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ANALYTICAL REPORT

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Laboratory Job ID: 580-109054-1
Client Project/Site: Red Hill CV22F0106
Revision: 1

For:
AECOM
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Attn: Margie F Pascua

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Narrative

01/15/2022: Report was revised to include the method 8015DRO QC samples which were not included in the original report.

Job Narrative
580-109054-1

Receipt
Three samples were received on 1/7/2022 11:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were -0.7º C and -0.2º C.

GC/MS VOA
Method 8260/CALUFT DOD: Surrogate recovery for the following QC samples was outside the upper control limit: (CCVIS 580-377719/4). This sample did not contain any target analytes; therefore, re-analysis was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-377897 recovered above the upper control limit for Carbon disulfide and Carbon tetrachloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: 20220105-C1-ZT03 (580-109054-1) and (CCVIS 580-377897/3).

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-377897 recovered outside control limits for the following analytes: Carbon disulfide and Carbon tetrachloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-377897 recovered outside control limits for the following analytes: Carbon disulfide.

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

GC/MS Semi VOA
Method 8270E: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-377805 was outside criteria for the following analytes: Bis(2-chloroethyl)ether and N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analytes is considered estimated.

Method 8270E: The laboratory control sample duplicate (LCSD) for preparation batch 580-377698 and analytical batch 580-377805 recovered outside control limits for the following analytes: 4-Nitrophenol. 4-Nitrophenol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8270E: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-377698 and analytical batch 580-377805 recovered outside control limits for the following analytes: 4-Nitroaniline and 4-Nitrophenol.

Method 8270E: Surrogate 2-Fluorophenol (Surr) and Phenol-d5 (Surr) recovery for the following samples was outside control limits: 20220105-C1-ZT03 (580-109054-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Organic Prep
Methods 3510C, CWA_Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 580-377698. Laboratory control sample/laboratory control sample duplicate were created and substituted for MS/MSD/DUP.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 580-377700. Laboratory control sample/ laboratory control sample duplicate were created and substituted for MS/MSD/DUP.

Job ID: 580-109054-1 (Continued)

Laboratory: Eurofins Seattle (Continued)

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

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

Definitions/Glossary

Client: AECOM
Job ID: 580-109054-1
Project/Site: Red Hill CV22F0106

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Client Sample ID: 20220105-C1-ZT03

Date Collected: 01/05/22 15:35
Date Received: 01/07/22 11:00

Lab Sample ID: 580-109054-1

Matrix: Water

Method: 8260/CALUFT DOD - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U	100	31	ug/L			01/07/22 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*69 - 133*		*01/07/22 18:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			01/07/22 18:56	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			01/07/22 18:56	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/07/22 18:56	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/07/22 18:56	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/07/22 18:56	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/07/22 18:56	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/07/22 18:56	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			01/07/22 18:56	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/07/22 18:56	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/07/22 18:56	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/07/22 18:56	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/07/22 18:56	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/07/22 18:56	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/07/22 18:56	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/07/22 18:56	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/07/22 18:56	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/07/22 18:56	1
Methyl Ethyl Ketone	4.7	U	15	4.7	ug/L			01/07/22 18:56	1
Methyl isobutyl ketone (MIBK)	2.5	U	5.0	2.5	ug/L			01/07/22 18:56	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/07/22 18:56	1
Styrene	0.53	U	1.0	0.53	ug/L			01/07/22 18:56	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/07/22 18:56	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/07/22 18:56	1
Toluene	0.39	U	1.0	0.39	ug/L			01/07/22 18:56	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/07/22 18:56	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/07/22 18:56	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/07/22 18:56	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/07/22 18:56	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/07/22 18:56	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/07/22 18:56	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/07/22 18:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*		*01/07/22 18:56*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*01/07/22 18:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*		*01/07/22 18:56*	*1*
Toluene-d8 (Surr)	*98*		*89 - 112*		*01/07/22 18:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	U	1.0	0.24	ug/L			01/10/22 14:56	1
Bromoform	**4.1**		1.0	0.51	ug/L			01/10/22 14:56	1
Carbon disulfide	0.53	U *+ *1	1.0	0.53	ug/L			01/10/22 14:56	1

Client Sample ID: 20220105-C1-ZT03

Date Collected: 01/05/22 15:35
Date Received: 01/07/22 11:00

Lab Sample ID: 580-109054-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	0.30	U *+	1.0	0.30	ug/L			01/10/22 14:56	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/10/22 14:56	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/10/22 14:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*		*01/10/22 14:56*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*01/10/22 14:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*01/10/22 14:56*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*01/10/22 14:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.052	U	0.42	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
Acenaphthylene	0.063	U	1.0	0.063	ug/L		01/07/22 15:14	01/08/22 19:58	1
Anthracene	0.052	U	1.0	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
Benzo[a]anthracene	0.052	U	0.26	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
Benzo[a]pyrene	0.042	U	0.26	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
Benzo[b]fluoranthene	0.042	U	0.26	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
Benzo[g,h,i]perylene	0.042	U	0.26	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
Benzo[k]fluoranthene	0.052	U	0.26	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
Bis(2-chloroethoxy)methane	0.052	U	0.63	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
Bis(2-chloroethyl)ether	**0.10**		0.10	0.031	ug/L		01/07/22 15:14	01/08/22 19:58	1
Bis(2-ethylhexyl) phthalate	0.77	U	3.1	0.77	ug/L		01/07/22 15:14	01/08/22 19:58	1
4-Bromophenyl phenyl ether	0.063	U	0.63	0.063	ug/L		01/07/22 15:14	01/08/22 19:58	1
Butyl benzyl phthalate	0.28	U	4.2	0.28	ug/L		01/07/22 15:14	01/08/22 19:58	1
Carbazole	0.10	U	0.63	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1
4-Chloroaniline	0.62	U	2.1	0.62	ug/L		01/07/22 15:14	01/08/22 19:58	1
4-Chloro-3-methylphenol	0.14	U	0.63	0.14	ug/L		01/07/22 15:14	01/08/22 19:58	1
2-Chloronaphthalene	0.073	U	1.0	0.073	ug/L		01/07/22 15:14	01/08/22 19:58	1
2-Chlorophenol	0.052	U	1.0	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
4-Chlorophenyl phenyl ether	0.052	U	0.63	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
Chrysene	0.042	U	0.26	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
Dibenz(a,h)anthracene	0.073	U	0.26	0.073	ug/L		01/07/22 15:14	01/08/22 19:58	1
Dibenzofuran	0.10	U	0.42	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1
1,2-Dichlorobenzene	0.052	U	0.42	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
1,3-Dichlorobenzene	0.042	U	0.42	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
1,4-Dichlorobenzene	0.042	U	0.42	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
3,3'-Dichlorobenzidine	0.27	U	1.0	0.27	ug/L		01/07/22 15:14	01/08/22 19:58	1
2,4-Dichlorophenol	0.21	U	1.0	0.21	ug/L		01/07/22 15:14	01/08/22 19:58	1
Diethyl phthalate	0.16	U	1.0	0.16	ug/L		01/07/22 15:14	01/08/22 19:58	1
2,4-Dimethylphenol	0.17	U	4.2	0.17	ug/L		01/07/22 15:14	01/08/22 19:58	1
Dimethyl phthalate	0.063	U	0.63	0.063	ug/L		01/07/22 15:14	01/08/22 19:58	1
Di-n-butyl phthalate	0.20	U	3.1	0.20	ug/L		01/07/22 15:14	01/08/22 19:58	1
4,6-Dinitro-2-methylphenol	0.57	U	2.1	0.57	ug/L		01/07/22 15:14	01/08/22 19:58	1
2,4-Dinitrophenol	1.7	U	5.2	1.7	ug/L		01/07/22 15:14	01/08/22 19:58	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1
2,6-Dinitrotoluene	0.10	U	0.42	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1
Di-n-octyl phthalate	0.14	U	1.0	0.14	ug/L		01/07/22 15:14	01/08/22 19:58	1
Fluoranthene	0.063	U	0.26	0.063	ug/L		01/07/22 15:14	01/08/22 19:58	1
Fluorene	0.052	U	0.26	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1

Client Sample ID: 20220105-C1-ZT03
Date Collected: 01/05/22 15:35
Date Received: 01/07/22 11:00

Lab Sample ID: 580-109054-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	0.042	U	0.63	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
Hexachlorobutadiene	0.063	U	1.0	0.063	ug/L		01/07/22 15:14	01/08/22 19:58	1
Hexachlorocyclopentadiene	0.15	U	1.0	0.15	ug/L		01/07/22 15:14	01/08/22 19:58	1
Hexachloroethane	0.052	U	1.0	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
Indeno[1,2,3-cd]pyrene	0.14	U	0.42	0.14	ug/L		01/07/22 15:14	01/08/22 19:58	1
Isophorone	0.10	U	0.42	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1
2-Methylphenol	0.052	U	0.63	0.052	ug/L		01/07/22 15:14	01/08/22 19:58	1
3 & 4 Methylphenol	**0.14**	**J**	0.63	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1
Naphthalene	0.17	U	0.42	0.17	ug/L		01/07/22 15:14	01/08/22 19:58	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1
3-Nitroaniline	0.17	U	3.1	0.17	ug/L		01/07/22 15:14	01/08/22 19:58	1
4-Nitroaniline	0.22	U *1	2.1	0.22	ug/L		01/07/22 15:14	01/08/22 19:58	1
Nitrobenzene	0.042	U	1.0	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
4-Nitrophenol	1.8	U *- *1	10	1.8	ug/L		01/07/22 15:14	01/08/22 19:58	1
N-Nitrosodi-n-propylamine	0.063	U	0.42	0.063	ug/L		01/07/22 15:14	01/08/22 19:58	1
N-Nitrosodiphenylamine	0.073	U	1.0	0.073	ug/L		01/07/22 15:14	01/08/22 19:58	1
Pentachlorophenol	0.53	U	10	0.53	ug/L		01/07/22 15:14	01/08/22 19:58	1
Phenanthrene	0.13	U	1.0	0.13	ug/L		01/07/22 15:14	01/08/22 19:58	1
Phenol	0.38	U	1.0	0.38	ug/L		01/07/22 15:14	01/08/22 19:58	1
Pyrene	0.042	U	1.0	0.042	ug/L		01/07/22 15:14	01/08/22 19:58	1
1,2,4-Trichlorobenzene	0.094	U	0.42	0.094	ug/L		01/07/22 15:14	01/08/22 19:58	1
2,4,5-Trichlorophenol	0.10	U	0.42	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1
2,4,6-Trichlorophenol	0.10	U	0.63	0.10	ug/L		01/07/22 15:14	01/08/22 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*48*		*44 - 119*	*01/07/22 15:14*	*01/08/22 19:58*	*1*
2-Fluorophenol (Surr)	*6*	*S1-*	*19 - 119*	*01/07/22 15:14*	*01/08/22 19:58*	*1*
Nitrobenzene-d5 (Surr)	*72*		*44 - 120*	*01/07/22 15:14*	*01/08/22 19:58*	*1*
Phenol-d5 (Surr)	*0.3*	*S1-*	*10 - 120*	*01/07/22 15:14*	*01/08/22 19:58*	*1*
Terphenyl-d14	*120*		*50 - 134*	*01/07/22 15:14*	*01/08/22 19:58*	*1*
2,4,6-Tribromophenol	*140*		*43 - 140*	*01/07/22 15:14*	*01/08/22 19:58*	*1*

Method: 8015D DRO - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	87	U	110	87	ug/L		01/07/22 15:12	01/08/22 01:13	1
C24-C40	170	U	340	170	ug/L		01/07/22 15:12	01/08/22 01:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*56 - 125*	*01/07/22 15:12*	*01/08/22 01:13*	*1*

Client: AECOM
Project/Site: Red Hill CV22F0106

Job ID: 580-109054-1

Client Sample ID: 20220106-D3-ZT02
Date Collected: 01/06/22 13:10
Date Received: 01/07/22 11:00

Lab Sample ID: 580-109054-2
Matrix: Water

Method: 8260/CALUFT DOD - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U	100	31	ug/L			01/08/22 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*69 - 133*		*01/08/22 16:56*	*1*

Client: AECOM
Project/Site: Red Hill CV22F0106

Job ID: 580-109054-1

Client Sample ID: 20220106-D3-ZT03

Date Collected: 01/06/22 13:15
Date Received: 01/07/22 11:00

Lab Sample ID: 580-109054-3

Matrix: Water

Method: 8260/CALUFT DOD - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U	100	31	ug/L			01/08/22 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*69 - 133*		*01/08/22 17:20*	*1*

Method: 8015D DRO - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	91	U	110	91	ug/L		01/07/22 15:12	01/08/22 01:33	1
C24-C40	180	U	350	180	ug/L		01/07/22 15:12	01/08/22 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*56 - 125*	*01/07/22 15:12*	*01/08/22 01:33*	*1*

Method: 8260/CALUFT DOD - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-377719/5
Matrix: Water
Analysis Batch: 377719

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U	100	31	ug/L			01/07/22 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*69 - 133*		*01/07/22 12:39*	*1*

Lab Sample ID: LCS 580-377719/8
Matrix: Water
Analysis Batch: 377719

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (C6-C12)			1000	1010		ug/L		101	78 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*69 - 133*

Lab Sample ID: LCSD 580-377719/9
Matrix: Water
Analysis Batch: 377719

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
Gasoline Range Organics (C6-C12)			1000	1020		ug/L		102	78 - 122	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*109*		*69 - 133*

Lab Sample ID: MB 580-377829/4
Matrix: Water
Analysis Batch: 377829

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U	100	31	ug/L			01/08/22 14:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*69 - 133*		*01/08/22 14:09*	*1*

Lab Sample ID: LCS 580-377829/5
Matrix: Water
Analysis Batch: 377829

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (C6-C12)			1000	942		ug/L		94	78 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*69 - 133*

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

Lab Sample ID: LCSD 580-377829/6
Matrix: Water
Analysis Batch: 377829

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
Gasoline Range Organics (C6-C12)			1000	942		ug/L		94	78 - 122	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*69 - 133*

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

Lab Sample ID: MB 580-377771/5
Matrix: Water
Analysis Batch: 377771

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			01/07/22 12:39	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			01/07/22 12:39	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/07/22 12:39	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/07/22 12:39	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/07/22 12:39	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/07/22 12:39	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/07/22 12:39	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			01/07/22 12:39	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/07/22 12:39	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/07/22 12:39	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/07/22 12:39	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/07/22 12:39	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/07/22 12:39	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/07/22 12:39	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/07/22 12:39	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/07/22 12:39	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/07/22 12:39	1
Methyl Ethyl Ketone	4.7	U	15	4.7	ug/L			01/07/22 12:39	1
Methyl isobutyl ketone (MIBK)	2.5	U	5.0	2.5	ug/L			01/07/22 12:39	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/07/22 12:39	1
Styrene	0.53	U	1.0	0.53	ug/L			01/07/22 12:39	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/07/22 12:39	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/07/22 12:39	1
Toluene	0.39	U	1.0	0.39	ug/L			01/07/22 12:39	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/07/22 12:39	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/07/22 12:39	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/07/22 12:39	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/07/22 12:39	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/07/22 12:39	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/07/22 12:39	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/07/22 12:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*		*01/07/22 12:39*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*01/07/22 12:39*	*1*

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

Lab Sample ID: MB 580-377771/5
Matrix: Water
Analysis Batch: 377771

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		01/07/22 12:39	1
Toluene-d8 (Surr)	98		89 - 112		01/07/22 12:39	1

Lab Sample ID: LCS 580-377771/6
Matrix: Water
Analysis Batch: 377771

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	46.6		ug/L		93	39 - 160
Bromodichloromethane	10.0	10.5		ug/L		105	79 - 125
Bromomethane	10.0	11.3		ug/L		113	53 - 141
Chlorobenzene	10.0	10.4		ug/L		104	82 - 118
Chloromethane	10.0	8.94		ug/L		89	50 - 139
cis-1,2-Dichloroethene	10.0	10.8		ug/L		108	78 - 123
cis-1,3-Dichloropropene	10.0	9.85		ug/L		98	75 - 124
Dibromochloromethane	10.0	10.9		ug/L		109	74 - 126
1,1-Dichloroethane	10.0	10.6		ug/L		106	77 - 125
1,2-Dichloroethane	10.0	10.0		ug/L		100	73 - 128
1,1-Dichloroethene	10.0	11.7		ug/L		117	71 - 131
1,2-Dichloroethene, Total	20.0	22.3		ug/L		112	78 - 123
Dichloromethane	10.0	11.3		ug/L		113	74 - 124
1,2-Dichloropropane	10.0	10.6		ug/L		106	78 - 122
Ethylbenzene	10.0	10.6		ug/L		106	79 - 121
Ethyl Chloride	10.0	10.2		ug/L		102	60 - 138
2-Hexanone	50.0	49.5		ug/L		99	57 - 139
Methyl Ethyl Ketone	50.0	49.6		ug/L		99	56 - 143
Methyl isobutyl ketone (MIBK)	50.0	50.2		ug/L		100	67 - 130
o-Xylene	10.0	10.6		ug/L		106	78 - 122
Styrene	10.0	10.2		ug/L		102	78 - 123
1,1,2,2-Tetrachloroethane	10.0	9.46		ug/L		95	71 - 121
Tetrachloroethene	10.0	10.6		ug/L		106	74 - 129
Toluene	10.0	11.1		ug/L		111	80 - 121
trans-1,2-Dichloroethene	10.0	11.5		ug/L		115	75 - 124
trans-1,3-Dichloropropene	10.0	10.7		ug/L		107	73 - 127
1,1,1-Trichloroethane	10.0	11.0		ug/L		110	74 - 131
1,1,2-Trichloroethane	10.0	10.3		ug/L		103	80 - 119
Trichloroethene	10.0	11.0		ug/L		110	79 - 123
Vinyl chloride	10.0	9.81		ug/L		98	58 - 137
Xylenes, Total	20.0	20.9		ug/L		105	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		85 - 114
Dibromofluoromethane (Surr)	101		80 - 119
1,2-Dichloroethane-d4 (Surr)	95		81 - 118
Toluene-d8 (Surr)	106		89 - 112

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

Lab Sample ID: LCSD 580-377771/7
Matrix: Water
Analysis Batch: 377771

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			50.0	49.1		ug/L		98	39 - 160	5	20
Bromodichloromethane			10.0	10.1		ug/L		101	79 - 125	3	20
Bromomethane			10.0	10.8		ug/L		108	53 - 141	4	20
Chlorobenzene			10.0	10.1		ug/L		101	82 - 118	3	20
Chloromethane			10.0	8.99		ug/L		90	50 - 139	0	20
cis-1,2-Dichloroethene			10.0	10.4		ug/L		104	78 - 123	4	20
cis-1,3-Dichloropropene			10.0	9.63		ug/L		96	75 - 124	2	20
Dibromochloromethane			10.0	10.6		ug/L		106	74 - 126	3	20
1,1-Dichloroethane			10.0	10.6		ug/L		106	77 - 125	1	20
1,2-Dichloroethane			10.0	10.1		ug/L		101	73 - 128	1	20
1,1-Dichloroethene			10.0	11.4		ug/L		114	71 - 131	2	20
1,2-Dichloroethene, Total			20.0	21.4		ug/L		107	78 - 123	4	20
Dichloromethane			10.0	11.0		ug/L		110	74 - 124	2	20
1,2-Dichloropropane			10.0	9.94		ug/L		99	78 - 122	6	20
Ethylbenzene			10.0	10.2		ug/L		102	79 - 121	3	20
Ethyl Chloride			10.0	10.0		ug/L		100	60 - 138	2	20
2-Hexanone			50.0	52.2		ug/L		104	57 - 139	5	20
Methyl Ethyl Ketone			50.0	50.6		ug/L		101	56 - 143	2	20
Methyl isobutyl ketone (MIBK)			50.0	50.8		ug/L		102	67 - 130	1	20
o-Xylene			10.0	10.2		ug/L		102	78 - 122	3	20
Styrene			10.0	9.88		ug/L		99	78 - 123	3	20
1,1,2,2-Tetrachloroethane			10.0	9.60		ug/L		96	71 - 121	1	20
Tetrachloroethene			10.0	10.5		ug/L		105	74 - 129	1	20
Toluene			10.0	10.4		ug/L		104	80 - 121	6	20
trans-1,2-Dichloroethene			10.0	11.0		ug/L		110	75 - 124	5	20
trans-1,3-Dichloropropene			10.0	10.2		ug/L		102	73 - 127	5	20
1,1,1-Trichloroethane			10.0	10.7		ug/L		107	74 - 131	3	20
1,1,2-Trichloroethane			10.0	9.97		ug/L		100	80 - 119	3	20
Trichloroethene			10.0	10.7		ug/L		107	79 - 123	3	20
Vinyl chloride			10.0	9.65		ug/L		97	58 - 137	2	20
Xylenes, Total			20.0	19.9		ug/L		99	79 - 121	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*96*		*81 - 118*
Toluene-d8 (Surr)	*105*		*89 - 112*

Lab Sample ID: MB 580-377897/7
Matrix: Water
Analysis Batch: 377897

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.24	U	1.0	0.24	ug/L			01/10/22 12:52	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/10/22 12:52	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/10/22 12:52	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/10/22 12:52	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/10/22 12:52	1

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

Lab Sample ID: MB 580-377897/7
Matrix: Water
Analysis Batch: 377897

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/10/22 12:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*01/10/22 12:52*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*01/10/22 12:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*01/10/22 12:52*	*1*
Toluene-d8 (Surr)	*99*		*89 - 112*		*01/10/22 12:52*	*1*

Lab Sample ID: LCS 580-377897/4
Matrix: Water
Analysis Batch: 377897

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzene			5.00	5.52		ug/L		110	79 - 120		
Bromoform			5.00	5.74		ug/L		115	66 - 130		
Carbon disulfide			5.00	7.96	*+	ug/L		159	64 - 133		
Carbon tetrachloride			5.00	7.43	*+	ug/L		149	72 - 136		
Chloroform			5.00	5.30		ug/L		106	79 - 124		
m-Xylene & p-Xylene			5.00	5.83		ug/L		117	80 - 121		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*
Dibromofluoromethane (Surr)	*100*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*
Toluene-d8 (Surr)	*101*		*89 - 112*

Lab Sample ID: LCSD 580-377897/5
Matrix: Water
Analysis Batch: 377897

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
Benzene			5.00	5.33		ug/L		107	79 - 120	3	20
Bromoform			5.00	5.57		ug/L		111	66 - 130	3	20
Carbon disulfide			5.00	5.92	*1	ug/L		118	64 - 133	29	20
Carbon tetrachloride			5.00	6.45		ug/L		129	72 - 136	14	20
Chloroform			5.00	5.05		ug/L		101	79 - 124	5	20
m-Xylene & p-Xylene			5.00	5.79		ug/L		116	80 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*
Toluene-d8 (Surr)	*94*		*89 - 112*

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

Lab Sample ID: MB 580-377698/1-A
Matrix: Water
Analysis Batch: 377805

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.050	U	0.40	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
Acenaphthylene	0.060	U	1.0	0.060	ug/L		01/07/22 10:46	01/08/22 14:38	1
Anthracene	0.050	U	1.0	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
Benzo[a]anthracene	0.050	U	0.25	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
Benzo[a]pyrene	0.040	U	0.25	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
Benzo[b]fluoranthene	0.040	U	0.25	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
Benzo[g,h,i]perylene	0.040	U	0.25	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
Benzo[k]fluoranthene	0.050	U	0.25	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
Bis(2-chloroethoxy)methane	0.050	U	0.60	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
Bis(2-chloroethyl)ether	0.030	U	0.10	0.030	ug/L		01/07/22 10:46	01/08/22 14:38	1
Bis(2-ethylhexyl) phthalate	0.74	U	3.0	0.74	ug/L		01/07/22 10:46	01/08/22 14:38	1
4-Bromophenyl phenyl ether	0.060	U	0.60	0.060	ug/L		01/07/22 10:46	01/08/22 14:38	1
Butyl benzyl phthalate	0.27	U	4.0	0.27	ug/L		01/07/22 10:46	01/08/22 14:38	1
Carbazole	0.10	U	0.60	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1
4-Chloroaniline	0.59	U	2.0	0.59	ug/L		01/07/22 10:46	01/08/22 14:38	1
4-Chloro-3-methylphenol	0.13	U	0.60	0.13	ug/L		01/07/22 10:46	01/08/22 14:38	1
2-Chloronaphthalene	0.070	U	1.0	0.070	ug/L		01/07/22 10:46	01/08/22 14:38	1
2-Chlorophenol	0.050	U	1.0	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
4-Chlorophenyl phenyl ether	0.050	U	0.60	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
Chrysene	0.040	U	0.25	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
Dibenz(a,h)anthracene	0.070	U	0.25	0.070	ug/L		01/07/22 10:46	01/08/22 14:38	1
Dibenzofuran	0.10	U	0.40	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1
1,2-Dichlorobenzene	0.050	U	0.40	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
1,3-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
1,4-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		01/07/22 10:46	01/08/22 14:38	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		01/07/22 10:46	01/08/22 14:38	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		01/07/22 10:46	01/08/22 14:38	1
2,4-Dimethylphenol	0.16	U	4.0	0.16	ug/L		01/07/22 10:46	01/08/22 14:38	1
Dimethyl phthalate	0.060	U	0.60	0.060	ug/L		01/07/22 10:46	01/08/22 14:38	1
Di-n-butyl phthalate	0.19	U	3.0	0.19	ug/L		01/07/22 10:46	01/08/22 14:38	1
4,6-Dinitro-2-methylphenol	0.55	U	2.0	0.55	ug/L		01/07/22 10:46	01/08/22 14:38	1
2,4-Dinitrophenol	1.6	U	5.0	1.6	ug/L		01/07/22 10:46	01/08/22 14:38	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1
2,6-Dinitrotoluene	0.10	U	0.40	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		01/07/22 10:46	01/08/22 14:38	1
Fluoranthene	0.060	U	0.25	0.060	ug/L		01/07/22 10:46	01/08/22 14:38	1
Fluorene	0.050	U	0.25	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
Hexachlorobenzene	0.040	U	0.60	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
Hexachlorobutadiene	0.060	U	1.0	0.060	ug/L		01/07/22 10:46	01/08/22 14:38	1
Hexachlorocyclopentadiene	0.14	U	1.0	0.14	ug/L		01/07/22 10:46	01/08/22 14:38	1
Hexachloroethane	0.050	U	1.0	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.40	0.13	ug/L		01/07/22 10:46	01/08/22 14:38	1
Isophorone	0.10	U	0.40	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1
2-Methylphenol	0.050	U	0.60	0.050	ug/L		01/07/22 10:46	01/08/22 14:38	1
3 & 4 Methylphenol	0.10	U	0.60	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1
Naphthalene	0.16	U	0.40	0.16	ug/L		01/07/22 10:46	01/08/22 14:38	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1

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

Lab Sample ID: MB 580-377698/1-A
Matrix: Water
Analysis Batch: 377805

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3-Nitroaniline	0.16	U	3.0	0.16	ug/L		01/07/22 10:46	01/08/22 14:38	1
4-Nitroaniline	0.21	U	2.0	0.21	ug/L		01/07/22 10:46	01/08/22 14:38	1
Nitrobenzene	0.040	U	1.0	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
4-Nitrophenol	1.7	U	10	1.7	ug/L		01/07/22 10:46	01/08/22 14:38	1
N-Nitrosodi-n-propylamine	0.060	U	0.40	0.060	ug/L		01/07/22 10:46	01/08/22 14:38	1
N-Nitrosodiphenylamine	0.070	U	1.0	0.070	ug/L		01/07/22 10:46	01/08/22 14:38	1
Pentachlorophenol	0.51	U	10	0.51	ug/L		01/07/22 10:46	01/08/22 14:38	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		01/07/22 10:46	01/08/22 14:38	1
Phenol	0.36	U	1.0	0.36	ug/L		01/07/22 10:46	01/08/22 14:38	1
Pyrene	0.040	U	1.0	0.040	ug/L		01/07/22 10:46	01/08/22 14:38	1
1,2,4-Trichlorobenzene	0.090	U	0.40	0.090	ug/L		01/07/22 10:46	01/08/22 14:38	1
2,4,5-Trichlorophenol	0.10	U	0.40	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1
2,4,6-Trichlorophenol	0.10	U	0.60	0.10	ug/L		01/07/22 10:46	01/08/22 14:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*60*		*44 - 119*	*01/07/22 10:46*	*01/08/22 14:38*	*1*
2-Fluorophenol (Surr)	*32*		*19 - 119*	*01/07/22 10:46*	*01/08/22 14:38*	*1*
Nitrobenzene-d5 (Surr)	*60*		*44 - 120*	*01/07/22 10:46*	*01/08/22 14:38*	*1*
Phenol-d5 (Surr)	*20*		*10 - 120*	*01/07/22 10:46*	*01/08/22 14:38*	*1*
Terphenyl-d14	*95*		*50 - 134*	*01/07/22 10:46*	*01/08/22 14:38*	*1*
2,4,6-Tribromophenol	*53*		*43 - 140*	*01/07/22 10:46*	*01/08/22 14:38*	*1*

Lab Sample ID: LCS 580-377698/2-A
Matrix: Water
Analysis Batch: 377805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	1.24		ug/L		62	47 - 122
Acenaphthylene	2.00	1.26		ug/L		63	41 - 130
Anthracene	2.00	1.40		ug/L		70	57 - 123
Benzo[a]anthracene	2.00	1.62		ug/L		81	58 - 125
Benzo[a]pyrene	2.00	1.61		ug/L		80	54 - 128
Benzo[b]fluoranthene	2.00	1.41		ug/L		70	53 - 131
Benzo[g,h,i]perylene	2.00	1.57		ug/L		79	50 - 134
Benzo[k]fluoranthene	2.00	1.79		ug/L		89	57 - 129
Bis(2-chloroethoxy)methane	2.00	1.39		ug/L		69	48 - 120
Bis(2-ethylhexyl) phthalate	2.00	1.85	J	ug/L		93	55 - 135
4-Bromophenyl phenyl ether	2.00	1.36		ug/L		68	55 - 124
Butyl benzyl phthalate	2.00	1.88	J	ug/L		94	53 - 134
Carbazole	2.00	1.71		ug/L		85	60 - 122
4-Chloroaniline	2.00	0.922	J	ug/L		46	33 - 117
4-Chloro-3-methylphenol	2.00	1.29		ug/L		64	52 - 119
2-Chloronaphthalene	2.00	1.38		ug/L		69	40 - 116
2-Chlorophenol	2.00	1.26		ug/L		63	38 - 117
4-Chlorophenyl phenyl ether	2.00	1.35		ug/L		68	53 - 121
Chrysene	2.00	1.82		ug/L		91	59 - 123
Dibenz(a,h)anthracene	2.00	1.56		ug/L		78	51 - 134
Dibenzofuran	2.00	1.45		ug/L		73	53 - 118

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

Lab Sample ID: LCS 580-377698/2-A
Matrix: Water
Analysis Batch: 377805

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	2.00	1.12		ug/L		56	32 - 111
1,3-Dichlorobenzene	2.00	1.10		ug/L		55	28 - 110
1,4-Dichlorobenzene	2.00	1.07		ug/L		53	29 - 112
3,3'-Dichlorobenzidine	4.00	3.32		ug/L		83	27 - 129
2,4-Dichlorophenol	2.00	1.14		ug/L		57	47 - 121
Diethyl phthalate	2.00	1.74		ug/L		87	56 - 125
2,4-Dimethylphenol	2.00	1.37	J	ug/L		69	31 - 124
Dimethyl phthalate	2.00	1.54		ug/L		77	45 - 127
Di-n-butyl phthalate	2.00	1.68	J	ug/L		84	59 - 127
4,6-Dinitro-2-methylphenol	4.00	2.56		ug/L		64	44 - 137
2,4-Dinitrophenol	4.00	2.71	J	ug/L		68	23 - 143
2,4-Dinitrotoluene	2.00	1.43		ug/L		71	57 - 128
2,6-Dinitrotoluene	2.00	1.39		ug/L		70	57 - 124
Di-n-octyl phthalate	2.00	1.72		ug/L		86	51 - 140
Fluoranthene	2.00	1.61		ug/L		80	57 - 128
Fluorene	2.00	1.42		ug/L		71	52 - 124
Hexachlorobenzene	2.00	1.30		ug/L		65	53 - 125
Hexachlorobutadiene	2.00	0.999	J	ug/L		50	22 - 124
Hexachlorocyclopentadiene	2.00	0.718	J	ug/L		36	20 - 125
Hexachloroethane	2.00	1.12		ug/L		56	21 - 115
Indeno[1,2,3-cd]pyrene	2.00	1.73		ug/L		87	52 - 134
Isophorone	2.00	1.34		ug/L		67	42 - 124
2-Methylphenol	2.00	1.08		ug/L		54	30 - 117
3 & 4 Methylphenol	2.00	1.16		ug/L		58	29 - 110
Naphthalene	2.00	1.20		ug/L		60	40 - 121
2-Nitroaniline	2.00	1.31		ug/L		65	55 - 127
3-Nitroaniline	2.00	1.30	J	ug/L		65	41 - 128
4-Nitroaniline	2.00	1.45	J	ug/L		73	70 - 125
Nitrobenzene	2.00	1.40		ug/L		70	45 - 121
4-Nitrophenol	4.00	2.03	J	ug/L		51	35 - 145
N-Nitrosodi-n-propylamine	2.00	1.44		ug/L		72	49 - 119
N-Nitrosodiphenylamine	2.00	1.36		ug/L		68	51 - 123
Pentachlorophenol	4.00	1.95	J	ug/L		49	35 - 138
Phenanthrene	2.00	1.38		ug/L		69	59 - 120
Phenol	2.00	0.573	J	ug/L		29	13 - 120
Pyrene	2.00	1.62		ug/L		81	57 - 126
1,2,4-Trichlorobenzene	2.00	1.17		ug/L		58	29 - 116
2,4,5-Trichlorophenol	2.00	1.49		ug/L		74	53 - 123
2,4,6-Trichlorophenol	2.00	1.24		ug/L		62	50 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*66*		*44 - 119*
2-Fluorophenol (Surr)	*42*		*19 - 119*
Nitrobenzene-d5 (Surr)	*70*		*44 - 120*
Phenol-d5 (Surr)	*25*		*10 - 120*
Terphenyl-d14	*90*		*50 - 134*
2,4,6-Tribromophenol	*72*		*43 - 140*

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

Lab Sample ID: LCSD 580-377698/3-A
Matrix: Water
Analysis Batch: 377805

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377698

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	2.00	1.47		ug/L		74	47 - 122	17	20
Acenaphthylene	2.00	1.43		ug/L		71	41 - 130	13	20
Anthracene	2.00	1.45		ug/L		72	57 - 123	3	20
Benzo[a]anthracene	2.00	1.51		ug/L		75	58 - 125	7	20
Benzo[a]pyrene	2.00	1.64		ug/L		82	54 - 128	2	20
Benzo[b]fluoranthene	2.00	1.72		ug/L		86	53 - 131	20	20
Benzo[g,h,i]perylene	2.00	1.69		ug/L		84	50 - 134	7	20
Benzo[k]fluoranthene	2.00	1.59		ug/L		79	57 - 129	12	20
Bis(2-chloroethoxy)methane	2.00	1.63		ug/L		81	48 - 120	16	20
Bis(2-ethylhexyl) phthalate	2.00	1.79	J	ug/L		90	55 - 135	3	20
4-Bromophenyl phenyl ether	2.00	1.47		ug/L		73	55 - 124	7	20
Butyl benzyl phthalate	2.00	1.74	J	ug/L		87	53 - 134	8	20
Carbazole	2.00	1.69		ug/L		84	60 - 122	1	20
4-Chloroaniline	2.00	1.03	J	ug/L		52	33 - 117	11	20
4-Chloro-3-methylphenol	2.00	1.42		ug/L		71	52 - 119	10	20
2-Chloronaphthalene	2.00	1.46		ug/L		73	40 - 116	6	20
2-Chlorophenol	2.00	1.46		ug/L		73	38 - 117	15	20
4-Chlorophenyl phenyl ether	2.00	1.49		ug/L		75	53 - 121	10	20
Chrysene	2.00	1.73		ug/L		87	59 - 123	5	20
Dibenz(a,h)anthracene	2.00	1.57		ug/L		79	51 - 134	1	20
Dibenzofuran	2.00	1.58		ug/L		79	53 - 118	8	20
1,2-Dichlorobenzene	2.00	1.30		ug/L		65	32 - 111	15	20
1,3-Dichlorobenzene	2.00	1.24		ug/L		62	28 - 110	12	20
1,4-Dichlorobenzene	2.00	1.27		ug/L		63	29 - 112	17	20
3,3'-Dichlorobenzidine	4.00	3.13		ug/L		78	27 - 129	6	20
2,4-Dichlorophenol	2.00	1.29		ug/L		65	47 - 121	13	20
Diethyl phthalate	2.00	1.77		ug/L		88	56 - 125	2	20
2,4-Dimethylphenol	2.00	1.64	J	ug/L		82	31 - 124	17	20
Dimethyl phthalate	2.00	1.67		ug/L		83	45 - 127	8	20
Di-n-butyl phthalate	2.00	1.69	J	ug/L		84	59 - 127	0	20
4,6-Dinitro-2-methylphenol	4.00	2.35		ug/L		59	44 - 137	9	20
2,4-Dinitrophenol	4.00	2.33	J	ug/L		58	23 - 143	15	20
2,4-Dinitrotoluene	2.00	1.55		ug/L		77	57 - 128	8	20
2,6-Dinitrotoluene	2.00	1.50		ug/L		75	57 - 124	7	20
Di-n-octyl phthalate	2.00	1.75		ug/L		88	51 - 140	2	20
Fluoranthene	2.00	1.64		ug/L		82	57 - 128	2	20
Fluorene	2.00	1.60		ug/L		80	52 - 124	12	20
Hexachlorobenzene	2.00	1.39		ug/L		70	53 - 125	7	20
Hexachlorobutadiene	2.00	1.16		ug/L		58	22 - 124	15	20
Hexachlorocyclopentadiene	2.00	0.855	J	ug/L		43	20 - 125	17	20
Hexachloroethane	2.00	1.34		ug/L		67	21 - 115	18	20
Indeno[1,2,3-cd]pyrene	2.00	1.71		ug/L		85	52 - 134	1	20
Isophorone	2.00	1.61		ug/L		81	42 - 124	18	20
2-Methylphenol	2.00	1.31		ug/L		66	30 - 117	20	20
3 & 4 Methylphenol	2.00	1.09		ug/L		55	29 - 110	6	20
Naphthalene	2.00	1.35		ug/L		68	40 - 121	12	20
2-Nitroaniline	2.00	1.50		ug/L		75	55 - 127	14	20
3-Nitroaniline	2.00	1.37	J	ug/L		69	41 - 128	6	20

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

Lab Sample ID: LCSD 580-377698/3-A
Matrix: Water
Analysis Batch: 377805

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377698

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Nitroaniline			2.00	1.83	J *1	ug/L		92	70 - 125	23	20
Nitrobenzene			2.00	1.70		ug/L		85	45 - 121	19	20
4-Nitrophenol			4.00	1.7	U *- *1	ug/L		32	35 - 145	44	20
N-Nitrosodi-n-propylamine			2.00	1.76		ug/L		88	49 - 119	20	20
N-Nitrosodiphenylamine			2.00	1.48		ug/L		74	51 - 123	9	20
Pentachlorophenol			4.00	1.84	J	ug/L		46	35 - 138	6	20
Phenanthrene			2.00	1.49		ug/L		74	59 - 120	8	20
Phenol			2.00	0.667	J	ug/L		33	13 - 120	15	20
Pyrene			2.00	1.61		ug/L		81	57 - 126	1	20
1,2,4-Trichlorobenzene			2.00	1.36		ug/L		68	29 - 116	15	20
2,4,5-Trichlorophenol			2.00	1.59		ug/L		79	53 - 123	7	20
2,4,6-Trichlorophenol			2.00	1.37		ug/L		68	50 - 125	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*71*		*44 - 119*
2-Fluorophenol (Surr)	*51*		*19 - 119*
Nitrobenzene-d5 (Surr)	*78*		*44 - 120*
Phenol-d5 (Surr)	*30*		*10 - 120*
Terphenyl-d14	*90*		*50 - 134*
2,4,6-Tribromophenol	*76*		*43 - 140*

Method: 8015D DRO - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 580-377700/1-A
Matrix: Water
Analysis Batch: 377794

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	90	U	110	90	ug/L		01/07/22 10:54	01/07/22 20:31	1
C24-C40	180	U	350	180	ug/L		01/07/22 10:54	01/07/22 20:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*56 - 125*	*01/07/22 10:54*	*01/07/22 20:31*	*1*

Lab Sample ID: LCS 580-377700/2-A
Matrix: Water
Analysis Batch: 377794

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377700

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C9-C25			4000	2870		ug/L		72	36 - 132
C24-C40			4000	3620		ug/L		91	41 - 113

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*77*		*56 - 125*

Method: 8015D DRO - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 580-377700/3-A
Matrix: Water
Analysis Batch: 377794

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377700

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C25			4000	2890		ug/L		72	36 - 132	1	20
C24-C40			4000	3570		ug/L		89	41 - 113	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*76*		*56 - 125*

Lab Chronicle

Client: AECOM
Job ID: 580-109054-1
Project/Site: Red Hill CV22F0106

Client Sample ID: 20220105-C1-ZT03
Lab Sample ID: 580-109054-1
Date Collected: 01/05/22 15:35
Matrix: Water
Date Received: 01/07/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377719	01/07/22 18:56	JSM	FGS SEA
Total/NA	Analysis	8260D		1	377771	01/07/22 18:56	JSM	FGS SEA
Total/NA	Analysis	8260D	RA	1	377897	01/10/22 14:56	B1M	FGS SEA
Total/NA	Prep	3510C			377698	01/07/22 15:14	M1E	FGS SEA
Total/NA	Analysis	8270E		1	377805	01/08/22 19:58	TL1	FGS SEA
Total/NA	Prep	3510C			377700	01/07/22 15:12	M1E	FGS SEA
Total/NA	Analysis	8015D DRO		1	377794	01/08/22 01:13	JAE	FGS SEA

Client Sample ID: 20220106-D3-ZT02
Lab Sample ID: 580-109054-2
Date Collected: 01/06/22 13:10
Matrix: Water
Date Received: 01/07/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377829	01/08/22 16:56	CJ	FGS SEA

Client Sample ID: 20220106-D3-ZT03
Lab Sample ID: 580-109054-3
Date Collected: 01/06/22 13:15
Matrix: Water
Date Received: 01/07/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377829	01/08/22 17:20	CJ	FGS SEA
Total/NA	Prep	3510C			377700	01/07/22 15:12	M1E	FGS SEA
Total/NA	Analysis	8015D DRO		1	377794	01/08/22 01:33	JAE	FGS SEA

Laboratory References:
FGS SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: AECOM
Job ID: 580-109054-1
Project/Site: Red Hill CV22F0106

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2236	01-19-22

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
8260D		Water	1,2-Dichloroethene, Total

Sample Summary

Client: AECOM
Project/Site: Red Hill CV22F0106

Job ID: 580-109054-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-109054-1	20220105-C1-ZT03	Water	01/05/22 15:35	01/07/22 11:00
580-109054-2	20220106-D3-ZT02	Water	01/06/22 13:10	01/07/22 11:00
580-109054-3	20220106-D3-ZT03	Water	01/06/22 13:15	01/07/22 11:00

Chain of Custody Record

eurofins Environment Testing America

580-109054 Chain of Custody

Client Contact: Alethea Ramos (alternate: Margie Pascua)	Sampler: AECOM	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 01062022 DW - 01
Company: AECOM	Phone:	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Address: 1001 Bishop St. Suite 1600	PWSID:	Analysis Requested		Job #:
City: Honolulu	Due Date Requested: see subcontract			
State, Zip: Hawaii 96813	TAT Requested (days): 48hrs			
Phone: 808-521-3051 (direct: 808-529-7283) (alternate: 808-356-5373)	Compliance Project: Δ Yes Δ No			
Email: alethea.ramos@aecom.com (alternate: margie.pascua@aecom.com)	PO #:			
Project Name: CV22F0106	WO #:			
Site: RHSF	Project #: 60674414			
	SSOW#:			

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)	EPA 8260 TPH-g (HCl) 4 VOCs	EPA 8270 SVOCs (none)	EPA 8015 TPH-d/o	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	I	I		
20220105-C1-ZT03	1/5/22	1535	G	W	N	N	Y	Y	Y	8	

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)

Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD

Special Instructions/QC Requirements: DOD QSM project.

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

	Date/Time	Company	Received by	Date/Time	Company
Relinquished by: Thomas Aguilo Flegie	1/5/22 16:15	AECOM	Thomas Aguilo Flegie	01/05/22 16:15	AECOM
Relinquished by: Thomas Aguilo Flegie	01/06/22 12:00	AECOM		1/7/21 1100	EFGS
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:

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: AECOM	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 01062c22DW-05
Client Contact: Alethea Ramos (alternate: Margie Pascua)	Phone:	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:			Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract			
City: Honolulu	TAT Requested (days): Rush (2 days)			
State, Zip: Hawaii 96813	Compliance Project: Δ Yes Δ No			
Phone: 808-521-3051 (direct: 808-529-7283) (alternate: 808-356-5373)	PO #:			
Email: alethea.ramos@aecom.com (alternate: margie.pascua@aecom.com)	WO #:			
Project Name: CV22F0106	Project #: 60674414			
Site: RHSF	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)	EPA 8260 ~~VOCs~~ + TPH-g (HCl)	EPA 8270 SVOCs (none)	EPA 8015 TPH-d/o	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	N		
20220106-D3-ZT02	01/06/22	1310	G	W	N	N	X			2	
20220106-D3-ZT03	01/06/22	1315	G	W	N	N	X		X	5	

01/06/22

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)

Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.

Special Instructions/QC Requirements: DOD QSM project.

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Thomas Aguilo	01/06/22 1350	AECOM		1/7/21 1100	EFGS
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:

48 hr

Therm. ID: A2 Cor: -0.7 ° Unc: 0.0 °
Cooler Dsc: 01 FedEx: PO
Packing: Bub UPS:
Cust. Seal: Yes X No Lab Cour:
Blue Ice, (Wet) Dry, None Other:

48 hr

Therm. ID: A2 Cor: -0.2 ° Unc: 0.5 °
Cooler Dsc: ~~01~~ 05 FedEx: PO
Packing: Bub UPS:
Cust. Seal: Yes X No Lab Cour:
Blue Ice, (Wet) Dry, None Other:

Std

Therm. ID: A2 Cor: -0.7 ° Unc: 0.0 °
Cooler Dsc: 04 FedEx: PO
Packing: Bub UPS:
Cust. Seal: Yes X No Lab Cour:
Blue Ice, (Wet) Dry, None Other:

Standard

Therm. ID: IR9 Cor: -0.6 ° Unc: -1.1 °
Cooler Dsc: 03 FedEx: PO
Packing: Bub UPS:
Cust. Seal: Yes X No Lab Cour:
Blue Ice, (Wet) Dry, None Other:

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-109054-1

Login Number: 109054
List Number: 1
Creator: Greene, Ashton R

List Source: Eurofins Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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	
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	

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ANALYTICAL REPORT

Eurofins Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-109090-1
Client Project/Site: Red Hill CV22FO106

For:
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

Attn: Margie F Pascua

Kristine D. Allen

Authorized for release by:
1/11/2022 9:01:37 AM
Kristine Allen, Client Service Manager
(253)248-4970
Kristine.Allen@Eurofinset.com

Designee for

Elaine Walker, Project Manager II
(253)248-4972
m.elaine.walker@eurofinset.com

Table of Contents

Job ID: 580-109090-1

Laboratory: Eurofins Seattle

Narrative

Job Narrative
580-109090-1

Comments
No additional comments.

Receipt
The samples were received on 1/8/2022 11:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were -0.6º C and -0.3º C.

GC/MS VOA
Methods 8260/CALUFT DOD, 8260B/CA_LUFTMS: Internal standard recovery is low in the method blank. This creates a high bias that results in a high recovery of the surrogate. Method blank is non detect, therefore data have been reported. (MB 580-377913/7)

Method 8260B/CA_LUFTMS: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-377913 recovered outside control limits for the following analytes: Gasoline Range Organics (C6-C12). The individual recoveries of both the LCS and LCSD met the acceptance criteria.

Method 8260D: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-377858 recovered outside control limits for the following analytes: 1,2-Dichloroethene, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: Internal standard is low and surrogate recovery is high (due to low IS) in the method blank, laboratory control sample, and duplicate associated with samples 20220106-F2-ZT07 (580-109090-3), 20220106-F2-ZT08 (580-109090-4) and (MB 580-377858/7). Method blank is non detect for all analytes and IS recovery is acceptable in the samples, therefore data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-377820 recovered above the upper control limit for Chloromethane, Vinyl chloride, Acetone, Ethyl Chloride and Carbon disulfide. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: 20220106-F2-ZT07 (580-109090-3), 20220106-F2-ZT08 (580-109090-4) and (CCVIS 580-377820/2).

Method 8260D: The laboratory control sample (LCS) for analytical batch 580-377820 recovered outside control limits for the following analytes: Chloromethane and Vinyl chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: Surrogate recovery was outside control limits for the following sample: 20220106-F2-ZT07 (580-109090-3), 20220106-F2-ZT08 (580-109090-4) and (MB 580-377820/6). 4-Bromofluorobenzene (Surr) failed low. The analyte associated v the surrogate is not reported from this batch.

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

GC/MS Semi VOA
Method 8270E: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-377876 was outside criteria for the following analytes: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method 8270E: The laboratory control sample (LCS) for preparation batch 580-377860 and analytical batch 580-377876 recovered outside control limits for the following analytes: Pentachlorophenol. This analyte has been identified as a poor-performing compound; results for this analyte have been qualified and reported.

Method 8270E: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-377860 and analytical batch 580-377876 recovered outside control limits for several analytes The individual recoveries of both the LCS and LCSD met the acceptance critieria.

Method 8270E: Surrogate 2-Fluorophenol (Surr) and Phenol-d5 (Surr) recovery for the following samples was outside control limits:

Job ID: 580-109090-1 (Continued)

Laboratory: Eurofins Seattle (Continued)

20220106-F2-ZT08 (580-109090-4). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

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

Organic Prep
Methods 3510C, CWA_Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 580-377860. Laboratory control sample/laboratory control sample duplicate were created and substituted for MS/MSD/DUP.

Method 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 580-377861. Laboratory control sample/laboratory control sample duplicate were created and substituted for MS/MSD/DUP.

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

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

Definitions/Glossary

Client: AECOM
Project/Site: Red Hill CV22FO106

Job ID: 580-109090-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
*3	ISTD response or retention time outside acceptable limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
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
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client: AECOM
Project/Site: Red Hill CV22FO106

Job ID: 580-109090-1

Client Sample ID: 20220106-C1-ZT05
Date Collected: 01/06/22 15:25
Date Received: 01/08/22 11:00

Lab Sample ID: 580-109090-1
Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U *1	100	31	ug/L			01/09/22 22:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*78 - 120*		*01/09/22 22:06*	*1*

Client: AECOM
Project/Site: Red Hill CV22FO106

Job ID: 580-109090-1

Client Sample ID: 20220106-C1-ZT06

Date Collected: 01/06/22 15:30
Date Received: 01/08/22 11:00

Lab Sample ID: 580-109090-2

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U *1	100	31	ug/L			01/09/22 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*78 - 120*		*01/09/22 22:31*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	45	U	55	45	ug/L		01/09/22 13:27	01/10/22 03:20	1
C24-C40	90	U	180	90	ug/L		01/09/22 13:27	01/10/22 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*53 - 120*	*01/09/22 13:27*	*01/10/22 03:20*	*1*

Client: AECOM
Project/Site: Red Hill CV22FO106

Job ID: 580-109090-1

Client Sample ID: 20220106-F2-ZT07

Date Collected: 01/06/22 18:25
Date Received: 01/08/22 11:00

Lab Sample ID: 580-109090-3

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U *1	100	31	ug/L			01/09/22 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*78 - 120*		*01/09/22 22:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, Total	0.39	U *+	1.0	0.39	ug/L			01/09/22 22:56	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/09/22 22:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*01/09/22 22:56*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*01/09/22 22:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*		*01/09/22 22:56*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*01/09/22 22:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			01/08/22 21:20	1
Benzene	0.24	U	1.0	0.24	ug/L			01/08/22 21:20	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			01/08/22 21:20	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/08/22 21:20	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/08/22 21:20	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/08/22 21:20	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/08/22 21:20	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/08/22 21:20	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/08/22 21:20	1
Chloromethane	0.28	U *+	1.0	0.28	ug/L			01/08/22 21:20	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/08/22 21:20	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/08/22 21:20	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			01/08/22 21:20	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/08/22 21:20	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/08/22 21:20	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/08/22 21:20	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/08/22 21:20	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/08/22 21:20	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/08/22 21:20	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/08/22 21:20	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/08/22 21:20	1
Methyl Ethyl Ketone	4.7	U	15	4.7	ug/L			01/08/22 21:20	1
Methyl isobutyl ketone (MIBK)	2.5	U	5.0	2.5	ug/L			01/08/22 21:20	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/08/22 21:20	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/08/22 21:20	1
Styrene	0.53	U	1.0	0.53	ug/L			01/08/22 21:20	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/08/22 21:20	1
Toluene	0.39	U	1.0	0.39	ug/L			01/08/22 21:20	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/08/22 21:20	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/08/22 21:20	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/08/22 21:20	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/08/22 21:20	1

Client: AECOM
Project/Site: Red Hill CV22FO106

Job ID: 580-109090-1

Client Sample ID: 20220106-F2-ZT07
Date Collected: 01/06/22 18:25
Date Received: 01/08/22 11:00

Lab Sample ID: 580-109090-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/08/22 21:20	1
Vinyl chloride	0.22	U *+	1.0	0.22	ug/L			01/08/22 21:20	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/08/22 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*	*S1-*	*85 - 114*		*01/08/22 21:20*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 119*		*01/08/22 21:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*115*		*81 - 118*		*01/08/22 21:20*	*1*
Toluene-d8 (Surr)	*105*		*89 - 112*		*01/08/22 21:20*	*1*

Client: AECOM
Project/Site: Red Hill CV22FO106

Job ID: 580-109090-1

Client Sample ID: 20220106-F2-ZT08

Date Collected: 01/06/22 18:30
Date Received: 01/08/22 11:00

Lab Sample ID: 580-109090-4

Matrix: Water

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U *1	100	31	ug/L			01/09/22 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*78 - 120*		*01/09/22 23:20*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, Total	0.39	U *+	1.0	0.39	ug/L			01/09/22 23:20	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/09/22 23:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*01/09/22 23:20*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 119*		*01/09/22 23:20*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*01/09/22 23:20*	*1*
Toluene-d8 (Surr)	*100*		*89 - 112*		*01/09/22 23:20*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			01/08/22 21:44	1
Benzene	0.24	U	1.0	0.24	ug/L			01/08/22 21:44	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			01/08/22 21:44	1
Bromoform	**0.58**	**J**	1.0	0.51	ug/L			01/08/22 21:44	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/08/22 21:44	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/08/22 21:44	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/08/22 21:44	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/08/22 21:44	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/08/22 21:44	1
Chloromethane	0.28	U *+	1.0	0.28	ug/L			01/08/22 21:44	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/08/22 21:44	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/08/22 21:44	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			01/08/22 21:44	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/08/22 21:44	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/08/22 21:44	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/08/22 21:44	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/08/22 21:44	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/08/22 21:44	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/08/22 21:44	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/08/22 21:44	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/08/22 21:44	1
Methyl Ethyl Ketone	4.7	U	15	4.7	ug/L			01/08/22 21:44	1
Methyl isobutyl ketone (MIBK)	2.5	U	5.0	2.5	ug/L			01/08/22 21:44	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/08/22 21:44	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/08/22 21:44	1
Styrene	0.53	U	1.0	0.53	ug/L			01/08/22 21:44	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/08/22 21:44	1
Toluene	0.39	U	1.0	0.39	ug/L			01/08/22 21:44	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/08/22 21:44	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/08/22 21:44	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/08/22 21:44	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/08/22 21:44	1

Client Sample ID: 20220106-F2-ZT08

Date Collected: 01/06/22 18:30
Date Received: 01/08/22 11:00

Lab Sample ID: 580-109090-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/08/22 21:44	1
Vinyl chloride	0.22	U *+	1.0	0.22	ug/L			01/08/22 21:44	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/08/22 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*79*	*S1-*	*85 - 114*		*01/08/22 21:44*	*1*
Dibromofluoromethane (Surr)	*110*		*80 - 119*		*01/08/22 21:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*81 - 118*		*01/08/22 21:44*	*1*
Toluene-d8 (Surr)	*106*		*89 - 112*		*01/08/22 21:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.051	U	0.41	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
Acenaphthylene	0.062	U *1	1.0	0.062	ug/L		01/09/22 13:22	01/10/22 19:40	1
Anthracene	0.051	U	1.0	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
Benzo[a]anthracene	0.051	U	0.26	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
Benzo[a]pyrene	0.041	U	0.26	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
Benzo[b]fluoranthene	0.041	U	0.26	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
Benzo[g,h,i]perylene	0.041	U	0.26	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
Benzo[k]fluoranthene	0.051	U	0.26	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
Bis(2-chloroethoxy)methane	0.051	U	0.62	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
Bis(2-chloroethyl)ether	**1.6**		0.10	0.031	ug/L		01/09/22 13:22	01/10/22 19:40	1
Bis(2-ethylhexyl) phthalate	0.76	U	3.1	0.76	ug/L		01/09/22 13:22	01/10/22 19:40	1
4-Bromophenyl phenyl ether	0.062	U	0.62	0.062	ug/L		01/09/22 13:22	01/10/22 19:40	1
Butyl benzyl phthalate	0.28	U	4.1	0.28	ug/L		01/09/22 13:22	01/10/22 19:40	1
Carbazole	0.10	U	0.62	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1
4-Chloroaniline	0.61	U *1	2.1	0.61	ug/L		01/09/22 13:22	01/10/22 19:40	1
4-Chloro-3-methylphenol	0.13	U	0.62	0.13	ug/L		01/09/22 13:22	01/10/22 19:40	1
2-Chloronaphthalene	0.072	U	1.0	0.072	ug/L		01/09/22 13:22	01/10/22 19:40	1
2-Chlorophenol	0.051	U	1.0	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
4-Chlorophenyl phenyl ether	0.051	U	0.62	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
Chrysene	0.041	U	0.26	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
Dibenz(a,h)anthracene	0.072	U	0.26	0.072	ug/L		01/09/22 13:22	01/10/22 19:40	1
Dibenzofuran	0.10	U	0.41	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1
1,2-Dichlorobenzene	0.051	U	0.41	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
1,3-Dichlorobenzene	0.041	U *1	0.41	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
1,4-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
3,3'-Dichlorobenzidine	0.27	U *1	1.0	0.27	ug/L		01/09/22 13:22	01/10/22 19:40	1
2,4-Dichlorophenol	0.21	U	1.0	0.21	ug/L		01/09/22 13:22	01/10/22 19:40	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		01/09/22 13:22	01/10/22 19:40	1
2,4-Dimethylphenol	0.16	U *1	4.1	0.16	ug/L		01/09/22 13:22	01/10/22 19:40	1
Dimethyl phthalate	0.062	U	0.62	0.062	ug/L		01/09/22 13:22	01/10/22 19:40	1
Di-n-butyl phthalate	0.20	U	3.1	0.20	ug/L		01/09/22 13:22	01/10/22 19:40	1
4,6-Dinitro-2-methylphenol	0.57	U	2.1	0.57	ug/L		01/09/22 13:22	01/10/22 19:40	1
2,4-Dinitrophenol	1.6	U	5.1	1.6	ug/L		01/09/22 13:22	01/10/22 19:40	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1
2,6-Dinitrotoluene	0.10	U	0.41	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		01/09/22 13:22	01/10/22 19:40	1
Fluoranthene	0.062	U	0.26	0.062	ug/L		01/09/22 13:22	01/10/22 19:40	1
Fluorene	0.051	U	0.26	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1

Client Sample ID: 20220106-F2-ZT08
Date Collected: 01/06/22 18:30
Date Received: 01/08/22 11:00

Lab Sample ID: 580-109090-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobenzene	0.041	U	0.62	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
Hexachlorobutadiene	0.062	U *1	1.0	0.062	ug/L		01/09/22 13:22	01/10/22 19:40	1
Hexachlorocyclopentadiene	0.14	U *1	1.0	0.14	ug/L		01/09/22 13:22	01/10/22 19:40	1
Hexachloroethane	0.051	U *1	1.0	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.41	0.13	ug/L		01/09/22 13:22	01/10/22 19:40	1
Isophorone	0.10	U	0.41	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1
2-Methylphenol	0.051	U	0.62	0.051	ug/L		01/09/22 13:22	01/10/22 19:40	1
3 & 4 Methylphenol	0.10	U *1	0.62	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1
Naphthalene	0.16	U *1	0.41	0.16	ug/L		01/09/22 13:22	01/10/22 19:40	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1
3-Nitroaniline	0.16	U	3.1	0.16	ug/L		01/09/22 13:22	01/10/22 19:40	1
4-Nitroaniline	0.22	U	2.1	0.22	ug/L		01/09/22 13:22	01/10/22 19:40	1
Nitrobenzene	0.041	U	1.0	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
4-Nitrophenol	1.7	U	10	1.7	ug/L		01/09/22 13:22	01/10/22 19:40	1
N-Nitrosodi-n-propylamine	0.062	U	0.41	0.062	ug/L		01/09/22 13:22	01/10/22 19:40	1
N-Nitrosodiphenylamine	0.072	U	1.0	0.072	ug/L		01/09/22 13:22	01/10/22 19:40	1
Pentachlorophenol	0.52	U *1 *-	10	0.52	ug/L		01/09/22 13:22	01/10/22 19:40	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		01/09/22 13:22	01/10/22 19:40	1
Phenol	0.37	U *1	1.0	0.37	ug/L		01/09/22 13:22	01/10/22 19:40	1
Pyrene	0.041	U	1.0	0.041	ug/L		01/09/22 13:22	01/10/22 19:40	1
1,2,4-Trichlorobenzene	0.093	U	0.41	0.093	ug/L		01/09/22 13:22	01/10/22 19:40	1
2,4,5-Trichlorophenol	0.10	U	0.41	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1
2,4,6-Trichlorophenol	0.10	U	0.62	0.10	ug/L		01/09/22 13:22	01/10/22 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*81*		*44 - 119*	*01/09/22 13:22*	*01/10/22 19:40*	*1*
2-Fluorophenol (Surr)	*11*	*S1-*	*19 - 119*	*01/09/22 13:22*	*01/10/22 19:40*	*1*
Nitrobenzene-d5 (Surr)	*81*		*44 - 120*	*01/09/22 13:22*	*01/10/22 19:40*	*1*
Phenol-d5 (Surr)	*0.2*	*S1-*	*10 - 120*	*01/09/22 13:22*	*01/10/22 19:40*	*1*
Terphenyl-d14	*98*		*50 - 134*	*01/09/22 13:22*	*01/10/22 19:40*	*1*
2,4,6-Tribromophenol	*75*		*43 - 140*	*01/09/22 13:22*	*01/10/22 19:40*	*1*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	46	U	56	46	ug/L		01/09/22 13:27	01/10/22 03:40	1
C24-C40	91	U	180	91	ug/L		01/09/22 13:27	01/10/22 03:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*76*		*53 - 120*	*01/09/22 13:27*	*01/10/22 03:40*	*1*

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-377913/7
Matrix: Water
Analysis Batch: 377913

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	31	U *3	100	31	ug/L			01/09/22 15:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	**3 S1+*	*78 - 120*		*01/09/22 15:53*	*1*

Lab Sample ID: LCS 580-377913/9
Matrix: Water
Analysis Batch: 377913

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (C6-C12)			1000	1190		ug/L		119	75 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*	**3 S1+*	*78 - 120*

Lab Sample ID: LCSD 580-377913/10
Matrix: Water
Analysis Batch: 377913

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
Gasoline Range Organics (C6-C12)			1000	955	*1	ug/L		95	75 - 127	22	13

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*78 - 120*

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

Lab Sample ID: MB 580-377820/6
Matrix: Water
Analysis Batch: 377820

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			01/08/22 17:13	1
Benzene	0.24	U	1.0	0.24	ug/L			01/08/22 17:13	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			01/08/22 17:13	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/08/22 17:13	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/08/22 17:13	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/08/22 17:13	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/08/22 17:13	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/08/22 17:13	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/08/22 17:13	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/08/22 17:13	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/08/22 17:13	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/08/22 17:13	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			01/08/22 17:13	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/08/22 17:13	1

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

Lab Sample ID: MB 580-377820/6
Matrix: Water
Analysis Batch: 377820

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/08/22 17:13	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/08/22 17:13	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/08/22 17:13	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/08/22 17:13	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/08/22 17:13	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/08/22 17:13	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/08/22 17:13	1
Methyl Ethyl Ketone	4.7	U	15	4.7	ug/L			01/08/22 17:13	1
Methyl isobutyl ketone (MIBK)	2.5	U	5.0	2.5	ug/L			01/08/22 17:13	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/08/22 17:13	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/08/22 17:13	1
Styrene	0.53	U	1.0	0.53	ug/L			01/08/22 17:13	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/08/22 17:13	1
Toluene	0.39	U	1.0	0.39	ug/L			01/08/22 17:13	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/08/22 17:13	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/08/22 17:13	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/08/22 17:13	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/08/22 17:13	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/08/22 17:13	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/08/22 17:13	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/08/22 17:13	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*84*	*S1-*	*85 - 114*		*01/08/22 17:13*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 119*		*01/08/22 17:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*81 - 118*		*01/08/22 17:13*	*1*
Toluene-d8 (Surr)	*103*		*89 - 112*		*01/08/22 17:13*	*1*

Lab Sample ID: LCS 580-377820/3
Matrix: Water
Analysis Batch: 377820

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	25.0	31.8		ug/L		127	39 - 160
Benzene	5.00	5.43		ug/L		109	79 - 120
Bromodichloromethane	5.00	5.23		ug/L		105	79 - 125
Bromoform	5.00	5.12		ug/L		102	66 - 130
Bromomethane	5.00	6.17		ug/L		123	53 - 141
Carbon disulfide	5.00	6.12		ug/L		122	64 - 133
Carbon tetrachloride	5.00	4.76		ug/L		95	72 - 136
Chlorobenzene	5.00	5.40		ug/L		108	82 - 118
Chloroform	5.00	5.31		ug/L		106	79 - 124
Chloromethane	5.00	7.42	*+	ug/L		148	50 - 139
cis-1,2-Dichloroethene	5.00	5.21		ug/L		104	78 - 123
cis-1,3-Dichloropropene	5.00	5.23		ug/L		105	75 - 124
Dibromochloromethane	5.00	5.38		ug/L		108	74 - 126
1,1-Dichloroethane	5.00	5.82		ug/L		116	77 - 125
1,2-Dichloroethane	5.00	5.10		ug/L		102	73 - 128

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

Lab Sample ID: LCS 580-377820/3
Matrix: Water
Analysis Batch: 377820

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	5.00	5.84		ug/L		117	71 - 131
Dichloromethane	5.00	6.14		ug/L		123	74 - 124
1,2-Dichloropropane	5.00	5.43		ug/L		109	78 - 122
Ethylbenzene	5.00	5.37		ug/L		107	79 - 121
Ethyl Chloride	5.00	6.68		ug/L		134	60 - 138
2-Hexanone	25.0	24.8		ug/L		99	57 - 139
Methyl Ethyl Ketone	25.0	20.9		ug/L		84	56 - 143
Methyl isobutyl ketone (MIBK)	25.0	26.0		ug/L		104	67 - 130
m-Xylene & p-Xylene	5.00	5.70		ug/L		114	80 - 121
o-Xylene	5.00	5.45		ug/L		109	78 - 122
Styrene	5.00	5.23		ug/L		105	78 - 123
Tetrachloroethene	5.00	5.03		ug/L		101	74 - 129
Toluene	5.00	5.70		ug/L		114	80 - 121
trans-1,2-Dichloroethene	5.00	5.08		ug/L		102	75 - 124
trans-1,3-Dichloropropene	5.00	5.52		ug/L		110	73 - 127
1,1,1-Trichloroethane	5.00	5.00		ug/L		100	74 - 131
1,1,2-Trichloroethane	5.00	5.43		ug/L		109	80 - 119
Trichloroethene	5.00	4.19		ug/L		84	79 - 123
Vinyl chloride	5.00	7.06	*+	ug/L		141	58 - 137
Xylenes, Total	10.0	11.2		ug/L		112	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*85 - 114*
Dibromofluoromethane (Surr)	*96*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*
Toluene-d8 (Surr)	*109*		*89 - 112*

Lab Sample ID: LCSD 580-377820/4
Matrix: Water
Analysis Batch: 377820

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	25.0	32.7		ug/L		131	39 - 160	3	20
Benzene	5.00	5.20		ug/L		104	79 - 120	4	20
Bromodichloromethane	5.00	5.11		ug/L		102	79 - 125	2	20
Bromoform	5.00	5.01		ug/L		100	66 - 130	2	20
Bromomethane	5.00	5.76		ug/L		115	53 - 141	7	20
Carbon disulfide	5.00	5.72		ug/L		114	64 - 133	7	20
Carbon tetrachloride	5.00	4.67		ug/L		93	72 - 136	2	20
Chlorobenzene	5.00	5.28		ug/L		106	82 - 118	2	20
Chloroform	5.00	5.20		ug/L		104	79 - 124	2	20
Chloromethane	5.00	6.97		ug/L		139	50 - 139	6	20
cis-1,2-Dichloroethene	5.00	4.80		ug/L		96	78 - 123	8	20
cis-1,3-Dichloropropene	5.00	5.11		ug/L		102	75 - 124	2	20
Dibromochloromethane	5.00	5.33		ug/L		107	74 - 126	1	20
1,1-Dichloroethane	5.00	5.52		ug/L		110	77 - 125	5	20
1,2-Dichloroethane	5.00	4.96		ug/L		99	73 - 128	3	20
1,1-Dichloroethene	5.00	5.55		ug/L		111	71 - 131	5	20

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

Lab Sample ID: LCSD 580-377820/4
Matrix: Water
Analysis Batch: 377820

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
Dichloromethane	5.00	5.69		ug/L		114	74 - 124	8	20
1,2-Dichloropropane	5.00	5.11		ug/L		102	78 - 122	6	20
Ethylbenzene	5.00	5.30		ug/L		106	79 - 121	1	20
Ethyl Chloride	5.00	6.29		ug/L		126	60 - 138	6	20
2-Hexanone	25.0	24.9		ug/L		99	57 - 139	0	20
Methyl Ethyl Ketone	25.0	24.3		ug/L		97	56 - 143	15	20
Methyl isobutyl ketone (MIBK)	25.0	26.5		ug/L		106	67 - 130	2	20
m-Xylene & p-Xylene	5.00	5.68		ug/L		114	80 - 121	0	20
o-Xylene	5.00	5.38		ug/L		108	78 - 122	1	20
Styrene	5.00	5.00		ug/L		100	78 - 123	4	20
Tetrachloroethene	5.00	4.83		ug/L		97	74 - 129	4	20
Toluene	5.00	5.62		ug/L		112	80 - 121	1	20
trans-1,2-Dichloroethene	5.00	4.91		ug/L		98	75 - 124	3	20
trans-1,3-Dichloropropene	5.00	5.09		ug/L		102	73 - 127	8	20
1,1,1-Trichloroethane	5.00	4.63		ug/L		93	74 - 131	8	20
1,1,2-Trichloroethane	5.00	5.50		ug/L		110	80 - 119	1	20
Trichloroethene	5.00	4.24		ug/L		85	79 - 123	1	20
Vinyl chloride	5.00	6.55		ug/L		131	58 - 137	7	20
Xylenes, Total	10.0	11.1		ug/L		111	79 - 121	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*85 - 114*
Dibromofluoromethane (Surr)	*98*		*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*101*		*81 - 118*
Toluene-d8 (Surr)	*109*		*89 - 112*

Lab Sample ID: MB 580-377858/7
Matrix: Water
Analysis Batch: 377858

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/09/22 15:53	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/09/22 15:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*135*	**3 S1+*	*85 - 114*		*01/09/22 15:53*	*1*
Dibromofluoromethane (Surr)	*148*	**3 S1+*	*80 - 119*		*01/09/22 15:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*	**3*	*81 - 118*		*01/09/22 15:53*	*1*
Toluene-d8 (Surr)	*106*	**3*	*89 - 112*		*01/09/22 15:53*	*1*

Lab Sample ID: LCS 580-377858/4
Matrix: Water
Analysis Batch: 377858

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethene, Total	20.0	38.5	*+	ug/L		193	78 - 123
1,1,2,2-Tetrachloroethane	10.0	7.61		ug/L		76	71 - 121

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

Lab Sample ID: LCS 580-377858/4
Matrix: Water
Analysis Batch: 377858

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*123*	**3 S1+*	*85 - 114*
Dibromofluoromethane (Surr)	*137*	*S1+*	*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*
Toluene-d8 (Surr)	*115*	**3 S1+*	*89 - 112*

Lab Sample ID: LCSD 580-377858/5
Matrix: Water
Analysis Batch: 377858

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
1,2-Dichloroethene, Total			20.0	35.1	*+	ug/L		176	78 - 123	9	20
1,1,2,2-Tetrachloroethane			10.0	8.13		ug/L		81	71 - 121	7	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*128*	*S1+*	*85 - 114*
Dibromofluoromethane (Surr)	*136*	*S1+*	*80 - 119*
1,2-Dichloroethane-d4 (Surr)	*100*		*81 - 118*
Toluene-d8 (Surr)	*98*		*89 - 112*

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

Lab Sample ID: MB 580-377860/1-A
Matrix: Water
Analysis Batch: 377876

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.050	U	0.40	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
Acenaphthylene	0.060	U	1.0	0.060	ug/L		01/07/22 10:46	01/10/22 18:31	1
Anthracene	0.050	U	1.0	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
Benzo[a]anthracene	0.050	U	0.25	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
Benzo[a]pyrene	0.040	U	0.25	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
Benzo[b]fluoranthene	0.040	U	0.25	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
Benzo[g,h,i]perylene	0.040	U	0.25	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
Benzo[k]fluoranthene	0.050	U	0.25	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
Bis(2-chloroethoxy)methane	0.050	U	0.60	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
Bis(2-chloroethyl)ether	0.030	U	0.10	0.030	ug/L		01/07/22 10:46	01/10/22 18:31	1
Bis(2-ethylhexyl) phthalate	0.74	U	3.0	0.74	ug/L		01/07/22 10:46	01/10/22 18:31	1
4-Bromophenyl phenyl ether	0.060	U	0.60	0.060	ug/L		01/07/22 10:46	01/10/22 18:31	1
Butyl benzyl phthalate	0.27	U	4.0	0.27	ug/L		01/07/22 10:46	01/10/22 18:31	1
Carbazole	0.10	U	0.60	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1
4-Chloroaniline	0.59	U	2.0	0.59	ug/L		01/07/22 10:46	01/10/22 18:31	1
4-Chloro-3-methylphenol	0.13	U	0.60	0.13	ug/L		01/07/22 10:46	01/10/22 18:31	1
2-Chloronaphthalene	0.070	U	1.0	0.070	ug/L		01/07/22 10:46	01/10/22 18:31	1
2-Chlorophenol	0.050	U	1.0	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
4-Chlorophenyl phenyl ether	0.050	U	0.60	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
Chrysene	0.040	U	0.25	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
Dibenz(a,h)anthracene	0.070	U	0.25	0.070	ug/L		01/07/22 10:46	01/10/22 18:31	1
Dibenzofuran	0.10	U	0.40	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1

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

Lab Sample ID: MB 580-377860/1-A
Matrix: Water
Analysis Batch: 377876

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	0.050	U	0.40	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
1,3-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
1,4-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		01/07/22 10:46	01/10/22 18:31	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		01/07/22 10:46	01/10/22 18:31	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		01/07/22 10:46	01/10/22 18:31	1
2,4-Dimethylphenol	0.16	U	4.0	0.16	ug/L		01/07/22 10:46	01/10/22 18:31	1
Dimethyl phthalate	0.060	U	0.60	0.060	ug/L		01/07/22 10:46	01/10/22 18:31	1
Di-n-butyl phthalate	0.19	U	3.0	0.19	ug/L		01/07/22 10:46	01/10/22 18:31	1
4,6-Dinitro-2-methylphenol	0.55	U	2.0	0.55	ug/L		01/07/22 10:46	01/10/22 18:31	1
2,4-Dinitrophenol	1.6	U	5.0	1.6	ug/L		01/07/22 10:46	01/10/22 18:31	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1
2,6-Dinitrotoluene	0.10	U	0.40	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		01/07/22 10:46	01/10/22 18:31	1
Fluoranthene	0.060	U	0.25	0.060	ug/L		01/07/22 10:46	01/10/22 18:31	1
Fluorene	0.050	U	0.25	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
Hexachlorobenzene	0.040	U	0.60	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
Hexachlorobutadiene	0.060	U	1.0	0.060	ug/L		01/07/22 10:46	01/10/22 18:31	1
Hexachlorocyclopentadiene	0.14	U	1.0	0.14	ug/L		01/07/22 10:46	01/10/22 18:31	1
Hexachloroethane	0.050	U	1.0	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.40	0.13	ug/L		01/07/22 10:46	01/10/22 18:31	1
Isophorone	0.10	U	0.40	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1
2-Methylphenol	0.050	U	0.60	0.050	ug/L		01/07/22 10:46	01/10/22 18:31	1
3 & 4 Methylphenol	0.10	U	0.60	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1
Naphthalene	0.16	U	0.40	0.16	ug/L		01/07/22 10:46	01/10/22 18:31	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1
3-Nitroaniline	0.16	U	3.0	0.16	ug/L		01/07/22 10:46	01/10/22 18:31	1
4-Nitroaniline	0.21	U	2.0	0.21	ug/L		01/07/22 10:46	01/10/22 18:31	1
Nitrobenzene	0.040	U	1.0	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
4-Nitrophenol	1.7	U	10	1.7	ug/L		01/07/22 10:46	01/10/22 18:31	1
N-Nitrosodi-n-propylamine	0.060	U	0.40	0.060	ug/L		01/07/22 10:46	01/10/22 18:31	1
N-Nitrosodiphenylamine	0.070	U	1.0	0.070	ug/L		01/07/22 10:46	01/10/22 18:31	1
Pentachlorophenol	0.51	U	10	0.51	ug/L		01/07/22 10:46	01/10/22 18:31	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		01/07/22 10:46	01/10/22 18:31	1
Phenol	0.36	U	1.0	0.36	ug/L		01/07/22 10:46	01/10/22 18:31	1
Pyrene	0.040	U	1.0	0.040	ug/L		01/07/22 10:46	01/10/22 18:31	1
1,2,4-Trichlorobenzene	0.090	U	0.40	0.090	ug/L		01/07/22 10:46	01/10/22 18:31	1
2,4,5-Trichlorophenol	0.10	U	0.40	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1
2,4,6-Trichlorophenol	0.10	U	0.60	0.10	ug/L		01/07/22 10:46	01/10/22 18:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*83*		*44 - 119*	*01/07/22 10:46*	*01/10/22 18:31*	*1*
2-Fluorophenol (Surr)	*56*		*19 - 119*	*01/07/22 10:46*	*01/10/22 18:31*	*1*
Nitrobenzene-d5 (Surr)	*91*		*44 - 120*	*01/07/22 10:46*	*01/10/22 18:31*	*1*
Phenol-d5 (Surr)	*33*		*10 - 120*	*01/07/22 10:46*	*01/10/22 18:31*	*1*
Terphenyl-d14	*109*		*50 - 134*	*01/07/22 10:46*	*01/10/22 18:31*	*1*
2,4,6-Tribromophenol	*81*		*43 - 140*	*01/07/22 10:46*	*01/10/22 18:31*	*1*

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

Lab Sample ID: LCS 580-377860/2-A
Matrix: Water
Analysis Batch: 377876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377860

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	1.83		ug/L		92	47 - 122
Acenaphthylene	2.00	1.87		ug/L		93	41 - 130
Anthracene	2.00	1.59		ug/L		80	57 - 123
Benzo[a]anthracene	2.00	1.91		ug/L		96	58 - 125
Benzo[a]pyrene	2.00	1.97		ug/L		98	54 - 128
Benzo[b]fluoranthene	2.00	1.99		ug/L		99	53 - 131
Benzo[g,h,i]perylene	2.00	2.05		ug/L		102	50 - 134
Benzo[k]fluoranthene	2.00	1.92		ug/L		96	57 - 129
Bis(2-chloroethoxy)methane	2.00	1.89		ug/L		95	48 - 120
Bis(2-ethylhexyl) phthalate	2.00	2.08	J	ug/L		104	55 - 135
4-Bromophenyl phenyl ether	2.00	1.62		ug/L		81	55 - 124
Butyl benzyl phthalate	2.00	2.04	J	ug/L		102	53 - 134
Carbazole	2.00	1.92		ug/L		96	60 - 122
4-Chloroaniline	2.00	1.23	J	ug/L		62	33 - 117
4-Chloro-3-methylphenol	2.00	1.86		ug/L		93	52 - 119
2-Chloronaphthalene	2.00	1.84		ug/L		92	40 - 116
2-Chlorophenol	2.00	1.68		ug/L		84	38 - 117
4-Chlorophenyl phenyl ether	2.00	1.82		ug/L		91	53 - 121
Chrysene	2.00	1.96		ug/L		98	59 - 123
Dibenz(a,h)anthracene	2.00	1.89		ug/L		94	51 - 134
Dibenzofuran	2.00	1.83		ug/L		92	53 - 118
1,2-Dichlorobenzene	2.00	1.69		ug/L		84	32 - 111
1,3-Dichlorobenzene	2.00	1.70		ug/L		85	28 - 110
1,4-Dichlorobenzene	2.00	1.72		ug/L		86	29 - 112
3,3'-Dichlorobenzidine	4.00	3.32		ug/L		83	27 - 129
2,4-Dichlorophenol	2.00	1.77		ug/L		88	47 - 121
Diethyl phthalate	2.00	2.11		ug/L		106	56 - 125
2,4-Dimethylphenol	2.00	1.98	J	ug/L		99	31 - 124
Dimethyl phthalate	2.00	1.98		ug/L		99	45 - 127
Di-n-butyl phthalate	2.00	1.90	J	ug/L		95	59 - 127
4,6-Dinitro-2-methylphenol	4.00	3.14		ug/L		78	44 - 137
2,4-Dinitrophenol	4.00	3.24	J	ug/L		81	23 - 143
2,4-Dinitrotoluene	2.00	1.87		ug/L		94	57 - 128
2,6-Dinitrotoluene	2.00	1.90		ug/L		95	57 - 124
Di-n-octyl phthalate	2.00	2.07		ug/L		104	51 - 140
Fluoranthene	2.00	1.88		ug/L		94	57 - 128
Fluorene	2.00	1.96		ug/L		98	52 - 124
Hexachlorobenzene	2.00	1.60		ug/L		80	53 - 125
Hexachlorobutadiene	2.00	1.80		ug/L		90	22 - 124
Hexachlorocyclopentadiene	2.00	1.31		ug/L		65	20 - 125
Hexachloroethane	2.00	1.86		ug/L		93	21 - 115
Indeno[1,2,3-cd]pyrene	2.00	1.98		ug/L		99	52 - 134
Isophorone	2.00	1.88		ug/L		94	42 - 124
2-Methylphenol	2.00	1.56		ug/L		78	30 - 117
3 & 4 Methylphenol	2.00	1.51		ug/L		75	29 - 110
Naphthalene	2.00	1.77		ug/L		89	40 - 121
2-Nitroaniline	2.00	1.90		ug/L		95	55 - 127
3-Nitroaniline	2.00	1.44	J	ug/L		72	41 - 128

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

Lab Sample ID: LCS 580-377860/2-A
Matrix: Water
Analysis Batch: 377876

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377860

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
4-Nitroaniline			2.00	1.84	J	ug/L		92	70 - 125		
Nitrobenzene			2.00	1.89		ug/L		95	45 - 121		
4-Nitrophenol			4.00	1.7	U	ug/L		42	35 - 145		
N-Nitrosodi-n-propylamine			2.00	1.97		ug/L		99	49 - 119		
N-Nitrosodiphenylamine			2.00	1.68		ug/L		84	51 - 123		
Pentachlorophenol			4.00	1.36	J *-	ug/L		34	35 - 138		
Phenanthrene			2.00	1.73		ug/L		86	59 - 120		
Phenol			2.00	0.826	J	ug/L		41	13 - 120		
Pyrene			2.00	1.88		ug/L		94	57 - 126		
1,2,4-Trichlorobenzene			2.00	1.79		ug/L		89	29 - 116		
2,4,5-Trichlorophenol			2.00	1.85		ug/L		92	53 - 123		
2,4,6-Trichlorophenol			2.00	1.85		ug/L		93	50 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*44 - 119*
2-Fluorophenol (Surr)	*54*		*19 - 119*
Nitrobenzene-d5 (Surr)	*86*		*44 - 120*
Phenol-d5 (Surr)	*34*		*10 - 120*
Terphenyl-d14	*91*		*50 - 134*
2,4,6-Tribromophenol	*79*		*43 - 140*

Lab Sample ID: LCSD 580-377860/3-A
Matrix: Water
Analysis Batch: 377876

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377860

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			2.00	1.50		ug/L		75	47 - 122	20	20
Acenaphthylene			2.00	1.50	*1	ug/L		75	41 - 130	22	20
Anthracene			2.00	1.87		ug/L		93	57 - 123	16	20
Benzo[a]anthracene			2.00	1.99		ug/L		99	58 - 125	4	20
Benzo[a]pyrene			2.00	2.19		ug/L		109	54 - 128	11	20
Benzo[b]fluoranthene			2.00	2.21		ug/L		111	53 - 131	11	20
Benzo[g,h,i]perylene			2.00	2.25		ug/L		113	50 - 134	10	20
Benzo[k]fluoranthene			2.00	2.11		ug/L		106	57 - 129	9	20
Bis(2-chloroethoxy)methane			2.00	1.58		ug/L		79	48 - 120	18	20
Bis(2-ethylhexyl) phthalate			2.00	2.25	J	ug/L		113	55 - 135	8	20
4-Bromophenyl phenyl ether			2.00	1.71		ug/L		86	55 - 124	6	20
Butyl benzyl phthalate			2.00	2.28	J	ug/L		114	53 - 134	11	20
Carbazole			2.00	2.09		ug/L		104	60 - 122	8	20
4-Chloroaniline			2.00	0.993	J *1	ug/L		50	33 - 117	22	20
4-Chloro-3-methylphenol			2.00	1.69		ug/L		85	52 - 119	10	20
2-Chloronaphthalene			2.00	1.52		ug/L		76	40 - 116	19	20
2-Chlorophenol			2.00	1.37		ug/L		68	38 - 117	20	20
4-Chlorophenyl phenyl ether			2.00	1.53		ug/L		77	53 - 121	17	20
Chrysene			2.00	2.10		ug/L		105	59 - 123	7	20
Dibenz(a,h)anthracene			2.00	2.09		ug/L		105	51 - 134	10	20
Dibenzofuran			2.00	1.55		ug/L		77	53 - 118	17	20
1,2-Dichlorobenzene			2.00	1.41		ug/L		70	32 - 111	18	20

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

Lab Sample ID: LCSD 580-377860/3-A
Matrix: Water
Analysis Batch: 377876

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377860

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichlorobenzene			2.00	1.36	*1	ug/L		68	28 - 110	22	20
1,4-Dichlorobenzene			2.00	1.42		ug/L		71	29 - 112	19	20
3,3'-Dichlorobenzidine			4.00	2.36	*1	ug/L		59	27 - 129	34	20
2,4-Dichlorophenol			2.00	1.46		ug/L		73	47 - 121	19	20
Diethyl phthalate			2.00	2.18		ug/L		109	56 - 125	3	20
2,4-Dimethylphenol			2.00	1.58	J *1	ug/L		79	31 - 124	22	20
Dimethyl phthalate			2.00	1.92		ug/L		96	45 - 127	3	20
Di-n-butyl phthalate			2.00	2.18	J	ug/L		109	59 - 127	14	20
4,6-Dinitro-2-methylphenol			4.00	3.52		ug/L		88	44 - 137	12	20
2,4-Dinitrophenol			4.00	3.17	J	ug/L		79	23 - 143	2	20
2,4-Dinitrotoluene			2.00	1.94		ug/L		97	57 - 128	3	20
2,6-Dinitrotoluene			2.00	1.71		ug/L		85	57 - 124	10	20
Di-n-octyl phthalate			2.00	2.35		ug/L		118	51 - 140	13	20
Fluoranthene			2.00	2.11		ug/L		105	57 - 128	11	20
Fluorene			2.00	1.64		ug/L		82	52 - 124	18	20
Hexachlorobenzene			2.00	1.74		ug/L		87	53 - 125	9	20
Hexachlorobutadiene			2.00	1.38	*1	ug/L		69	22 - 124	27	20
Hexachlorocyclopentadiene			2.00	1.02	*1	ug/L		51	20 - 125	25	20
Hexachloroethane			2.00	1.47	*1	ug/L		74	21 - 115	24	20
Indeno[1,2,3-cd]pyrene			2.00	2.16		ug/L		108	52 - 134	9	20
Isophorone			2.00	1.64		ug/L		82	42 - 124	14	20
2-Methylphenol			2.00	1.31		ug/L		65	30 - 117	18	20
3 & 4 Methylphenol			2.00	1.22	*1	ug/L		61	29 - 110	21	20
Naphthalene			2.00	1.43	*1	ug/L		71	40 - 121	21	20
2-Nitroaniline			2.00	1.72		ug/L		86	55 - 127	10	20
3-Nitroaniline			2.00	1.34	J	ug/L		67	41 - 128	8	20
4-Nitroaniline			2.00	1.74	J	ug/L		87	70 - 125	6	20
Nitrobenzene			2.00	1.56		ug/L		78	45 - 121	19	20
4-Nitrophenol			4.00	1.7	U	ug/L		40	35 - 145	6	20
N-Nitrosodi-n-propylamine			2.00	1.66		ug/L		83	49 - 119	17	20
N-Nitrosodiphenylamine			2.00	1.82		ug/L		91	51 - 123	8	20
Pentachlorophenol			4.00	1.83	J *1	ug/L		46	35 - 138	29	20
Phenanthrene			2.00	1.97		ug/L		99	59 - 120	13	20
Phenol			2.00	0.644	J *1	ug/L		32	13 - 120	25	20
Pyrene			2.00	2.11		ug/L		105	57 - 126	11	20
1,2,4-Trichlorobenzene			2.00	1.46		ug/L		73	29 - 116	20	20
2,4,5-Trichlorophenol			2.00	1.66		ug/L		83	53 - 123	11	20
2,4,6-Trichlorophenol			2.00	1.51		ug/L		76	50 - 125	20	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*66*		*44 - 119*
2-Fluorophenol (Surr)	*44*		*19 - 119*
Nitrobenzene-d5 (Surr)	*72*		*44 - 120*
Phenol-d5 (Surr)	*27*		*10 - 120*
Terphenyl-d14	*102*		*50 - 134*
2,4,6-Tribromophenol	*87*		*43 - 140*

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 580-377861/1-A
Matrix: Water
Analysis Batch: 377867

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377861

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	45	U	55	45	ug/L		01/08/22 15:21	01/10/22 02:19	1
C24-C40	90	U	180	90	ug/L		01/08/22 15:21	01/10/22 02:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*53 - 120*	*01/08/22 15:21*	*01/10/22 02:19*	*1*

Lab Sample ID: LCS 580-377861/2-A
Matrix: Water
Analysis Batch: 377867

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377861

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C9-C25			4000	3030		ug/L		76	55 - 134		
C24-C40			4000	3910		ug/L		98	36 - 143		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*83*		*53 - 120*

Lab Sample ID: LCSD 580-377861/3-A
Matrix: Water
Analysis Batch: 377867

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377861

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C25			4000	3000		ug/L		75	55 - 134	1	26
C24-C40			4000	3880		ug/L		97	36 - 143	1	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*84*		*53 - 120*

Lab Chronicle

Client: AECOM
Job ID: 580-109090-1
Project/Site: Red Hill CV22FO106

Client Sample ID: 20220106-C1-ZT05
Lab Sample ID: 580-109090-1
Date Collected: 01/06/22 15:25
Matrix: Water
Date Received: 01/08/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	377913	01/09/22 22:06	JSM	FGS SEA

Client Sample ID: 20220106-C1-ZT06
Lab Sample ID: 580-109090-2
Date Collected: 01/06/22 15:30
Matrix: Water
Date Received: 01/08/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	377913	01/09/22 22:31	JSM	FGS SEA
Total/NA	Prep	3510C			377861	01/09/22 13:27	JHR	FGS SEA
Total/NA	Analysis	8015D		1	377867	01/10/22 03:20	JAE	FGS SEA

Client Sample ID: 20220106-F2-ZT07
Lab Sample ID: 580-109090-3
Date Collected: 01/06/22 18:25
Matrix: Water
Date Received: 01/08/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	377913	01/09/22 22:56	JSM	FGS SEA
Total/NA	Analysis	8260D		1	377858	01/09/22 22:56	JSM	FGS SEA
Total/NA	Analysis	8260D	RA	1	377820	01/08/22 21:20	T1W	FGS SEA

Client Sample ID: 20220106-F2-ZT08
Lab Sample ID: 580-109090-4
Date Collected: 01/06/22 18:30
Matrix: Water
Date Received: 01/08/22 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	377913	01/09/22 23:20	JSM	FGS SEA
Total/NA	Analysis	8260D		1	377858	01/09/22 23:20	JSM	FGS SEA
Total/NA	Analysis	8260D	RA	1	377820	01/08/22 21:44	T1W	FGS SEA
Total/NA	Prep	3510C			377860	01/09/22 13:22	JHR	FGS SEA
Total/NA	Analysis	8270E		1	377876	01/10/22 19:40	T1L	FGS SEA
Total/NA	Prep	3510C			377861	01/09/22 13:27	JHR	FGS SEA
Total/NA	Analysis	8015D		1	377867	01/10/22 03:40	JAE	FGS SEA

Laboratory References:

FGS SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: AECOM
Job ID: 580-109090-1
Project/Site: Red Hill CV22FO106

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2236	01-19-22

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
8260D		Water	1,2-Dichloroethene, Total

Sample Summary

Client: AECOM
Project/Site: Red Hill CV22FO106

Job ID: 580-109090-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-109090-1	20220106-C1-ZT05	Water	01/06/22 15:25	01/08/22 11:00
580-109090-2	20220106-C1-ZT06	Water	01/06/22 15:30	01/08/22 11:00
580-109090-3	20220106-F2-ZT07	Water	01/06/22 18:25	01/08/22 11:00
580-109090-4	20220106-F2-ZT08	Water	01/06/22 18:30	01/08/22 11:00

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

580-109090 Chain of Custody

eurofins Environment Testing America

Client Information	Sampler: AECOM	Lab PM: Elaine Walker	COC No: 1072022DW-01
Client Contact: Alethea Ramos (alternate: Margie Pascua)	Phone:	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii
Company: AECOM	PWSID:		Page: Page 1 of 1
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract	Analysis Requested	Job #:
City: Honolulu	TAT Requested (days):		
State, Zip: Hawaii 96813	Compliance Project: Δ Yes Δ No		
Phone: 808-521-3051 (direct: 808-529-7283) (alternate: 808-356-5373)	PO #:		
Email: alethea.ramos@aecom.com (alternate: margie.pascua@aecom.com)	WO #:		
Project Name: CV22F0106	Project #: 60674414		
Site: RHSF	SSOW#:		

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)	TPH-g (C6-C10) by 8260	TPH-d, TPH-o (C10-C24, C24-C40) by 8015	Total Number of containers	Special Instructions/Note:
Preservation Code:							A	N		
20220106-CI-ZT05	01/06/22	1525	G	W	N	N	X		2	
20220106-CI-ZT06	01/06/22	1530	G	W	N	N	X	X	5	

Therm. ID: A2 Cor: -0.6 ° Unc: 0.1 °
Cooler Dsc: Red FedEx: 00
Packing: Bubble UPS:
Cust. Seal: Yes ✓ No Lab Cour:
Blue Ice, (Wet) Dry, None Other:

JGA 01/06/22

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)

Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.

Special Instructions/QC Requirements: DOD QSM project.

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Thomas Aguilo JAguilo	01/06/22 2000	AECOM	Conner Rothe Conner Rothe	1/6/22 2000	AECOM
Conner Rothe Conner Rothe	1/7/22 1200	AECOM	Shawn Kusma	1/8/22 1100	Eurofins

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Eurofins FGS, Seattle
5755 8th Street East
Tacoma, WA 98424

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: AECOM	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No. 01072022DW-03
Client Contact: Alethea Ramos (alternate: Margie Pascua)	Phone:	E-Mail: M.Elaine.Walker@EurofinsET.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: AECOM	PWSID:			Job #:
Address: 1001 Bishop St. Suite 1600	Due Date Requested: see subcontract	Analysis Requested		Preservation Codes:
City: Honolulu	TAT Requested (days):			
State, Zip: Hawaii 96813	Compliance Project: Δ Yes Δ No			
Phone: 808-521-3051 (direct: 808-529-7283) (alternate: 808-356-5373)	PO #:			
Email: alethea.ramos@aecom.com (alternate: margie.pascua@aecom.com)	WO #:			
Project Name: CV22F0106	Project #: 60674414			
Site: RHSF	SSOW#:			

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)	EPA 8260 VOCs & TPH-g (HCl)	~~EPA 8270 SVOCs (none)~~	EPA 8015 TPH-d/o	EPA 8270 SVOCs (Low)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	N	N			
20220106-F2-ZT07	01/06/22	1825	G	W	N	N	X					
20220106-F2-ZT08	01/06/22	1830	G	W	N	N	X		X	X		

Therm. ID: A2 Cor: -0.5 ° Unc: 0.4 °
Cooler Dsc: Red
Packing: Bubble
Cust. Seal: Yes ✓ No
Blue Ice, (Wet), Dry, None
FedEx: PO
UPS:
Lab Cour:
Other:

01/06/22

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)

Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQuIS EDD.

Special Instructions/QC Requirements: DOD QSM project.

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Thomas Aguilo	01/06/22 2000	AECOM	Connor Rothe	1/6/22 2000	AECOM
Connor Rothe	1/7/22 1200	AECOM	Shawn Kwong	1/8/22 1100	Eurofins

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

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-109090-1

Login Number: 109090
List Number: 1
Creator: Presley, Kim A

List Source: Eurofins Seattle

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
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	
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	

WECK LABORATORIES, INC.

Certificate of Analysis

FINAL REPORT

Work Orders:	2A08001	**Report Date:**	1/12/2022
		Received Date:	01/08/2022
Project:	60674414, COC # 01072022 DW-02	**Turnaround Time:**	3 workdays
		Phones:	(808) 529-7277
		Fax:	(808) 524-0246
Attn:	Margie Pascua	**P.O. #:**	reference number 60571032.02.46.01
Client:	AECOM - Honolulu 1001 Bishop Street Suite 1600 Honolulu, HI 96813	**Billing Code:**	

ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • HW-DOH #4047 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP #CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

This is a complete final report. The information in this report applies to the samples analyzed in accordance with the chain-of-custody document. Weck Laboratories certifies that the test results meet all requirements of TNI unless noted by qualifiers or written in the Case Narrative. This analytical report must be reproduced in its entirety.

Dear Margie Pascua,

Enclosed are the results of analyses for samples received 1/08/22 with the Chain-of-Custody document. The samples were received in good condition, at 3.1 °C and on ice. All analyses met the method criteria except as noted in the case narrative or in the report with data qualifiers.

Reviewed by:

Kim G. Tu
Project Manager

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AECOM - Honolulu
1001 Bishop Street Suite 1600
Honolulu, HI 96813

Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported:
01/12/2022 15:29

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
20220106-C1-ZT04	AECOM	2A08001-01	Water	01/06/22 15:25	
20220106-C1-ZT06	AECOM	2A08001-02	Water	01/06/22 15:30	

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Sample Results

Sample: 20220106-C1-ZT04
2A08001-01 (Water)

Sampled: 01/06/22 15:25 by AECOM

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2				**Instr:** GCMS14			
Batch ID: W2A0422 **Preparation:** Method (P+T)				**Prepared:** 01/09/22 09:16			**Analyst:** cam
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	01/09/22	U
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	01/09/22	U
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	01/09/22	U
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	01/09/22	U
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	01/09/22	U
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	01/09/22	U
Benzene	ND	0.15	0.50	ug/l	1	01/09/22	U
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	01/09/22	U
Chlorobenzene	ND	0.15	0.50	ug/l	1	01/09/22	U
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	01/09/22	U
Ethylbenzene	ND	0.21	0.50	ug/l	1	01/09/22	U
m,p-Xylene	ND	0.33	0.50	ug/l	1	01/09/22	U
Methylene chloride	ND	0.30	0.50	ug/l	1	01/09/22	U
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	01/09/22	U
o-Xylene	ND	0.20	0.50	ug/l	1	01/09/22	U
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	01/09/22	U
Styrene	ND	0.19	0.50	ug/l	1	01/09/22	U
Tetrachloroethene	ND	0.18	0.50	ug/l	1	01/09/22	U
THMs, Total	ND		0.50	ug/l	1	01/09/22	U
Toluene	ND	0.29	0.50	ug/l	1	01/09/22	U
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	01/09/22	U
Trichloroethene	ND	0.18	0.50	ug/l	1	01/09/22	U
Vinyl chloride	ND	0.18	0.50	ug/l	1	01/09/22	U
Surrogate(s)							
1,2-Dichlorobenzene-d4	*93%*	*Conc: 9.29*	*70-130*			*01/09/22*	
4-Bromofluorobenzene	*90%*	*Conc: 9.03*	*70-130*			*01/09/22*	

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Sample Results

(Continued)

Sample: 20220106-C1-ZT06
2A08001-02 (Water)

Sampled: 01/06/22 15:30 by AECOM

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Chlorinated Pesticides and/or PCBs by GC/ECD							
Method: EPA 508.1			**Instr:** GC08				
Batch ID: W2A0524 **Preparation:** Method (SPE)			**Prepared:** 01/08/22 12:31				**Analyst:** rjg
Aroclor 1016	ND	0.016	0.10	ug/l	1	01/10/22	U
Aroclor 1221	ND	0.044	0.10	ug/l	1	01/10/22	U
Aroclor 1232	ND	0.010	0.10	ug/l	1	01/10/22	U
Aroclor 1242	ND	0.074	0.10	ug/l	1	01/10/22	U
Aroclor 1248	ND	0.094	0.10	ug/l	1	01/10/22	U
Aroclor 1254	ND	0.087	0.10	ug/l	1	01/10/22	U
Aroclor 1260	ND	0.038	0.10	ug/l	1	01/10/22	U
Chlordane (tech)	ND	0.067	0.10	ug/l	1	01/10/22	U
PCBs, Total	ND		0.50	ug/l	1	01/10/22	U
Surrogate(s)							
4,4-Dibromobiphenyl	*146%*	*Conc: 0.139*	*70-130*			*01/10/22*	*S-03*
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B			**Instr:** TOC02				
Batch ID: W2A0446 **Preparation:** _NONE (TOC/TOX)			**Prepared:** 01/07/22 09:18				**Analyst:** ajc
Total Organic Carbon (TOC)	**0.31**	0.19	0.30	mg/l	1	01/12/22	
Metals by EPA 200 Series Methods							
Method: EPA 200.8			**Instr:** ICPMS04				
Batch ID: W2A0526 **Preparation:** EPA 200.2			**Prepared:** 01/08/22 14:00				**Analyst:** mpn
Antimony, Total	ND	0.089	0.50	ug/l	1	01/10/22	U
Arsenic, Total	ND	0.074	0.40	ug/l	1	01/10/22	U
Barium, Total	**4.0**	0.14	1.0	ug/l	1	01/10/22	
Beryllium, Total	ND	0.062	0.10	ug/l	1	01/10/22	U
Cadmium, Total	ND	0.042	0.20	ug/l	1	01/10/22	U
Chromium, Total	**1.5**	0.089	0.20	ug/l	1	01/10/22	
Copper, Total	**2.6**	0.23	0.50	ug/l	1	01/10/22	
Lead, Total	**0.91**	0.083	0.20	ug/l	1	01/10/22	
Selenium, Total	ND	0.067	0.40	ug/l	1	01/10/22	U
Thallium, Total	ND	0.021	0.20	ug/l	1	01/10/22	U
Method: EPA 245.1			**Instr:** HG03				
Batch ID: W2A0552 **Preparation:** Method (Hot Block)			**Prepared:** 01/10/22 09:22				**Analyst:** kvm
Mercury, Total	ND	0.017	0.050	ug/l	1	01/10/22	U
Semivolatile Organic Compounds by GC/MS							
Method: EPA 525.2			**Instr:** GCMS16				
Batch ID: W2A0525 **Preparation:** Method (SPE)			**Prepared:** 01/08/22 12:37				**Analyst:** rmr
1-Methylnaphthalene	ND	0.0080	0.050	ug/l	1	01/09/22	U
2-Methylnaphthalene	ND	0.0090	0.050	ug/l	1	01/09/22	U

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Sample Results

(Continued)

Sample: 20220106-C1-ZT06
2A08001-02 (Water)

Sampled: 01/06/22 15:30 by AECOM

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Semivolatile Organic Compounds by GC/MS (Continued)							
Method: EPA 525.2			**Instr:** GCMS16				
Batch ID: W2A0525 **Preparation:** Method (SPE)			**Prepared:** 01/08/22 12:37				**Analyst:** rmr
Alachlor	ND	0.011	0.10	ug/l	1	01/09/22	U
Atrazine	ND	0.0073	0.10	ug/l	1	01/09/22	U
Benzo (a) pyrene	ND	0.012	0.050	ug/l	1	01/09/22	U
Bis(2-ethylhexyl)adipate	**0.063**	0.0096	5.0	ug/l	1	01/09/22	J
Bis(2-ethylhexyl)phthalate	ND	0.44	3.0	ug/l	1	01/09/22	U
Endrin	ND	0.0099	0.20	ug/l	1	01/09/22	U
gamma-BHC (Lindane)	ND	0.0063	0.10	ug/l	1	01/09/22	U
Heptachlor	ND	0.0096	0.10	ug/l	1	01/09/22	U
Heptachlor epoxide	ND	0.012	0.10	ug/l	1	01/09/22	U
Hexachlorobenzene	ND	0.098	0.10	ug/l	1	01/09/22	U
Hexachlorocyclopentadiene	ND	0.0059	1.0	ug/l	1	01/09/22	U
Methoxychlor	ND	0.0086	0.20	ug/l	1	01/09/22	U
Naphthalene	ND	0.010	0.050	ug/l	1	01/09/22	U
Pentachlorophenol	ND	0.024	1.0	ug/l	1	01/09/22	U
Simazine	ND	0.0073	0.10	ug/l	1	01/09/22	U
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*102%*	*Conc: 0.488*	*70-130*			*01/09/22*	
Perylene-d12	*130%*	*Conc: 0.622*	*70-130*			*01/09/22*	
Triphenyl phosphate	*152%*	*Conc: 0.726*	*70-130*			*01/09/22*	*S-11*
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			**Instr:** GCMS14				
Batch ID: W2A0422 **Preparation:** Method (P+T)			**Prepared:** 01/09/22 09:16				**Analyst:** cam
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	01/09/22	U
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	01/09/22	U
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	01/09/22	U
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	01/09/22	U
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	01/09/22	U
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	01/09/22	U
Benzene	ND	0.15	0.50	ug/l	1	01/09/22	U
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	01/09/22	U
Chlorobenzene	ND	0.15	0.50	ug/l	1	01/09/22	U
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	01/09/22	U
Ethylbenzene	ND	0.21	0.50	ug/l	1	01/09/22	U
m,p-Xylene	ND	0.33	0.50	ug/l	1	01/09/22	U
Methylene chloride	ND	0.30	0.50	ug/l	1	01/09/22	U
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	01/09/22	U

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported:
01/12/2022 15:29

Sample Results

(Continued)

Sample: 20220106-C1-ZT06
2A08001-02 (Water)

Sampled: 01/06/22 15:30 by AECOM

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2			**Instr:** GCMS14				
Batch ID: W2A0422 **Preparation:** Method (P+T)			**Prepared:** 01/09/22 09:16			**Analyst:** cam	
o-Xylene	ND	0.20	0.50	ug/l	1	01/09/22	U
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	01/09/22	U
Styrene	ND	0.19	0.50	ug/l	1	01/09/22	U
Tetrachloroethene	ND	0.18	0.50	ug/l	1	01/09/22	U
THMs, Total	**1.8**		0.50	ug/l	1	01/09/22	
Toluene	ND	0.29	0.50	ug/l	1	01/09/22	U
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	01/09/22	U
Trichloroethene	ND	0.18	0.50	ug/l	1	01/09/22	U
Vinyl chloride	ND	0.18	0.50	ug/l	1	01/09/22	U
Surrogate(s)							
1,2-Dichlorobenzene-d4	*95%*	*Conc: 9.47*	*70-130*			*01/09/22*	
4-Bromofluorobenzene	*93%*	*Conc: 9.27*	*70-130*			*01/09/22*	

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Quality Control Results

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0524 - EPA 508.1											
Blank (W2A0524-BLK1)					**Prepared: 01/08/22 Analyzed: 01/10/22**						
Aroclor 1016	ND	0.016	0.10	ug/l							U
Aroclor 1221	ND	0.044	0.10	ug/l							U
Aroclor 1232	ND	0.010	0.10	ug/l							U
Aroclor 1242	ND	0.074	0.10	ug/l							U
Aroclor 1248	ND	0.094	0.10	ug/l							U
Aroclor 1254	ND	0.087	0.10	ug/l							U
Aroclor 1260	ND	0.038	0.10	ug/l							U
Chlordane (tech)	ND	0.067	0.10	ug/l							U
PCBs, Total	ND		0.50	ug/l							U
Surrogate(s)											
4,4-Dibromobiphenyl	*0.129*			*ug/l*	*0.100*		*129*	*70-130*			
LCS (W2A0524-BS1)					**Prepared: 01/08/22 Analyzed: 01/10/22**						
Aroclor 1016	0.479	0.016	0.10	ug/l	0.500		96	70-130			
Aroclor 1260	0.513	0.038	0.10	ug/l	0.500		103	70-130			
Surrogate(s)											
4,4-Dibromobiphenyl	*0.121*			*ug/l*	*0.100*		*121*	*70-130*			
LCS Dup (W2A0524-BSD1)					**Prepared: 01/08/22 Analyzed: 01/10/22**						
Aroclor 1016	0.409	0.016	0.10	ug/l	0.500		82	70-130	16	30	
Aroclor 1260	0.501	0.038	0.10	ug/l	0.500		100	70-130	2	30	
Surrogate(s)											
4,4-Dibromobiphenyl	*0.123*			*ug/l*	*0.100*		*123*	*70-130*			

Quality Control Results

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0446 - SM 5310B											
Blank (W2A0446-BLK1)					**Prepared: 01/07/22 Analyzed: 01/11/22**						
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							U
LCS (W2A0446-BS1)					**Prepared: 01/07/22 Analyzed: 01/11/22**						
Total Organic Carbon (TOC)	1.02	0.19	0.30	mg/l	1.00		102	85-115			
Matrix Spike (W2A0446-MS1)	**Source: 1F21006-02**				**Prepared: 01/07/22 Analyzed: 01/11/22**						
Total Organic Carbon (TOC)	8.67	0.19	0.30	mg/l	5.00	3.80	97	76-115			
Matrix Spike Dup (W2A0446-MSD1)	**Source: 1F21006-02**				**Prepared: 01/07/22 Analyzed: 01/11/22**						
Total Organic Carbon (TOC)	8.68	0.19	0.30	mg/l	5.00	3.80	98	76-115	0.1	20	

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0526 - EPA 200.8											
Blank (W2A0526-BLK1)					**Prepared: 01/08/22 Analyzed: 01/10/22**						
Antimony, Total	ND	0.089	0.50	ug/l							U
Arsenic, Total	ND	0.074	0.40	ug/l							U
Barium, Total	ND	0.14	1.0	ug/l							U
Beryllium, Total	ND	0.062	0.10	ug/l							U
Cadmium, Total	ND	0.042	0.20	ug/l							U
Chromium, Total	ND	0.089	0.20	ug/l							U
Copper, Total	ND	0.23	0.50	ug/l							U
Lead, Total	ND	0.083	0.20	ug/l							U
Selenium, Total	ND	0.067	0.40	ug/l							U
Thallium, Total	ND	0.021	0.20	ug/l							U
LCS (W2A0526-BS1)					**Prepared: 01/08/22 Analyzed: 01/10/22**						
Antimony, Total	48.0	0.089	0.50	ug/l	50.0		96	85-115			
Arsenic, Total	47.3	0.074	0.40	ug/l	50.0		95	85-115			
Barium, Total	49.9	0.14	1.0	ug/l	50.0		100	85-115			
Beryllium, Total	45.2	0.062	0.10	ug/l	50.0		90	85-115			
Cadmium, Total	45.9	0.042	0.20	ug/l	50.0		92	85-115			
Chromium, Total	48.6	0.089	0.20	ug/l	50.0		97	85-115			
Copper, Total	49.7	0.23	0.50	ug/l	50.0		99	85-115			
Lead, Total	48.5	0.083	0.20	ug/l	50.0		97	85-115			
Selenium, Total	47.6	0.067	0.40	ug/l	50.0		95	85-115			
Thallium, Total	48.7	0.021	0.20	ug/l	50.0		97	85-115			
Matrix Spike (W2A0526-MS1)	**Source: 2A03038-01**				**Prepared: 01/08/22 Analyzed: 01/10/22**						
Antimony, Total	51.7	0.089	0.50	ug/l	50.0	ND	103	70-130			
Arsenic, Total	48.4	0.074	0.40	ug/l	50.0	0.329	96	70-130			
Barium, Total	145	0.14	1.0	ug/l	50.0	84.7	120	70-130			
Beryllium, Total	47.5	0.062	0.10	ug/l	50.0	ND	95	70-130			
Cadmium, Total	47.1	0.042	0.20	ug/l	50.0	ND	94	70-130			
Chromium, Total	51.9	0.089	0.20	ug/l	50.0	1.55	101	70-130			
Copper, Total	399	0.23	0.50	ug/l	50.0	334	131	70-130			MS-02
Lead, Total	51.0	0.083	0.20	ug/l	50.0	0.298	101	70-130			
Selenium, Total	48.0	0.067	0.40	ug/l	50.0	0.566	95	70-130			
Thallium, Total	51.1	0.021	0.20	ug/l	50.0	ND	102	70-130			
Matrix Spike Dup (W2A0526-MSD1)	**Source: 2A03038-01**				**Prepared: 01/08/22 Analyzed: 01/10/22**						
Antimony, Total	54.4	0.089	0.50	ug/l	50.0	ND	109	70-130	5	30	
Arsenic, Total	47.2	0.074	0.40	ug/l	50.0	0.329	94	70-130	2	30	
Barium, Total	152	0.14	1.0	ug/l	50.0	84.7	134	70-130	5	30	MS-02
Beryllium, Total	48.6	0.062	0.10	ug/l	50.0	ND	97	70-130	2	30	
Cadmium, Total	45.2	0.042	0.20	ug/l	50.0	ND	90	70-130	4	30	
Chromium, Total	49.5	0.089	0.20	ug/l	50.0	1.55	96	70-130	5	30	

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0526 - EPA 200.8 (Continued)											
Matrix Spike Dup (W2A0526-MSD1)	**Source: 2A03038-01**				**Prepared: 01/08/22**	**Analyzed: 01/10/22**					
Copper, Total	412	0.23	0.50	ug/l	50.0	334	156	70-130	3	30	MS-02
Lead, Total	53.3	0.083	0.20	ug/l	50.0	0.298	106	70-130	4	30	
Selenium, Total	47.4	0.067	0.40	ug/l	50.0	0.566	94	70-130	1	30	
Thallium, Total	53.4	0.021	0.20	ug/l	50.0	ND	107	70-130	4	30	
Batch: W2A0552 - EPA 245.1											
Blank (W2A0552-BLK1)					**Prepared & Analyzed: 01/10/22**						
Mercury, Total	ND	0.017	0.050	ug/l							U
LCS (W2A0552-BS1)					**Prepared & Analyzed: 01/10/22**						
Mercury, Total	1.08	0.017	0.050	ug/l	1.00		108	85-115			
Matrix Spike (W2A0552-MS1)	**Source: 2A07044-01**				**Prepared & Analyzed: 01/10/22**						
Mercury, Total	1.07	0.017	0.050	ug/l	1.00	ND	107	70-130			
Matrix Spike Dup (W2A0552-MSD1)	**Source: 2A07044-01**				**Prepared & Analyzed: 01/10/22**						
Mercury, Total	1.08	0.017	0.050	ug/l	1.00	ND	108	70-130	0.5	20	

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0525 - EPA 525.2											
Blank (W2A0525-BLK1)					**Prepared: 01/08/22 Analyzed: 01/09/22**						
1-Methylnaphthalene	ND	0.0080	0.050	ug/l							U
2-Methylnaphthalene	ND	0.0090	0.050	ug/l							U
Alachlor	ND	0.011	0.10	ug/l							U
Atrazine	ND	0.0073	0.10	ug/l							U
Benzo (a) pyrene	ND	0.012	0.050	ug/l							U
Bis(2-ethylhexyl)adipate	0.0358	0.0096	5.0	ug/l							J
Bis(2-ethylhexyl)phthalate	ND	0.44	3.0	ug/l							U
Endrin	ND	0.0099	0.20	ug/l							U
gamma-BHC (Lindane)	ND	0.0063	0.10	ug/l							U
Heptachlor	ND	0.0096	0.10	ug/l							U
Heptachlor epoxide	ND	0.012	0.10	ug/l							U
Hexachlorobenzene	ND	0.098	0.10	ug/l							U
Hexachlorocyclopentadiene	ND	0.0059	1.0	ug/l							U
Methoxychlor	ND	0.0086	0.20	ug/l							U
Naphthalene	ND	0.010	0.050	ug/l							U
Pentachlorophenol	ND	0.024	1.0	ug/l							U
Simazine	ND	0.0073	0.10	ug/l							U
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*0.450*			*ug/l*	*0.500*		*90*	*70-130*			
Perylene-d12	*0.374*			*ug/l*	*0.500*		*75*	*70-130*			
Triphenyl phosphate	*0.432*			*ug/l*	*0.500*		*86*	*70-130*			
LCS (W2A0525-BS1)					**Prepared: 01/08/22 Analyzed: 01/09/22**						
1-Methylnaphthalene	0.229	0.0080	0.050	ug/l	0.250		92	70-130			
2-Methylnaphthalene	0.237	0.0090	0.050	ug/l	0.250		95	70-130			
Alachlor	0.522	0.011	0.10	ug/l	0.500		104	70-130			
Atrazine	0.231	0.0073	0.10	ug/l	0.250		92	70-130			
Benzo (a) pyrene	0.215	0.012	0.050	ug/l	0.250		86	60-130			
Bis(2-ethylhexyl)adipate	0.282	0.0096	5.0	ug/l	0.250		113	70-130			J
Bis(2-ethylhexyl)phthalate	0.358	0.0	3.0	ug/l	0.250		143	70-130			Q-08, J
Endrin	0.321	0.0099	0.20	ug/l	0.250		128	70-130			
gamma-BHC (Lindane)	0.271	0.0063	0.10	ug/l	0.250		108	70-130			
Heptachlor	0.203	0.0096	0.10	ug/l	0.250		81	70-130			
Heptachlor epoxide	0.267	0.012	0.10	ug/l	0.250		107	70-130			
Hexachlorobenzene	0.0389	0.0	0.10	ug/l	0.0500		78	70-130			J
Hexachlorocyclopentadiene	0.160	0.0059	1.0	ug/l	0.250		64	33-106			J
Methoxychlor	0.256	0.0086	0.20	ug/l	0.250		102	70-130			
Naphthalene	0.214	0.010	0.050	ug/l	0.250		86	70-130			
Pentachlorophenol	0.269	0.024	1.0	ug/l	0.250		108	40-120			J
Simazine	0.275	0.0073	0.10	ug/l	0.250		110	60-130			

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0525 - EPA 525.2 (Continued)											
LCS (W2A0525-BS1)					**Prepared: 01/08/22 Analyzed: 01/09/22**						
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*0.457*			*ug/l*	*0.500*		*91*	*70-130*			
Perylene-d12	*0.507*			*ug/l*	*0.500*		*101*	*70-130*			
Triphenyl phosphate	*0.627*			*ug/l*	*0.500*		*125*	*70-130*			
LCS Dup (W2A0525-BSD1)					**Prepared: 01/08/22 Analyzed: 01/09/22**						
1-Methylnaphthalene	0.217	0.0080	0.050	ug/l	0.250		87	70-130	6	30	
2-Methylnaphthalene	0.230	0.0090	0.050	ug/l	0.250		92	70-130	3	30	
Alachlor	0.486	0.011	0.10	ug/l	0.500		97	70-130	7	30	
Atrazine	0.225	0.0073	0.10	ug/l	0.250		90	70-130	2	30	
Benzo (a) pyrene	0.199	0.012	0.050	ug/l	0.250		79	60-130	8	30	
Bis(2-ethylhexyl)adipate	0.281	0.0096	5.0	ug/l	0.250		113	70-130	0.2	30	J
Bis(2-ethylhexyl)phthalate	0.372	0.0	3.0	ug/l	0.250		149	70-130	4	30	Q-08, J
Endrin	0.277	0.0099	0.20	ug/l	0.250		111	70-130	15	30	
gamma-BHC (Lindane)	0.246	0.0063	0.10	ug/l	0.250		98	70-130	10	30	
Heptachlor	0.192	0.0096	0.10	ug/l	0.250		77	70-130	5	30	
Heptachlor epoxide	0.260	0.012	0.10	ug/l	0.250		104	70-130	3	30	
Hexachlorobenzene	0.0350	0.0	0.10	ug/l	0.0500		70	70-130	11	30	J
Hexachlorocyclopentadiene	0.150	0.0059	1.0	ug/l	0.250		60	33-106	6	30	J
Methoxychlor	0.257	0.0086	0.20	ug/l	0.250		103	70-130	0.5	30	
Naphthalene	0.216	0.010	0.050	ug/l	0.250		86	70-130	0.6	30	
Pentachlorophenol	0.285	0.024	1.0	ug/l	0.250		114	50-120	6	30	J
Simazine	0.274	0.0073	0.10	ug/l	0.250		109	60-130	0.5	30	
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*0.506*			*ug/l*	*0.500*		*101*	*70-130*			
Perylene-d12	*0.547*			*ug/l*	*0.500*		*109*	*70-130*			
Triphenyl phosphate	*0.713*			*ug/l*	*0.500*		*143*	*70-130*			*S-11*

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Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0422 - EPA 524.2											
Blank (W2A0422-BLK1)					**Prepared: 01/06/22 Analyzed: 01/09/22**						
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l							U
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l							U
1,1-Dichloroethene	ND	0.16	0.50	ug/l							U
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l							U
1,2-Dichloroethane	ND	0.24	0.50	ug/l							U
1,2-Dichloropropane	ND	0.13	0.50	ug/l							U
Benzene	ND	0.15	0.50	ug/l							U
Carbon tetrachloride	ND	0.27	0.50	ug/l							U
Chlorobenzene	ND	0.15	0.50	ug/l							U
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l							U
Ethylbenzene	ND	0.21	0.50	ug/l							U
m,p-Xylene	ND	0.33	0.50	ug/l							U
Methylene chloride	ND	0.30	0.50	ug/l							U
o-Dichlorobenzene	ND	0.19	0.50	ug/l							U
o-Xylene	ND	0.20	0.50	ug/l							U
p-Dichlorobenzene	ND	0.18	0.50	ug/l							U
Styrene	ND	0.19	0.50	ug/l							U
Tetrachloroethene	ND	0.18	0.50	ug/l							U
THMs, Total	ND		0.50	ug/l							U
Toluene	ND	0.29	0.50	ug/l							U
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l							U
Trichloroethene	ND	0.18	0.50	ug/l							U
Vinyl chloride	ND	0.18	0.50	ug/l							U
Surrogate(s)											
1,2-Dichlorobenzene-d4	*9.35*			*ug/l*	*10.0*		*94*	*70-130*			
4-Bromofluorobenzene	*9.10*			*ug/l*	*10.0*		*91*	*70-130*			
LCS (W2A0422-BS1)					**Prepared: 01/06/22 Analyzed: 01/09/22**						
1,1,1-Trichloroethane	5.05	0.26	0.50	ug/l	5.00		101	70-130			
1,1,2-Trichloroethane	5.39	0.19	0.50	ug/l	5.00		108	70-130			
1,1-Dichloroethene	5.34	0.16	0.50	ug/l	5.00		107	70-130			
1,2,4-Trichlorobenzene	5.17	0.17	0.50	ug/l	5.00		103	70-130			
1,2-Dichloroethane	5.12	0.24	0.50	ug/l	5.00		102	70-130			
1,2-Dichloropropane	5.33	0.13	0.50	ug/l	5.00		107	70-130			
Benzene	5.33	0.15	0.50	ug/l	5.00		107	70-130			
Carbon tetrachloride	5.05	0.27	0.50	ug/l	5.00		101	70-130			
Chlorobenzene	5.23	0.15	0.50	ug/l	5.00		105	70-130			
cis-1,2-Dichloroethene	5.42	0.25	0.50	ug/l	5.00		108	70-130			
Ethylbenzene	5.82	0.21	0.50	ug/l	5.00		116	70-130			
m,p-Xylene	5.58	0.33	0.50	ug/l	5.00		112	70-130			

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported: 01/12/2022 15:29

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qualifier
Batch: W2A0422 - EPA 524.2 (Continued)											
LCS (W2A0422-BS1)					**Prepared: 01/06/22 Analyzed: 01/09/22**						
Methylene chloride	5.23	0.30	0.50	ug/l	5.00		105	70-130			
o-Dichlorobenzene	5.39	0.19	0.50	ug/l	5.00		108	70-130			
o-Xylene	5.74	0.20	0.50	ug/l	5.00		115	70-130			
p-Dichlorobenzene	5.41	0.18	0.50	ug/l	5.00		108	70-130			
Styrene	5.81	0.19	0.50	ug/l	5.00		116	70-130			
Tetrachloroethene	5.08	0.18	0.50	ug/l	5.00		102	70-130			
Toluene	5.40	0.29	0.50	ug/l	5.00		108	70-130			
trans-1,2-Dichloroethene	5.38	0.26	0.50	ug/l	5.00		108	70-130			
Trichloroethene	5.84	0.18	0.50	ug/l	5.00		117	70-130			
Vinyl chloride	4.94	0.18	0.50	ug/l	5.00		99	70-130			
Surrogate(s)											
1,2-Dichlorobenzene-d4	*11.8*			*ug/l*	*10.0*		*118*	*70-130*			
4-Bromofluorobenzene	*11.8*			*ug/l*	*10.0*		*118*	*70-130*			
LCS Dup (W2A0422-BSD1)					**Prepared: 01/06/22 Analyzed: 01/09/22**						
1,1,1-Trichloroethane	4.76	0.26	0.50	ug/l	5.00		95	70-130	6	30	
1,1,2-Trichloroethane	4.98	0.19	0.50	ug/l	5.00		100	70-130	8	30	
1,1-Dichloroethene	5.11	0.16	0.50	ug/l	5.00		102	70-130	4	30	
1,2,4-Trichlorobenzene	4.88	0.17	0.50	ug/l	5.00		98	70-130	6	30	
1,2-Dichloroethane	4.79	0.24	0.50	ug/l	5.00		96	70-130	7	30	
1,2-Dichloropropane	4.89	0.13	0.50	ug/l	5.00		98	70-130	9	30	
Benzene	4.99	0.15	0.50	ug/l	5.00		100	70-130	7	30	
Carbon tetrachloride	4.68	0.27	0.50	ug/l	5.00		94	70-130	8	30	
Chlorobenzene	4.86	0.15	0.50	ug/l	5.00		97	70-130	7	30	
cis-1,2-Dichloroethene	5.01	0.25	0.50	ug/l	5.00		100	70-130	8	30	
Ethylbenzene	5.43	0.21	0.50	ug/l	5.00		109	70-130	7	30	
m,p-Xylene	5.13	0.33	0.50	ug/l	5.00		103	70-130	8	30	
Methylene chloride	4.97	0.30	0.50	ug/l	5.00		99	70-130	5	30	
o-Dichlorobenzene	4.93	0.19	0.50	ug/l	5.00		99	70-130	9	30	
o-Xylene	5.19	0.20	0.50	ug/l	5.00		104	70-130	10	30	
p-Dichlorobenzene	4.91	0.18	0.50	ug/l	5.00		98	70-130	10	30	
Styrene	5.27	0.19	0.50	ug/l	5.00		105	70-130	10	30	
Tetrachloroethene	4.75	0.18	0.50	ug/l	5.00		95	70-130	7	30	
Toluene	5.02	0.29	0.50	ug/l	5.00		100	70-130	7	30	
trans-1,2-Dichloroethene	5.13	0.26	0.50	ug/l	5.00		103	70-130	5	30	
Trichloroethene	4.96	0.18	0.50	ug/l	5.00		99	70-130	16	30	
Vinyl chloride	5.10	0.18	0.50	ug/l	5.00		102	70-130	3	30	
Surrogate(s)											
1,2-Dichlorobenzene-d4	*11.7*			*ug/l*	*10.0*		*117*	*70-130*			
4-Bromofluorobenzene	*11.7*			*ug/l*	*10.0*		*117*	*70-130*			

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Project Number: 60674414, COC # 01072022 DW-02

Project Manager: Margie Pascua

Reported:
01/12/2022 15:29

Notes and Definitions

Item	Definition
J	Estimated conc. detected <MRL and >MDL.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
S-03	High surrogate recovery for this sample is possibly due to a sample matrix effect. The data was accepted since all target analytes were not detected.
S-11	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
U	Analyte included in the analysis, but not detected
%REC	Percent Recovery
Dil	Dilution
MDL	Method Detection Limit
MRL	The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence. The MRL is also known as Limit of Quantitation (LOQ)
ND	NOT DETECTED at or above the Method Reporting Limit (MRL). If Method Detection Limit (MDL) is reported, then ND means not detected at or above the MDL.
RPD	Relative Percent Difference
Source	Sample that was matrix spiked or duplicated.

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

All results are expressed on wet weight basis unless otherwise specified.

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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Memorandum

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To	Karen Mixon, Data Validation Manager	Info	Complete
Subject	Summary Data Quality Review Joint Base Pearl Harbor-Hickam, Hawaii Red Hill Bulk Fuel Storage Facility		
From	Jennifer B. Garner, Chemist		
Date	January 13, 2022		

The summary data quality review of 4 water samples and 1 trip blank collected on January 5 and January 6, 2022, has been completed. The samples were collected by AECOM personnel and were analyzed at Eurofins TestAmerica, in Seattle, Washington, for volatile organic compounds (VOCs) by EPA Method 8260D, semivolatile organic compounds (SVOCs) by EPA Method 8270E, and/or total petroleum hydrocarbons (TPHs) by EPA Method 8260/CALUFT (gasoline-range, C6-C12 hydrocarbons) and EPA Method 8015D (diesel range, C9-C25 hydrocarbons, and motor oil range, C24-C40 hydrocarbons). The analyses were performed in general accordance with the methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)*. The laboratory provided summary reports containing sample results and associated quality assurance (QA) and quality control (QC) data. The following samples are associated with Eurofins TestAmerica-Seattle laboratory groups 580-109011-1 and 580-109054-1:

Sample ID	Laboratory ID	Requested Analyses
20220105-D3-ZT01	580-109011-1	VOCs, SVOCs, TPH
20220105-F1-ZT02	580-109011-2	TPH
20220105-C1-ZT03	580-109054-1	VOCs, SVOCs, TPH
20220105-D3-ZT02 (trip blank)	580-109054-2	TPH (gasoline range)
20220105-D3-ZT03	580-109054-3	TPH

Upon receipt by Eurofins TestAmerica-Seattle, the sample jar information was compared to the associated chain-of-custody (COC) and the cooler temperatures were recorded. No discrepancies relating to sample identification were noted by the laboratory. Two coolers submitted in association with laboratory group 580-109054-1 were received at temperatures below the EPA-recommended limits of greater than 0°C and less than or equal to 6°C at -0.7°C and -0.2°C. No sample containers were received frozen; therefore, no data were qualified based on the cooler temperatures.

Data validation is based on method performance criteria and QC criteria documented in the laboratory reports. Holding times, field/method/trip blanks, surrogate recoveries, laboratory control sample results, and reporting limits were reviewed to assess compliance with applicable methods and laboratory control criteria. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA document *National Functional Guidelines for Organic Superfund Methods Data Review,* November 2020. The following results required qualification:

- The percent recovery for the VOC surrogate toluene-d8 was below the laboratory control limits of 89-112% in 20220105-D3-ZT01 (6%). The toluene-d8 recovery was below 10% in this sample; therefore, all VOC results were rejected.

- The percent recoveries for the following SVOC surrogates were outside the laboratory control limits:

Sample ID	2-Fluorophenol (19-119%)	Phenol-d5 (10-120%)	2,4,6-Tribromophenol (43-140%)
20220105-D3-ZT01	1%	0.5%	151%
20220105-C1-ZT03	6%	0.3%	acceptable

  Two or more acid-fraction SVOC surrogate recoveries were below 10% in each of the samples noted above; therefore, the results for all acid-fraction SVOCs reported as not detected in 20220105-D3-ZT01 and 20220105-C1-ZT03 were rejected. The results for bis(2-chloroethoxy)ether and 3&4-methylphenol in 20220105-C1-ZT03 were qualified as estimated and flagged 'J-."

- The laboratory noted that the minimum response factors (RFs) for bis-(2-chloroethyl)ether and n-nitroso-di-n-propylamine were outside the method control criteria in the continuing calibration verification (CCV) associated with analysis batch 580-377665. The results for bis-(2-chloroethyl)ether and n-nitroso-di-n-propylamine in 20220105-D3-ZT01 were qualified as estimated and flagged 'J.'

- The laboratory noted that the minimum RF for n-nitroso-di-n-propylamine was outside the method control criteria in the continuing calibration verification (CCV) associated with analysis batch 580-377805. The result for n-nitroso-di-n-propylamine in 20220105-C1-ZT03 was qualified as estimated and flagged 'J.'

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Memorandum

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To	Karen Mixon, Data Validation Manager	Info	Complete
Subject	Summary Data Quality Review Joint Base Pearl Harbor-Hickam, Hawaii Red Hill Bulk Fuel Storage Facility		
From	Jennifer B. Garner, Chemist		
Date	January 14, 2022		

The summary data quality review of 2 water samples and 2 trip blanks collected on January 6, 2022, has been completed. The samples were collected by AECOM personnel and were analyzed at Eurofins TestAmerica, in Seattle, Washington, for volatile organic compounds (VOCs) by EPA Method 8260D, semivolatile organic compounds (SVOCs) by EPA Method 8270E, and/or total petroleum hydrocarbons (TPHs) by EPA Method 8260/CALUFT (gasoline-range, C6-C12 hydrocarbons) and EPA Method 8015D (diesel range, C9-C25 hydrocarbons, and motor oil range, C24-C40 hydrocarbons). The analyses were performed in general accordance with the methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846).* The laboratory provided summary reports containing sample results and associated quality assurance (QA) and quality control (QC) data. The following samples are associated with Eurofins TestAmerica-Seattle laboratory group 580-109090-1:

Sample ID	Laboratory ID	Requested Analyses
20220106-C1-ZT05 (trip blank)	580-109090-1	TPH (gasoline range)
20220106-C1-ZT06	580-109090-2	TPH
20220106-F2-ZT07 (trip blank)	580-109090-3	VOCs, TPH (gasoline range)
20220106-F2-ZT08	580-109090-4	VOCs, SVOCs, TPH

Upon receipt by Eurofins TestAmerica-Seattle, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperatures were recorded. No discrepancies relating to sample identification were noted by the laboratory. Two coolers submitted in association with laboratory group 580-109090-1 were received at temperatures below the EPA-recommended limits of greater than 0°C and less than or equal to 6°C at -0.6°C and -0.3°C. No sample containers were received frozen; therefore, no data were qualified based on the cooler temperatures.

Data validation is based on method performance criteria and QC criteria documented in the laboratory reports. Holding times, field/method/trip blanks, surrogate recoveries, laboratory control sample results, and reporting limits were reviewed to assess compliance with applicable methods and laboratory control criteria. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA document *National Functional Guidelines for Organic Superfund Methods Data Review,* November 2020. The following results required qualification:

- The percent recoveries for the VOC surrogate 4-bromofluorobenzene were below the laboratory control limits of 85-114% in 20220106-F2-ZT08 (79%) and the reanalysis of 20220106-F2-ZT07 (80%). The results for all VOCs in 20220106-F2-ZT08 and the reanalysis of 20220106-F2-ZT07 were qualified as estimated and flagged 'J' or 'UJ.'

- The percent recoveries for the SVOC surrogates 2-fluorophenol (11%) and phenol-d5 (0.2%) were below the laboratory control limits of 19-119% and 10-120%, respectively, in 20220106-F2-ZT08. The results for all

acid fraction SVOCs in this sample were rejected and flagged 'R.' The results for all acid fraction SVOCs reported as detected in 20220106-F2-ZT08 were qualified as estimated with a low bias and flagged 'J-.'

- The laboratory noted that the minimum response factor (RF) for n-nitroso-di-n-propylamine was outside the method control criteria in the continuing calibration verification (CCV) associated with analysis batch 580-377876. The result for n-nitroso-di-n-propylamine in 20220106-F2-ZT08 was qualified as estimated and flagged 'UJ.'

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To	Karen Mixon, Data Validation Manager	Info	Complete
Subject	Summary Data Quality Review Joint Base Pearl Harbor-Hickam, Hawaii Red Hill Bulk Fuel Storage Facility		
From	Jennifer B. Garner, Chemist		
Date	January 13, 2022		

The summary data quality review of 2 water samples collected on January 6, 2022, has been completed. The samples were collected by AECOM personnel and were analyzed at Weck Laboratories, Inc. (Weck), in City of Industries, California, for volatile organic compounds (VOCs) by EPA Drinking Water Method 524.2, semivolatile organic compounds (SVOCs) by EPA Drinking Water Method 525.2, polychlorinated biphenyls (PCBs) by EPA Drinking Water Method 508.1, total metals (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, selenium, and thallium) by EPA Method 200.8, total mercury by EPA Drinking Water method 245.1, and/or total organic carbon by Standard Method (SM) 5310B as indicated in the cross-reference below. The analyses were performed in general accordance with the methods specified in EPA drinking water program and Standard Methods for the Examination of Water and Wastewater. The laboratory provided a summary report containing sample results and associated quality assurance (QA) and quality control (QC) data. The following samples are associated with Weck laboratory group 2A08001:

Sample ID	Laboratory ID	Requested Analyses
20220106-C1-ZT04	2A08001-01	VOCs
20220106-C1-ZT06	2A08001-02	VOCs, SVOCs, PCBs, Metals, Mercury, TOC

Upon receipt by Weck, the sample jar information was compared to the associated chain-of-custody (COC) and the cooler temperatures were recorded. No discrepancies relating to sample identification were noted by the laboratory and the coolers were within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C.

Data validation is based on method performance criteria and QC criteria documented in the laboratory reports. Holding times, field/method/trip blanks, surrogate recoveries, laboratory control sample results, and reporting limits were reviewed to assess compliance with applicable methods and laboratory control criteria. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA document *National Functional Guidelines for Organic Superfund Methods Data Review,* November 2020. The following results required qualification:

- bis(2-Ethylhexyl)adipate (0.0358 ug/L) was detected in the SVOC method blank at a concentration between the method detection limit (MDL) and the laboratory reporting limit. The result for bis(2-ethylhexyl)adipate in 20220106-C1-ZT06 was reported at a concentration between the MDL and the laboratory reporting limit; therefore, the result for bis(2-ethylhexyl)adipate was qualified as not detected and flagged 'U' at the reporting limit.