/L			07/11/19 20:41	1
Methylcyclohexane	ND		1.0	0.26	ug/L			07/11/19 20:41	1
Methylene Chloride	ND		1.0	0.32	ug/L			07/11/19 20:41	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/11/19 20:41	1
Toluene	ND		1.0	0.38	ug/L			07/11/19 20:41	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/11/19 20:41	1
trans-1,3-Dichloropropene	ND		1.0	0.49	ug/L			07/11/19 20:41	1
Trichloroethene	ND		1.0	0.31	ug/L			07/11/19 20:41	1
Trichlorofluoromethane	ND		1.0	0.32	ug/L			07/11/19 20:41	1
Vinyl chloride	ND		1.0	0.17	ug/L			07/11/19 20:41	1
Xylenes, Total	ND		2.0	0.65	ug/L			07/11/19 20:41	1
cis-1,3-Dichloropropene	ND		1.0	0.22	ug/L			07/11/19 20:41	1
Styrene	ND		1.0	0.42	ug/L			07/11/19 20:41	1

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

Lab Sample ID: MB 460-623935/9
Matrix: Water
Analysis Batch: 623935

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

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					07/11/19 20:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		74 - 132		07/11/19 20:41	1
Toluene-d8 (Surr)	97		80 - 120		07/11/19 20:41	1
Dibromofluoromethane (Surr)	99		72 - 131		07/11/19 20:41	1
4-Bromofluorobenzene	105		77 - 124		07/11/19 20:41	1

Lab Sample ID: LCS 460-623935/4
Matrix: Water
Analysis Batch: 623935

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	20.0	21.4		ug/L		107	75 - 125
1,1,2,2-Tetrachloroethane	20.0	20.6		ug/L		103	74 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	19.9		ug/L		99	59 - 150
1,1,2-Trichloroethane	20.0	21.4		ug/L		107	78 - 120
1,1-Dichloroethane	20.0	20.5		ug/L		102	77 - 123
1,1-Dichloroethene	20.0	20.9		ug/L		105	74 - 123
1,2,4-Trichlorobenzene	20.0	23.9		ug/L		120	80 - 124
1,2-Dibromo-3-Chloropropane	20.0	20.0		ug/L		100	55 - 134
1,2-Dichlorobenzene	20.0	22.4		ug/L		112	80 - 120
1,2-Dichloroethane	20.0	19.7		ug/L		98	76 - 121
1,2-Dichloropropane	20.0	21.0		ug/L		105	77 - 123
1,3-Dichlorobenzene	20.0	22.3		ug/L		111	80 - 120
1,4-Dichlorobenzene	20.0	22.0		ug/L		110	80 - 120
2-Butanone (MEK)	100	106		ug/L		106	64 - 120
2-Hexanone	100	116		ug/L		116	71 - 125
4-Methyl-2-pentanone (MIBK)	100	118		ug/L		118	78 - 124
Acetone	100	109		ug/L		109	39 - 150
Benzene	20.0	21.1		ug/L		106	77 - 121
Bromoform	20.0	23.1		ug/L		115	53 - 120
Bromomethane	20.0	21.7		ug/L		108	10 - 150
Carbon disulfide	20.0	21.9		ug/L		109	69 - 133
Carbon tetrachloride	20.0	20.9		ug/L		104	70 - 132
Chlorobenzene	20.0	21.8		ug/L		109	80 - 120
Dibromochloromethane	20.0	22.6		ug/L		113	73 - 120
Chloroethane	20.0	19.6		ug/L		98	52 - 150
Chloroform	20.0	20.3		ug/L		101	80 - 120
Chloromethane	20.0	21.1		ug/L		106	56 - 131
cis-1,2-Dichloroethene	20.0	21.8		ug/L		109	80 - 120
Cyclohexane	20.0	20.8		ug/L		104	56 - 150
Bromodichloromethane	20.0	20.9		ug/L		104	76 - 120
Dichlorodifluoromethane	20.0	18.2		ug/L		91	50 - 131
Ethylbenzene	20.0	21.9		ug/L		110	80 - 120
1,2-Dibromoethane	20.0	21.5		ug/L		107	80 - 120
Isopropylbenzene	20.0	22.7		ug/L		113	80 - 123

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

Lab Sample ID: LCS 460-623935/4
Matrix: Water
Analysis Batch: 623935

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	40.0	42.9		ug/L		107	66 - 144
Methyl tert-butyl ether	20.0	23.8		ug/L		119	79 - 122
Methylcyclohexane	20.0	20.1		ug/L		100	61 - 145
Methylene Chloride	20.0	21.5		ug/L		107	77 - 123
Tetrachloroethene	20.0	20.9		ug/L		105	78 - 122
Toluene	20.0	21.2		ug/L		106	80 - 120
trans-1,2-Dichloroethene	20.0	20.5		ug/L		102	79 - 120
trans-1,3-Dichloropropene	20.0	21.7		ug/L		108	76 - 120
Trichloroethene	20.0	20.4		ug/L		102	77 - 120
Trichlorofluoromethane	20.0	19.6		ug/L		98	71 - 143
Vinyl chloride	20.0	20.7		ug/L		103	62 - 138
cis-1,3-Dichloropropene	20.0	21.8		ug/L		109	77 - 120
Styrene	20.0	23.2		ug/L		116	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*74 - 132*
Toluene-d8 (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*72 - 131*
4-Bromofluorobenzene	*106*		*77 - 124*

Lab Sample ID: MB 460-624085/7
Matrix: Water
Analysis Batch: 624085

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	ND		1.0	0.24	ug/L			07/12/19 11:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			07/12/19 11:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/12/19 11:29	1
1,1,2-Trichloroethane	ND		1.0	0.43	ug/L			07/12/19 11:29	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			07/12/19 11:29	1
1,1-Dichloroethene	ND		1.0	0.26	ug/L			07/12/19 11:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.37	ug/L			07/12/19 11:29	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.38	ug/L			07/12/19 11:29	1
1,2-Dichlorobenzene	ND		1.0	0.43	ug/L			07/12/19 11:29	1
1,2-Dichloroethane	ND		1.0	0.43	ug/L			07/12/19 11:29	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			07/12/19 11:29	1
1,3-Dichlorobenzene	ND		1.0	0.34	ug/L			07/12/19 11:29	1
1,4-Dichlorobenzene	ND		1.0	0.33	ug/L			07/12/19 11:29	1
2-Butanone (MEK)	ND		5.0	1.9	ug/L			07/12/19 11:29	1
2-Hexanone	ND		5.0	1.1	ug/L			07/12/19 11:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	1.3	ug/L			07/12/19 11:29	1
Acetone	ND		5.0	4.4	ug/L			07/12/19 11:29	1
Benzene	ND		1.0	0.20	ug/L			07/12/19 11:29	1
Bromoform	ND		1.0	0.54	ug/L			07/12/19 11:29	1
Bromomethane	ND		1.0	0.55	ug/L			07/12/19 11:29	1
Carbon disulfide	ND		1.0	0.82	ug/L			07/12/19 11:29	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			07/12/19 11:29	1
Chlorobenzene	ND		1.0	0.38	ug/L			07/12/19 11:29	1

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

Lab Sample ID: MB 460-624085/7
Matrix: Water
Analysis Batch: 624085

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		1.0	0.28	ug/L			07/12/19 11:29	1
Chloroethane	ND		1.0	0.32	ug/L			07/12/19 11:29	1
Chloroform	ND		1.0	0.33	ug/L			07/12/19 11:29	1
Chloromethane	ND		1.0	0.40	ug/L			07/12/19 11:29	1
cis-1,2-Dichloroethene	ND		1.0	0.22	ug/L			07/12/19 11:29	1
Cyclohexane	ND		1.0	0.32	ug/L			07/12/19 11:29	1
Bromodichloromethane	ND		1.0	0.34	ug/L			07/12/19 11:29	1
Dichlorodifluoromethane	ND		1.0	0.31	ug/L			07/12/19 11:29	1
Ethylbenzene	ND		1.0	0.30	ug/L			07/12/19 11:29	1
1,2-Dibromoethane	ND		1.0	0.50	ug/L			07/12/19 11:29	1
Isopropylbenzene	ND		1.0	0.34	ug/L			07/12/19 11:29	1
Methyl acetate	ND		5.0	0.79	ug/L			07/12/19 11:29	1
Methyl tert-butyl ether	ND		1.0	0.47	ug/L			07/12/19 11:29	1
Methylcyclohexane	ND		1.0	0.26	ug/L			07/12/19 11:29	1
Methylene Chloride	ND		1.0	0.32	ug/L			07/12/19 11:29	1
Tetrachloroethene	ND		1.0	0.25	ug/L			07/12/19 11:29	1
Toluene	ND		1.0	0.38	ug/L			07/12/19 11:29	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			07/12/19 11:29	1
trans-1,3-Dichloropropene	ND		1.0	0.49	ug/L			07/12/19 11:29	1
Trichloroethene	ND		1.0	0.31	ug/L			07/12/19 11:29	1
Trichlorofluoromethane	ND		1.0	0.32	ug/L			07/12/19 11:29	1
Vinyl chloride	ND		1.0	0.17	ug/L			07/12/19 11:29	1
Xylenes, Total	ND		2.0	0.65	ug/L			07/12/19 11:29	1
cis-1,3-Dichloropropene	ND		1.0	0.22	ug/L			07/12/19 11:29	1
Styrene	ND		1.0	0.42	ug/L			07/12/19 11:29	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*07/12/19 11:29*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*74 - 132*		*07/12/19 11:29*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*07/12/19 11:29*	*1*
Dibromofluoromethane (Surr)	*101*		*72 - 131*		*07/12/19 11:29*	*1*
4-Bromofluorobenzene	*103*		*77 - 124*		*07/12/19 11:29*	*1*

Lab Sample ID: LCS 460-624085/8
Matrix: Water
Analysis Batch: 624085

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	20.0	19.4		ug/L		97	75 - 125
1,1,2,2-Tetrachloroethane	20.0	19.2		ug/L		96	74 - 120
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	18.4		ug/L		92	59 - 150
1,1,2-Trichloroethane	20.0	19.4		ug/L		97	78 - 120
1,1-Dichloroethane	20.0	19.2		ug/L		96	77 - 123
1,1-Dichloroethene	20.0	18.7		ug/L		93	74 - 123
1,2,4-Trichlorobenzene	20.0	21.1		ug/L		106	80 - 124

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

Lab Sample ID: LCS 460-624085/8
Matrix: Water
Analysis Batch: 624085

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromo-3-Chloropropane	20.0	18.7		ug/L		94	55 - 134
1,2-Dichlorobenzene	20.0	20.7		ug/L		103	80 - 120
1,2-Dichloroethane	20.0	18.7		ug/L		93	76 - 121
1,2-Dichloropropane	20.0	19.7		ug/L		98	77 - 123
1,3-Dichlorobenzene	20.0	21.1		ug/L		105	80 - 120
1,4-Dichlorobenzene	20.0	20.7		ug/L		103	80 - 120
2-Butanone (MEK)	100	102		ug/L		102	64 - 120
2-Hexanone	100	105		ug/L		105	71 - 125
4-Methyl-2-pentanone (MIBK)	100	108		ug/L		108	78 - 124
Acetone	100	110		ug/L		110	39 - 150
Benzene	20.0	19.9		ug/L		99	77 - 121
Bromoform	20.0	21.1		ug/L		105	53 - 120
Bromomethane	20.0	17.7		ug/L		88	10 - 150
Carbon disulfide	20.0	18.1		ug/L		91	69 - 133
Carbon tetrachloride	20.0	18.8		ug/L		94	70 - 132
Chlorobenzene	20.0	20.7		ug/L		103	80 - 120
Dibromochloromethane	20.0	20.7		ug/L		104	73 - 120
Chloroethane	20.0	17.8		ug/L		89	52 - 150
Chloroform	20.0	19.5		ug/L		97	80 - 120
Chloromethane	20.0	16.4		ug/L		82	56 - 131
cis-1,2-Dichloroethene	20.0	20.1		ug/L		100	80 - 120
Cyclohexane	20.0	19.1		ug/L		96	56 - 150
Bromodichloromethane	20.0	19.6		ug/L		98	76 - 120
Dichlorodifluoromethane	20.0	15.2		ug/L		76	50 - 131
Ethylbenzene	20.0	20.3		ug/L		102	80 - 120
1,2-Dibromoethane	20.0	20.7		ug/L		103	80 - 120
Isopropylbenzene	20.0	20.9		ug/L		104	80 - 123
Methyl acetate	40.0	40.9		ug/L		102	66 - 144
Methyl tert-butyl ether	20.0	20.6		ug/L		103	79 - 122
Methylcyclohexane	20.0	19.0		ug/L		95	61 - 145
Methylene Chloride	20.0	19.4		ug/L		97	77 - 123
Tetrachloroethene	20.0	20.4		ug/L		102	78 - 122
Toluene	20.0	19.6		ug/L		98	80 - 120
trans-1,2-Dichloroethene	20.0	19.1		ug/L		95	79 - 120
trans-1,3-Dichloropropene	20.0	19.5		ug/L		97	76 - 120
Trichloroethene	20.0	18.9		ug/L		94	77 - 120
Trichlorofluoromethane	20.0	17.6		ug/L		88	71 - 143
Vinyl chloride	20.0	16.4		ug/L		82	62 - 138
cis-1,3-Dichloropropene	20.0	20.4		ug/L		102	77 - 120
Styrene	20.0	21.2		ug/L		106	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*74 - 132*
Toluene-d8 (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*72 - 131*
4-Bromofluorobenzene	*104*		*77 - 124*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-623810/1-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 623810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		10	1.2	ug/L		07/11/19 09:38	07/11/19 20:50	1
bis (2-chloroisopropyl) ether	ND		10	0.63	ug/L		07/11/19 09:38	07/11/19 20:50	1
2,4,5-Trichlorophenol	ND		10	0.28	ug/L		07/11/19 09:38	07/11/19 20:50	1
2,4,6-Trichlorophenol	ND		10	0.30	ug/L		07/11/19 09:38	07/11/19 20:50	1
2,4-Dichlorophenol	ND		10	0.42	ug/L		07/11/19 09:38	07/11/19 20:50	1
2,4-Dimethylphenol	ND		10	0.24	ug/L		07/11/19 09:38	07/11/19 20:50	1
2,4-Dinitrophenol	ND		20	14	ug/L		07/11/19 09:38	07/11/19 20:50	1
2,4-Dinitrotoluene	ND		2.0	1.0	ug/L		07/11/19 09:38	07/11/19 20:50	1
2,6-Dinitrotoluene	ND		2.0	0.39	ug/L		07/11/19 09:38	07/11/19 20:50	1
2-Chloronaphthalene	ND		10	1.2	ug/L		07/11/19 09:38	07/11/19 20:50	1
2-Chlorophenol	ND		10	0.38	ug/L		07/11/19 09:38	07/11/19 20:50	1
2-Methylnaphthalene	ND		10	1.1	ug/L		07/11/19 09:38	07/11/19 20:50	1
2-Methylphenol	ND		10	0.26	ug/L		07/11/19 09:38	07/11/19 20:50	1
2-Nitroaniline	ND		10	0.47	ug/L		07/11/19 09:38	07/11/19 20:50	1
2-Nitrophenol	ND		10	0.75	ug/L		07/11/19 09:38	07/11/19 20:50	1
3,3'-Dichlorobenzidine	ND		10	1.4	ug/L		07/11/19 09:38	07/11/19 20:50	1
3-Nitroaniline	ND		10	0.96	ug/L		07/11/19 09:38	07/11/19 20:50	1
4,6-Dinitro-2-methylphenol	ND		20	13	ug/L		07/11/19 09:38	07/11/19 20:50	1
4-Bromophenyl phenyl ether	ND		10	0.75	ug/L		07/11/19 09:38	07/11/19 20:50	1
4-Chloro-3-methylphenol	ND		10	0.58	ug/L		07/11/19 09:38	07/11/19 20:50	1
4-Chloroaniline	ND		10	1.9	ug/L		07/11/19 09:38	07/11/19 20:50	1
4-Chlorophenyl phenyl ether	ND		10	1.3	ug/L		07/11/19 09:38	07/11/19 20:50	1
4-Methylphenol	ND		10	0.24	ug/L		07/11/19 09:38	07/11/19 20:50	1
4-Nitroaniline	ND		10	0.54	ug/L		07/11/19 09:38	07/11/19 20:50	1
4-Nitrophenol	ND		20	0.69	ug/L		07/11/19 09:38	07/11/19 20:50	1
Acenaphthene	ND		10	1.1	ug/L		07/11/19 09:38	07/11/19 20:50	1
Acenaphthylene	ND		10	0.82	ug/L		07/11/19 09:38	07/11/19 20:50	1
Acetophenone	ND		10	0.79	ug/L		07/11/19 09:38	07/11/19 20:50	1
Anthracene	ND		10	0.63	ug/L		07/11/19 09:38	07/11/19 20:50	1
Atrazine	ND		2.0	1.3	ug/L		07/11/19 09:38	07/11/19 20:50	1
Benzaldehyde	ND		10	0.59	ug/L		07/11/19 09:38	07/11/19 20:50	1
Benzo[a]anthracene	ND		1.0	0.59	ug/L		07/11/19 09:38	07/11/19 20:50	1
Benzo[a]pyrene	ND		1.0	0.41	ug/L		07/11/19 09:38	07/11/19 20:50	1
Benzo[b]fluoranthene	ND		2.0	1.1	ug/L		07/11/19 09:38	07/11/19 20:50	1
Benzo[g,h,i]perylene	ND		10	1.4	ug/L		07/11/19 09:38	07/11/19 20:50	1
Benzo[k]fluoranthene	ND		1.0	0.67	ug/L		07/11/19 09:38	07/11/19 20:50	1
Bis(2-chloroethoxy)methane	ND		10	0.24	ug/L		07/11/19 09:38	07/11/19 20:50	1
Bis(2-chloroethyl)ether	ND		1.0	0.30	ug/L		07/11/19 09:38	07/11/19 20:50	1
Bis(2-ethylhexyl) phthalate	ND		2.0	1.7	ug/L		07/11/19 09:38	07/11/19 20:50	1
Butyl benzyl phthalate	ND		10	0.85	ug/L		07/11/19 09:38	07/11/19 20:50	1
Caprolactam	ND		10	0.68	ug/L		07/11/19 09:38	07/11/19 20:50	1
Carbazole	ND		10	0.68	ug/L		07/11/19 09:38	07/11/19 20:50	1
Chrysene	ND		2.0	0.91	ug/L		07/11/19 09:38	07/11/19 20:50	1
Dibenz(a,h)anthracene	ND		1.0	0.72	ug/L		07/11/19 09:38	07/11/19 20:50	1
Dibenzofuran	ND		10	1.1	ug/L		07/11/19 09:38	07/11/19 20:50	1
Diethyl phthalate	ND		10	0.98	ug/L		07/11/19 09:38	07/11/19 20:50	1
Dimethyl phthalate	ND		10	0.77	ug/L		07/11/19 09:38	07/11/19 20:50	1
Di-n-butyl phthalate	ND		10	0.84	ug/L		07/11/19 09:38	07/11/19 20:50	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 460-623810/1-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 623810

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		10	4.8	ug/L		07/11/19 09:38	07/11/19 20:50	1
Fluoranthene	ND		10	0.84	ug/L		07/11/19 09:38	07/11/19 20:50	1
Fluorene	ND		10	0.91	ug/L		07/11/19 09:38	07/11/19 20:50	1
Hexachlorobenzene	ND		1.0	0.40	ug/L		07/11/19 09:38	07/11/19 20:50	1
Hexachlorobutadiene	ND		1.0	0.78	ug/L		07/11/19 09:38	07/11/19 20:50	1
Hexachlorocyclopentadiene	ND		10	1.7	ug/L		07/11/19 09:38	07/11/19 20:50	1
Hexachloroethane	ND		2.0	1.2	ug/L		07/11/19 09:38	07/11/19 20:50	1
Indeno[1,2,3-cd]pyrene	ND		2.0	1.3	ug/L		07/11/19 09:38	07/11/19 20:50	1
Isophorone	ND		10	0.80	ug/L		07/11/19 09:38	07/11/19 20:50	1
Naphthalene	ND		10	1.1	ug/L		07/11/19 09:38	07/11/19 20:50	1
Nitrobenzene	ND		1.0	0.57	ug/L		07/11/19 09:38	07/11/19 20:50	1
N-Nitrosodi-n-propylamine	ND		1.0	0.43	ug/L		07/11/19 09:38	07/11/19 20:50	1
N-Nitrosodiphenylamine	ND		10	0.89	ug/L		07/11/19 09:38	07/11/19 20:50	1
Pentachlorophenol	ND		20	1.4	ug/L		07/11/19 09:38	07/11/19 20:50	1
Phenanthrene	ND		10	0.58	ug/L		07/11/19 09:38	07/11/19 20:50	1
Phenol	ND		10	0.29	ug/L		07/11/19 09:38	07/11/19 20:50	1
Pyrene	ND		10	1.6	ug/L		07/11/19 09:38	07/11/19 20:50	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*07/11/19 09:38*	*07/11/19 20:50*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5 (Surr)	*93*		*51 - 108*	*07/11/19 09:38*	*07/11/19 20:50*	*1*
Phenol-d5 (Surr)	*36*		*14 - 39*	*07/11/19 09:38*	*07/11/19 20:50*	*1*
2-Fluorophenol (Surr)	*51*		*25 - 58*	*07/11/19 09:38*	*07/11/19 20:50*	*1*
2,4,6-Tribromophenol (Surr)	*104*		*26 - 139*	*07/11/19 09:38*	*07/11/19 20:50*	*1*
2-Fluorobiphenyl (Surr)	*79*		*45 - 107*	*07/11/19 09:38*	*07/11/19 20:50*	*1*
Terphenyl-d14 (Surr)	*108*		*40 - 148*	*07/11/19 09:38*	*07/11/19 20:50*	*1*

Lab Sample ID: LCS 460-623810/2-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 623810

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biphenyl	80.0	54.0		ug/L		67	54 - 108
bis (2-chloroisopropyl) ether	80.0	68.6		ug/L		86	50 - 108
2,4,5-Trichlorophenol	80.0	73.0		ug/L		91	59 - 117
2,4,6-Trichlorophenol	80.0	70.8		ug/L		88	62 - 120
2,4-Dichlorophenol	80.0	65.9		ug/L		82	62 - 102
2,4-Dimethylphenol	80.0	63.7		ug/L		80	61 - 95
2,4-Dinitrophenol	160	160		ug/L		100	45 - 125
2,4-Dinitrotoluene	80.0	78.8		ug/L		99	70 - 123
2,6-Dinitrotoluene	80.0	81.4		ug/L		102	68 - 121
2-Chloronaphthalene	80.0	51.6		ug/L		65	54 - 105
2-Chlorophenol	80.0	60.4		ug/L		76	54 - 92
2-Methylnaphthalene	80.0	42.6		ug/L		53	47 - 104
2-Methylphenol	80.0	52.8		ug/L		66	43 - 80
2-Nitroaniline	80.0	71.1		ug/L		89	46 - 124

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-623810/2-A
Client Sample ID: Lab Control Sample
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 623951
Prep Batch: 623810

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Nitrophenol	80.0	68.0		ug/L		85	58 - 109
3,3'-Dichlorobenzidine	80.0	81.6		ug/L		102	68 - 123
3-Nitroaniline	80.0	72.6		ug/L		91	60 - 117
4,6-Dinitro-2-methylphenol	160	159		ug/L		99	59 - 132
4-Bromophenyl phenyl ether	80.0	67.3		ug/L		84	57 - 126
4-Chloro-3-methylphenol	80.0	62.6		ug/L		78	58 - 98
4-Chloroaniline	80.0	64.7		ug/L		81	51 - 108
4-Chlorophenyl phenyl ether	80.0	63.3		ug/L		79	60 - 114
4-Methylphenol	80.0	47.4		ug/L		59	34 - 78
4-Nitroaniline	80.0	74.8		ug/L		94	48 - 135
4-Nitrophenol	160	53.5		ug/L		33	11 - 47
Acenaphthene	80.0	59.9		ug/L		75	58 - 107
Acenaphthylene	80.0	60.7		ug/L		76	61 - 106
Acetophenone	80.0	65.3		ug/L		82	54 - 115
Anthracene	80.0	72.4		ug/L		90	70 - 118
Benzo[a]anthracene	80.0	75.7		ug/L		95	73 - 119
Benzo[a]pyrene	80.0	73.1		ug/L		91	76 - 125
Benzo[b]fluoranthene	80.0	76.7		ug/L		96	78 - 123
Benzo[g,h,i]perylene	80.0	70.5		ug/L		88	63 - 133
Benzo[k]fluoranthene	80.0	76.4		ug/L		95	71 - 126
Bis(2-chloroethoxy)methane	80.0	74.6		ug/L		93	67 - 104
Bis(2-chloroethyl)ether	80.0	71.0		ug/L		89	63 - 106
Bis(2-ethylhexyl) phthalate	80.0	87.0		ug/L		109	63 - 135
Butyl benzyl phthalate	80.0	86.0		ug/L		108	66 - 129
Carbazole	80.0	75.3		ug/L		94	68 - 121
Chrysene	80.0	86.6		ug/L		108	73 - 121
Dibenz(a,h)anthracene	80.0	71.7		ug/L		90	59 - 136
Dibenzofuran	80.0	62.9		ug/L		79	67 - 108
Diethyl phthalate	80.0	73.8		ug/L		92	61 - 129
Dimethyl phthalate	80.0	74.1		ug/L		93	65 - 121
Di-n-butyl phthalate	80.0	79.2		ug/L		99	64 - 130
Di-n-octyl phthalate	80.0	70.6		ug/L		88	64 - 131
Fluoranthene	80.0	74.2		ug/L		93	66 - 123
Fluorene	80.0	65.8		ug/L		82	67 - 112
Hexachlorobenzene	80.0	69.7		ug/L		87	63 - 125
Hexachlorobutadiene	80.0	22.6	*	ug/L		28	34 - 99
Hexachlorocyclopentadiene	80.0	16.7		ug/L		21	18 - 99
Hexachloroethane	80.0	21.4	*	ug/L		27	39 - 92
Indeno[1,2,3-cd]pyrene	80.0	71.7		ug/L		90	57 - 142
Isophorone	80.0	73.7		ug/L		92	55 - 105
Naphthalene	80.0	41.9		ug/L		52	51 - 98
Nitrobenzene	80.0	67.5		ug/L		84	56 - 106
N-Nitrosodi-n-propylamine	80.0	70.5		ug/L		88	48 - 118
N-Nitrosodiphenylamine	80.0	73.1		ug/L		91	69 - 118
Pentachlorophenol	160	150		ug/L		94	54 - 120
Phenanthrene	80.0	70.3		ug/L		88	70 - 117
Phenol	80.0	28.3		ug/L		35	16 - 43
Pyrene	80.0	85.5		ug/L		107	63 - 129

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-623810/2-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 623810

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5 (Surr)	*88*		*51 - 108*
Phenol-d5 (Surr)	*33*		*14 - 39*
2-Fluorophenol (Surr)	*47*		*25 - 58*
2,4,6-Tribromophenol (Surr)	*103*		*26 - 139*
2-Fluorobiphenyl (Surr)	*79*		*45 - 107*
Terphenyl-d14 (Surr)	*105*		*40 - 148*

Lab Sample ID: LCS 460-623810/4-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 623810

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Atrazine	160	183		ug/L		114	38 - 146
Benzaldehyde	160	161		ug/L		101	46 - 111
Caprolactam	160	48.9		ug/L		31	10 - 43

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5 (Surr)	*87*		*51 - 108*
Phenol-d5 (Surr)	*32*		*14 - 39*
2-Fluorophenol (Surr)	*46*		*25 - 58*
2,4,6-Tribromophenol (Surr)	*94*		*26 - 139*
2-Fluorobiphenyl (Surr)	*79*		*45 - 107*
Terphenyl-d14 (Surr)	*101*		*40 - 148*

Lab Sample ID: LCSD 460-623810/3-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 623810

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Biphenyl	80.0	65.0		ug/L		81	54 - 108	19	30
bis (2-chloroisopropyl) ether	80.0	74.1		ug/L		93	50 - 108	8	30
2,4,5-Trichlorophenol	80.0	81.1		ug/L		101	59 - 117	10	30
2,4,6-Trichlorophenol	80.0	79.4		ug/L		99	62 - 120	12	30
2,4-Dichlorophenol	80.0	72.6		ug/L		91	62 - 102	10	30
2,4-Dimethylphenol	80.0	70.8		ug/L		88	61 - 95	11	30
2,4-Dinitrophenol	160	183		ug/L		115	45 - 125	13	30
2,4-Dinitrotoluene	80.0	84.2		ug/L		105	70 - 123	7	30
2,6-Dinitrotoluene	80.0	87.5		ug/L		109	68 - 121	7	30
2-Chloronaphthalene	80.0	62.5		ug/L		78	54 - 105	19	30
2-Chlorophenol	80.0	65.1		ug/L		81	54 - 92	7	30
2-Methylnaphthalene	80.0	55.1		ug/L		69	47 - 104	26	30
2-Methylphenol	80.0	56.7		ug/L		71	43 - 80	7	30
2-Nitroaniline	80.0	72.6		ug/L		91	46 - 124	2	30
2-Nitrophenol	80.0	77.3		ug/L		97	58 - 109	13	30
3,3'-Dichlorobenzidine	80.0	88.7		ug/L		111	68 - 123	8	30
3-Nitroaniline	80.0	79.3		ug/L		99	60 - 117	9	30
4,6-Dinitro-2-methylphenol	160	173		ug/L		108	59 - 132	9	30
4-Bromophenyl phenyl ether	80.0	75.4		ug/L		94	57 - 126	11	30

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 460-623810/3-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 623810

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloro-3-methylphenol			80.0	68.3		ug/L		85	58 - 98	9	30
4-Chloroaniline			80.0	71.6		ug/L		89	51 - 108	10	30
4-Chlorophenyl phenyl ether			80.0	71.3		ug/L		89	60 - 114	12	30
4-Methylphenol			80.0	51.6		ug/L		65	34 - 78	8	30
4-Nitroaniline			80.0	84.1		ug/L		105	48 - 135	12	30
4-Nitrophenol			160	58.1		ug/L		36	11 - 47	8	30
Acenaphthene			80.0	69.8		ug/L		87	58 - 107	15	30
Acenaphthylene			80.0	70.9		ug/L		89	61 - 106	16	30
Acetophenone			80.0	71.0		ug/L		89	54 - 115	8	30
Anthracene			80.0	78.2		ug/L		98	70 - 118	8	30
Benzo[a]anthracene			80.0	84.2		ug/L		105	73 - 119	11	30
Benzo[a]pyrene			80.0	79.0		ug/L		99	76 - 125	8	30
Benzo[b]fluoranthene			80.0	75.8		ug/L		95	78 - 123	1	30
Benzo[g,h,i]perylene			80.0	85.8		ug/L		107	63 - 133	20	30
Benzo[k]fluoranthene			80.0	86.8		ug/L		108	71 - 126	13	30
Bis(2-chloroethoxy)methane			80.0	81.6		ug/L		102	67 - 104	9	30
Bis(2-chloroethyl)ether			80.0	77.4		ug/L		97	63 - 106	9	30
Bis(2-ethylhexyl) phthalate			80.0	95.1		ug/L		119	63 - 135	9	30
Butyl benzyl phthalate			80.0	94.4		ug/L		118	66 - 129	9	30
Carbazole			80.0	80.7		ug/L		101	68 - 121	7	30
Chrysene			80.0	91.0		ug/L		114	73 - 121	5	30
Dibenz(a,h)anthracene			80.0	84.4		ug/L		105	59 - 136	16	30
Dibenzofuran			80.0	71.9		ug/L		90	67 - 108	13	30
Diethyl phthalate			80.0	80.7		ug/L		101	61 - 129	9	30
Dimethyl phthalate			80.0	79.8		ug/L		100	65 - 121	7	30
Di-n-butyl phthalate			80.0	86.5		ug/L		108	64 - 130	9	30
Di-n-octyl phthalate			80.0	73.8		ug/L		92	64 - 131	4	30
Fluoranthene			80.0	80.1		ug/L		100	66 - 123	8	30
Fluorene			80.0	74.7		ug/L		93	67 - 112	13	30
Hexachlorobenzene			80.0	76.9		ug/L		96	63 - 125	10	30
Hexachlorobutadiene			80.0	25.2	*	ug/L		32	34 - 99	11	30
Hexachlorocyclopentadiene			80.0	21.3		ug/L		27	18 - 99	24	30
Hexachloroethane			80.0	23.5	*	ug/L		29	39 - 92	9	30
Indeno[1,2,3-cd]pyrene			80.0	86.1		ug/L		108	57 - 142	18	30
Isophorone			80.0	81.1		ug/L		101	55 - 105	9	30
Naphthalene			80.0	50.1		ug/L		63	51 - 98	18	30
Nitrobenzene			80.0	74.7		ug/L		93	56 - 106	10	30
N-Nitrosodi-n-propylamine			80.0	77.7		ug/L		97	48 - 118	10	30
N-Nitrosodiphenylamine			80.0	79.9		ug/L		100	69 - 118	9	30
Pentachlorophenol			160	164		ug/L		102	54 - 120	9	30
Phenanthrene			80.0	78.1		ug/L		98	70 - 117	10	30
Phenol			80.0	31.1		ug/L		39	16 - 43	9	30
Pyrene			80.0	92.2		ug/L		115	63 - 129	8	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5 (Surr)	*97*		*51 - 108*
Phenol-d5 (Surr)	*34*		*14 - 39*
2-Fluorophenol (Surr)	*51*		*25 - 58*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 460-623810/3-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 623810

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	*107*		*26 - 139*
2-Fluorobiphenyl (Surr)	*91*		*45 - 107*
Terphenyl-d14 (Surr)	*109*		*40 - 148*

Lab Sample ID: LCSD 460-623810/5-A
Matrix: Water
Analysis Batch: 623951

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 623810

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Atrazine			160	156		ug/L		97	38 - 146	16	30
Benzaldehyde			160	139		ug/L		87	46 - 111	15	30
Caprolactam			160	53.1		ug/L		33	10 - 43	8	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Nitrobenzene-d5 (Surr)	*68*		*51 - 108*
Phenol-d5 (Surr)	*26*		*14 - 39*
2-Fluorophenol (Surr)	*37*		*25 - 58*
2,4,6-Tribromophenol (Surr)	*69*		*26 - 139*
2-Fluorobiphenyl (Surr)	*61*		*45 - 107*
Terphenyl-d14 (Surr)	*90*		*40 - 148*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 460-624082/1-A
Matrix: Water
Analysis Batch: 624208

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 624082

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	0.0042	mg/L		07/12/19 09:09	07/12/19 19:11	1
Cadmium	ND		0.0050	0.0021	mg/L		07/12/19 09:09	07/12/19 19:11	1
Chromium	ND		0.010	0.0059	mg/L		07/12/19 09:09	07/12/19 19:11	1
Copper	ND		0.025	0.0055	mg/L		07/12/19 09:09	07/12/19 19:11	1
Lead	ND		0.0050	0.0038	mg/L		07/12/19 09:09	07/12/19 19:11	1
Molybdenum	ND		0.020	0.0047	mg/L		07/12/19 09:09	07/12/19 19:11	1
Nickel	ND		0.040	0.0063	mg/L		07/12/19 09:09	07/12/19 19:11	1
Selenium	ND		0.0050	0.0042	mg/L		07/12/19 09:09	07/12/19 19:11	1
Zinc	ND		0.030	0.0054	mg/L		07/12/19 09:09	07/12/19 19:11	1

Lab Sample ID: LCS 460-624082/2-A
Matrix: Water
Analysis Batch: 624208

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 624082

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic			2.00	1.91		mg/L		95	85 - 115
Cadmium			0.0500	0.0469		mg/L		94	85 - 115
Chromium			0.200	0.195		mg/L		97	85 - 115
Copper			0.250	0.225		mg/L		90	85 - 115
Lead			0.500	0.483		mg/L		97	85 - 115
Molybdenum			0.500	0.514		mg/L		103	85 - 115

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: LCS 460-624082/2-A
Matrix: Water
Analysis Batch: 624208

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 624082

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nickel	0.500	0.465		mg/L		93	85 - 115
Selenium	2.00	1.72		mg/L		86	85 - 115
Zinc	0.500	0.475		mg/L		95	85 - 115

Lab Sample ID: 460-186235-1 MS
Matrix: Water
Analysis Batch: 624208

Client Sample ID: PWFTWWNA088
Prep Type: Total Recoverable
Prep Batch: 624082

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		2.00	1.92		mg/L		96	70 - 130
Cadmium	ND		0.0500	0.0462		mg/L		92	70 - 130
Chromium	ND		0.200	0.189		mg/L		94	70 - 130
Copper	ND		0.250	0.220		mg/L		88	70 - 130
Lead	ND		0.500	0.478		mg/L		96	70 - 130
Molybdenum	ND		0.500	0.496		mg/L		99	70 - 130
Nickel	ND		0.500	0.454		mg/L		91	70 - 130
Selenium	ND		2.00	1.77		mg/L		89	70 - 130
Zinc	ND		0.500	0.471		mg/L		94	70 - 130

Lab Sample ID: 460-186235-1 DU
Matrix: Water
Analysis Batch: 624208

Client Sample ID: PWFTWWNA088
Prep Type: Total Recoverable
Prep Batch: 624082

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Molybdenum	ND		ND		mg/L		NC	20
Nickel	ND		ND		mg/L		NC	20
Selenium	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 460-623867/1-A
Matrix: Water
Analysis Batch: 623908

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 623867

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.12	ug/L		07/11/19 12:39	07/11/19 13:36	1

Lab Sample ID: LCS 460-623867/2-A
Matrix: Water
Analysis Batch: 623908

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 623867

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	1.00	0.967		ug/L		97	85 - 115

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 460-624151/1-A
Matrix: Water
Analysis Batch: 624196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 624151

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0040	mg/L		07/12/19 09:45	07/12/19 14:35	1

Lab Sample ID: LCS 460-624151/2-A
Matrix: Water
Analysis Batch: 624196

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 624151

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.107		mg/L		107	90 - 110

Lab Sample ID: 460-186235-1 MS
Matrix: Water
Analysis Batch: 624196

Client Sample ID: PWFTWWNA088
Prep Type: Total/NA
Prep Batch: 624151

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	ND	F1	0.200	0.236	F1	mg/L		118	90 - 110

Lab Sample ID: 460-186235-1 MSD
Matrix: Water
Analysis Batch: 624196

Client Sample ID: PWFTWWNA088
Prep Type: Total/NA
Prep Batch: 624151

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	ND	F1	0.200	0.235	F1	mg/L		118	90 - 110	0	35

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 460-623874/1
Matrix: Water
Analysis Batch: 623874

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		2.5	2.5	mg/L			07/11/19 13:09	1

Lab Sample ID: LCSSRM 460-623874/2
Matrix: Water
Analysis Batch: 623874

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

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	49.3	52.00		mg/L		105.5	77.3 - 114.6

Method: SM 5210B - BOD, 5-Day

Lab Sample ID: USB 460-623491/7
Matrix: Water
Analysis Batch: 623491

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

Analyte	USB Result	USB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biochemical Oxygen Demand	ND		1.0	1.0	mg/L			07/10/19 16:50	1

Method: SM 5210B - BOD, 5-Day (Continued)

Lab Sample ID: LCS 460-623491/2
Matrix: Water
Analysis Batch: 623491

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Biochemical Oxygen Demand	132	127.0		mg/L		96	84.6 - 115.4

QC Association Summary

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

GC/MS VOA

Analysis Batch: 623935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	8260C	
MB 460-623935/9	Method Blank	Total/NA	Water	8260C	
LCS 460-623935/4	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 624085

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 460-624085/7	Method Blank	Total/NA	Water	8260C	
LCS 460-624085/8	Lab Control Sample	Total/NA	Water	8260C	

GC/MS Semi VOA

Prep Batch: 623810

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	3510C	
MB 460-623810/1-A	Method Blank	Total/NA	Water	3510C	
LCS 460-623810/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 460-623810/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 460-623810/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 460-623810/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 623951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	8270D	623810
MB 460-623810/1-A	Method Blank	Total/NA	Water	8270D	623810
LCS 460-623810/2-A	Lab Control Sample	Total/NA	Water	8270D	623810
LCS 460-623810/4-A	Lab Control Sample	Total/NA	Water	8270D	623810
LCSD 460-623810/3-A	Lab Control Sample Dup	Total/NA	Water	8270D	623810
LCSD 460-623810/5-A	Lab Control Sample Dup	Total/NA	Water	8270D	623810

Metals

Prep Batch: 623867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	245.1	
MB 460-623867/1-A	Method Blank	Total/NA	Water	245.1	
LCS 460-623867/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 623908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	245.1	623867
MB 460-623867/1-A	Method Blank	Total/NA	Water	245.1	623867
LCS 460-623867/2-A	Lab Control Sample	Total/NA	Water	245.1	623867

Prep Batch: 624082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total Recoverable	Water	200.7	
MB 460-624082/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 460-624082/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
460-186235-1 MS	PWFTWWNA088	Total Recoverable	Water	200.7	
460-186235-1 DU	PWFTWWNA088	Total Recoverable	Water	200.7	

QC Association Summary

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Metals

Analysis Batch: 624208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total Recoverable	Water	200.7 Rev 4.4	624082
MB 460-624082/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	624082
LCS 460-624082/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	624082
460-186235-1 MS	PWFTWWNA088	Total Recoverable	Water	200.7 Rev 4.4	624082
460-186235-1 DU	PWFTWWNA088	Total Recoverable	Water	200.7 Rev 4.4	624082

General Chemistry

Analysis Batch: 623491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	SM 5210B	
USB 460-623491/7	Method Blank	Total/NA	Water	SM 5210B	
LCS 460-623491/2	Lab Control Sample	Total/NA	Water	SM 5210B	

Analysis Batch: 623874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	SM 2540D	
MB 460-623874/1	Method Blank	Total/NA	Water	SM 2540D	
LCSSRM 460-623874/2	Lab Control Sample	Total/NA	Water	SM 2540D	

Prep Batch: 624151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	Distill/CN	
MB 460-624151/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 460-624151/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
460-186235-1 MS	PWFTWWNA088	Total/NA	Water	Distill/CN	
460-186235-1 MSD	PWFTWWNA088	Total/NA	Water	Distill/CN	

Analysis Batch: 624196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-186235-1	PWFTWWNA088	Total/NA	Water	335.4	624151
MB 460-624151/1-A	Method Blank	Total/NA	Water	335.4	624151
LCS 460-624151/2-A	Lab Control Sample	Total/NA	Water	335.4	624151
460-186235-1 MS	PWFTWWNA088	Total/NA	Water	335.4	624151
460-186235-1 MSD	PWFTWWNA088	Total/NA	Water	335.4	624151

Lab Chronicle

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Client Sample ID: PWFTWWNA088
Lab Sample ID: 460-186235-1
Date Collected: 07/09/19 07:55
Matrix: Water
Date Received: 07/10/19 09:11

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	623935	07/12/19 01:28	VBP	TAL EDI
Total/NA	Prep	3510C			623810	07/11/19 09:38	OXG	TAL EDI
Total/NA	Analysis	8270D		1	623951	07/12/19 01:37	YAH	TAL EDI
Total Recoverable	Prep	200.7			624082	07/12/19 09:09	QZY	TAL EDI
Total Recoverable	Analysis	200.7 Rev 4.4		1	624208	07/12/19 19:22	YZH	TAL EDI
Total/NA	Prep	245.1			623867	07/11/19 12:39	RBS	TAL EDI
Total/NA	Analysis	245.1		1	623908	07/11/19 14:03	RBS	TAL EDI
Total/NA	Prep	Distill/CN			624151	07/12/19 09:45	EMS	TAL EDI
Total/NA	Analysis	335.4		1	624196	07/12/19 14:54	AJP	TAL EDI
Total/NA	Analysis	SM 2540D		1	623874	07/11/19 13:09	PLS	TAL EDI
Total/NA	Analysis	SM 5210B		1	623491	07/10/19 19:30	PLS	TAL EDI

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Laboratory: Eurofins TestAmerica, Edison

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11452	04-01-20

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
200.7 Rev 4.4	200.7	Water	Copper

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-20

Method Summary

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL EDI
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL EDI
200.7 Rev 4.4	Metals (ICP)	EPA	TAL EDI
245.1	Mercury (CVAA)	EPA	TAL EDI
335.4	Cyanide, Total	MCAWW	TAL EDI
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL EDI
SM 5210B	BOD, 5-Day	SM	TAL EDI
200.7	Preparation, Total Recoverable Metals	EPA	TAL EDI
245.1	Preparation, Mercury	EPA	TAL EDI
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL EDI
5030C	Purge and Trap	SW846	TAL EDI
Distill/CN	Distillation, Cyanide	None	TAL EDI

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: AECOM
Job ID: 460-186235-1
Project/Site: 60584654, Penn Yan Former MGP Phase 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
460-186235-1	PWFTWWNA088	Water	07/09/19 07:55	07/10/19 09:11	

TestAmerica Buffalo
777 New Durham Rd.
Edison, New Jersey
Phone (732) 549-3900

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: GEORGE HERMANCE	Lab PM: Deyo, Melissa L	Carrier Tracking No(s):	COC No: 480-127595-28824.1
Client Contact: Mr. Matt Thorpe	Phone: 716-861-7882	E-Mail: melissa.deyo@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #: 186236

Address: 40 British American Blvd	Due Date Requested: 7/12/2019	Analysis Requested	Preservation Codes:
City: Latham	TAT Requested (days): 3 Per M. Deyo	SHORT HOLD	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: NY, 12110			
Phone: 518-428-4383(Tel)	PO #: 107852		Other:
Email: matthew.thorpe@aecom.com	WO #: Matthew.Thorpe@aecom.com		
Project Name: 60584654, Penn Yan Former MGP Phase 2	Project #: 48015558		
Site: 150 Water Street, Penn Yan, NY	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)	8270D - TCL SVOCs + 20 TICs	200.7, 245.1	8260C - TCL VOCs + 10 TICs	6210B - BOD	2540D - TSS	335.4 - Cyanide	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	D	A	N	N	B		
PWFTWWNA088	7/9/19	0755	G	Water	N		X	X	X	X	X	X	9	#3 1

460-186235 Chain of Custody

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, x Disposal By Lab, Archive For ____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
George Hermance	7/9/19 1500	AECOM	FedEx		
Relinquished by:	Date/Time:	Company	Received by: Angela Pinilla via FEDEX	Date/Time: 7/10/19 9:11	Company TA Edison
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: 810179	Cooler Temperature(s) °C and Other Remarks: 1.5°C IR#9

Ver: 01/16/2019

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7/16/2019

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 186335

Number of Coolers: 1 IR Gun # 9

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	1.5 °C	1.5 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1				<2								>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: ACCP Date: 7/10/19

Login Sample Receipt Checklist

Client: AECOM

Job Number: 460-186235-1

Login Number: 186235
List Number: 1
Creator: Meyers, Gary

List Source: Eurofins TestAmerica, Edison

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	810179
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	
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	