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ANALYTICAL REPORT

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Laboratory Job ID: 580-108868-1
Client Project/Site: CV22F0106
Revision: 4

For:
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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Job ID: 580-108868-1

Laboratory: Eurofins Seattle

Narrative

Report was revised 1/15/2022 to (1) report all 8260 analytes from both the initial run and the re-analysis for sample A2-DWS-AS-3-1-123121N, (2) remove an erroneous Q flag from an 8260 method blank, (3) correct the case narrative.

Report was revised 1/16/2022 to report all analytes from method 8260 from one run.

Report was revised a second time 1/16/2022 to correct the narrative related to changes made in the 8260 reporting.

Report was revised 1/17/2022 to make an additional narrative correction.

CASE NARRATIVE
Client: AECOM
Project: CV18F0126
Report Number: 580-108868-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

Three samples were received on 1/2/2022 11:05 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

GASOLINE RANGE ORGANICS (GRO)

Samples D2-DWS-TB02-429-123121-N (580-108868-1), D2-DWS-D2-429-123121-N (580-108868-2) and A2-DWS-A2-3-1-123121-N (580-108868-3) were analyzed for gasoline range organics (GRO) in accordance with 8260B CALUFT. The samples were analyzed on 01/03/2022 and 01/04/2022.

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

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples D2-DWS-TB02-429-123121-N (580-108868-1), D2-DWS-D2-429-123121-N (580-108868-2) and A2-DWS-A2-3-1-123121-N

Job ID: 580-108868-1 (Continued)

Laboratory: Eurofins Seattle (Continued)

(580-108868-3) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260D_DOD5. The samples were analyzed on 01/03/2022 and 01/04/2022.

The continuing calibration verification (CCV) associated with batch 580-377368 was outside of control limits for 1,1-Dichloroethene (low), MEK (low), 2-Hexanone (low), MIBK (low), Acetone (low), Carbon Disulfide (low) and Toluene (high). The associated sample is impacted: D2-DWS-TB02-429-123121-N (580-108868-1) and (CCVIS 580-377368/3).

Bromomethane and Chlorobenzene failed the recovery criteria high for LCS 580-377368/5. Chlorobenzene failed the recovery criteria limit high for the LCSD 580-377368/6. Methyl ethyl ketone (MEK) exceeded the RPD limit. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Several analytes failed the recovery criteria high for LCS 580-377410/4. Acetone failed the recovery criteria high for LCSD 580-377410/5. Several analytes exceeded the RPD limit. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

The continuing calibration verification (CCV) associated with batch 580-377410 recovered above the upper control limit for 1,1,1-Trichloroethane, Methyl ethyl ketone (MEK), 2-Hexanone, 4-Methyl-2-pentanone (MIBK), Acetone, Carbon disulfide, Chlorodibromomethane, Ethylbenzene, m-Xylene & p-Xylene, o-Xylene, Xylenes, Total, Styrene and Tetrachloroethene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: D2-DWS-D2-429-123121-N (580-108868-2), A2-DWS-A2-3-1-123121-N (580-108868-3) and (CCVIS 580-377409/3).

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples D2-DWS-D2-429-123121-N (580-108868-2) and A2-DWS-A2-3-1-123121-N (580-108868-3) were analyzed for semivolatile organic compounds (GC-MS) in accordance with 8270E. The samples were prepared on 01/03/2022 and analyzed on 01/04/2022.

The following analytes have been identified in the reference method and/or via historical data to be poor and/or erratic performers: Hexachlorocyclopentadiene. These analytes may have a %D >60%.

Surrogate recovery for the following samples was outside control limits: D2-DWS-D2-429-123121-N (580-108868-2) and A2-DWS-A2-3-1-123121-N (580-108868-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The continuing calibration verification (CCV) associated with batch 580-377363 recovered above the upper control limit for 2,2'-oxybis[1-chloropropane], Diethyl phthalate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVIS 580-377363/3).

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-377363 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.

4-Nitrophenol and Pentachlorophenol failed the recovery criteria low for LCS 580-377294/2-A. 4-Nitrophenol and Pentachlorophenol failed the recovery criteria low for LCSD 580-377294/3-A. 4-Nitrophenol and Pentachlorophenol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-377294 and analytical batch 580-377363 recovered outside control limits for the following analytes: 4-Nitrophenol, 4-Nitroaniline and Hexachloroethane.

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

DIESEL RANGE ORGANICS

Samples D2-DWS-D2-429-123121-N (580-108868-2) and A2-DWS-A2-3-1-123121-N (580-108868-3) were analyzed for Diesel Range Organics in accordance with 8015D DRO. The samples were prepared and analyzed on 01/03/2022.

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

Definitions/Glossary

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108868-1

Qualifiers

GC/MS VOA

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

GC/MS VOA TICs

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

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.
Q	One or more quality control criteria failed.
S1-	Surrogate recovery exceeds control limits, low biased.
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
N	This flag indicates the presumptive evidence of a compound.
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC Semi VOA

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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: AECOM
Project/Site: CV22F0106

Job ID: 580-108868-1

Client Sample ID: D2-DWS-TB02-429-123121-N

Lab Sample ID: 580-108868-1

Date Collected: 12/31/21 11:53

Matrix: Water

Date Received: 01/02/22 11:05

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)	0.031	U	0.10	0.031	mg/L			01/03/22 23:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*87*		*69 - 133*		*01/03/22 23:02*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/03/22 23:02	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/03/22 23:02	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/03/22 23:02	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/03/22 23:02	1
1,1-Dichloroethene	0.28	U Q	1.0	0.28	ug/L			01/03/22 23:02	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/03/22 23:02	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/03/22 23:02	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/03/22 23:02	1
2-Hexanone	4.0	U Q	15	4.0	ug/L			01/03/22 23:02	1
4-Methyl-2-pentanone (MIBK)	2.5	U Q	5.0	2.5	ug/L			01/03/22 23:02	1
Acetone	3.2	U Q	15	3.2	ug/L			01/03/22 23:02	1
Benzene	0.24	U	1.0	0.24	ug/L			01/03/22 23:02	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			01/03/22 23:02	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/03/22 23:02	1
Bromomethane	0.21	U *+	1.0	0.21	ug/L			01/03/22 23:02	1
Carbon disulfide	0.53	U Q	1.0	0.53	ug/L			01/03/22 23:02	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/03/22 23:02	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/03/22 23:02	1
Chlorobenzene	0.44	U *+	1.0	0.44	ug/L			01/03/22 23:02	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/03/22 23:02	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/03/22 23:02	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/03/22 23:02	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			01/03/22 23:02	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/03/22 23:02	1
Dibromochloropropane	0.57	U	3.0	0.57	ug/L			01/03/22 23:02	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/03/22 23:02	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/03/22 23:02	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/03/22 23:02	1
Methyl ethyl ketone (MEK)	4.7	U Q *1	15	4.7	ug/L			01/03/22 23:02	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/03/22 23:02	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/03/22 23:02	1
Styrene	0.53	U	1.0	0.53	ug/L			01/03/22 23:02	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/03/22 23:02	1
Toluene	0.39	U Q	1.0	0.39	ug/L			01/03/22 23:02	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/03/22 23:02	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/03/22 23:02	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/03/22 23:02	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/03/22 23:02	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*01/03/22 23:02*	*1*

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108868-1

Client Sample ID: D2-DWS-TB02-429-123121-N
Date Collected: 12/31/21 11:53
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108868-1
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		81 - 118		01/03/22 23:02	1
4-Bromofluorobenzene (Surr)	90		85 - 114		01/03/22 23:02	1
Dibromofluoromethane (Surr)	106		80 - 119		01/03/22 23:02	1
Toluene-d8 (Surr)	108		89 - 112		01/03/22 23:02	1

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108868-1

Client Sample ID: D2-DWS-D2-429-123121-N

Date Collected: 12/31/21 11:58
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108868-2

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)	0.031	U	0.10	0.031	mg/L			01/03/22 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*69 - 133*		*01/03/22 23:26*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/04/22 14:51	1
1,1,2,2-Tetrachloroethane	0.52	U *+	1.0	0.52	ug/L			01/04/22 14:51	1
1,1,2-Trichloroethane	0.24	U *+ *1	1.0	0.24	ug/L			01/04/22 14:51	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/04/22 14:51	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/04/22 14:51	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/04/22 14:51	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/04/22 14:51	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/04/22 14:51	1
2-Hexanone	4.0	U *+	15	4.0	ug/L			01/04/22 14:51	1
4-Methyl-2-pentanone (MIBK)	2.5	U *+ *1	5.0	2.5	ug/L			01/04/22 14:51	1
Acetone	3.2	U *+ *1	15	3.2	ug/L			01/04/22 14:51	1
Benzene	0.24	U	1.0	0.24	ug/L			01/04/22 14:51	1
Bromodichloromethane	0.29	U *+	1.0	0.29	ug/L			01/04/22 14:51	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/04/22 14:51	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/04/22 14:51	1
Carbon disulfide	0.53	U *1	1.0	0.53	ug/L			01/04/22 14:51	1
Carbon tetrachloride	0.30	U *+ *1	1.0	0.30	ug/L			01/04/22 14:51	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/04/22 14:51	1
Chlorobenzene	0.44	U *+	1.0	0.44	ug/L			01/04/22 14:51	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/04/22 14:51	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/04/22 14:51	1
cis-1,3-Dichloropropene	0.20	U *+ *1	1.0	0.20	ug/L			01/04/22 14:51	1
Dibromochloromethane	0.43	U *+	1.0	0.43	ug/L			01/04/22 14:51	1
cis-1,2-Dichloroethene	0.35	U *+	1.0	0.35	ug/L			01/04/22 14:51	1
Dibromochloropropane	0.57	U *+ *1	3.0	0.57	ug/L			01/04/22 14:51	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/04/22 14:51	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/04/22 14:51	1
Ethylbenzene	0.50	U *+	1.0	0.50	ug/L			01/04/22 14:51	1
Methyl ethyl ketone (MEK)	4.7	U *+	15	4.7	ug/L			01/04/22 14:51	1
m-Xylene & p-Xylene	0.53	U *+	2.0	0.53	ug/L			01/04/22 14:51	1
o-Xylene	0.39	U *+	1.0	0.39	ug/L			01/04/22 14:51	1
Styrene	0.53	U *+	1.0	0.53	ug/L			01/04/22 14:51	1
Tetrachloroethene	0.41	U *1	1.0	0.41	ug/L			01/04/22 14:51	1
Toluene	0.39	U *+ *1	1.0	0.39	ug/L			01/04/22 14:51	1
trans-1,3-Dichloropropene	0.41	U *+ *1	1.0	0.41	ug/L			01/04/22 14:51	1
Trichloroethene	0.26	U *+ *1	1.0	0.26	ug/L			01/04/22 14:51	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/04/22 14:51	1
Xylenes, Total	0.53	U *+	2.0	0.53	ug/L			01/04/22 14:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1.1*	*T J*	*ug/L*		*5.00*			*01/04/22 14:51*	*1*

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108868-1

Client Sample ID: D2-DWS-D2-429-123121-N
Date Collected: 12/31/21 11:58
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108868-2
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*81 - 118*		*01/04/22 14:51*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*01/04/22 14:51*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*01/04/22 14:51*	*1*
Toluene-d8 (Surr)	*95*		*89 - 112*		*01/04/22 14:51*	*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		01/03/22 11:47	01/04/22 12:58	1
Acenaphthylene	0.061	U	1.0	0.061	ug/L		01/03/22 11:47	01/04/22 12:58	1
Anthracene	0.051	U	1.0	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
Benzo[a]anthracene	0.051	U	0.26	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
Benzo[a]pyrene	0.041	U	0.26	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
Benzo[b]fluoranthene	0.041	U	0.26	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
Benzo[g,h,i]perylene	0.041	U	0.26	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
Benzo[k]fluoranthene	0.051	U	0.26	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
Bis(2-chloroethoxy)methane	0.051	U	0.61	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
Bis(2-chloroethyl)ether	0.031	U	0.10	0.031	ug/L		01/03/22 11:47	01/04/22 12:58	1
Bis(2-ethylhexyl) phthalate	0.76	U	3.1	0.76	ug/L		01/03/22 11:47	01/04/22 12:58	1
4-Bromophenyl phenyl ether	0.061	U	0.61	0.061	ug/L		01/03/22 11:47	01/04/22 12:58	1
Butyl benzyl phthalate	0.28	U	4.1	0.28	ug/L		01/03/22 11:47	01/04/22 12:58	1
Carbazole	0.10	U	0.61	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1
4-Chloroaniline	0.60	U	2.0	0.60	ug/L		01/03/22 11:47	01/04/22 12:58	1
4-Chloro-3-methylphenol	0.13	U	0.61	0.13	ug/L		01/03/22 11:47	01/04/22 12:58	1
2-Chloronaphthalene	0.072	U	1.0	0.072	ug/L		01/03/22 11:47	01/04/22 12:58	1
2-Chlorophenol	0.051	U	1.0	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
4-Chlorophenyl phenyl ether	0.051	U	0.61	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
Chrysene	0.041	U	0.26	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
Dibenz(a,h)anthracene	0.072	U	0.26	0.072	ug/L		01/03/22 11:47	01/04/22 12:58	1
Dibenzofuran	0.10	U	0.41	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1
Dibutylphthalate	0.19	U	3.1	0.19	ug/L		01/03/22 11:47	01/04/22 12:58	1
1,2-Dichlorobenzene	0.051	U	0.41	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
1,3-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
1,4-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
3,3'-Dichlorobenzidine	0.27	U	1.0	0.27	ug/L		01/03/22 11:47	01/04/22 12:58	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		01/03/22 11:47	01/04/22 12:58	1
Diethyl phthalate	0.15	U Q	1.0	0.15	ug/L		01/03/22 11:47	01/04/22 12:58	1
2,4-Dimethylphenol	0.16	U	4.1	0.16	ug/L		01/03/22 11:47	01/04/22 12:58	1
Dimethyl phthalate	0.061	U	0.61	0.061	ug/L		01/03/22 11:47	01/04/22 12:58	1
4,6-Dinitro-2-methylphenol	0.56	U	2.0	0.56	ug/L		01/03/22 11:47	01/04/22 12:58	1
2,4-Dinitrophenol	1.6	U	5.1	1.6	ug/L		01/03/22 11:47	01/04/22 12:58	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1
2,6-Dinitrotoluene	0.10	U	0.41	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		01/03/22 11:47	01/04/22 12:58	1
Fluoranthene	0.061	U	0.26	0.061	ug/L		01/03/22 11:47	01/04/22 12:58	1
Fluorene	0.051	U	0.26	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
Hexachlorobenzene	0.041	U	0.61	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
Hexachlorobutadiene	0.061	U	1.0	0.061	ug/L		01/03/22 11:47	01/04/22 12:58	1
Hexachlorocyclopentadiene	0.14	U Q	1.0	0.14	ug/L		01/03/22 11:47	01/04/22 12:58	1
Hexachloroethane	0.051	U *1	1.0	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.41	0.13	ug/L		01/03/22 11:47	01/04/22 12:58	1

Client Sample ID: D2-DWS-D2-429-123121-N
Date Collected: 12/31/21 11:58
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108868-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	0.10	U	0.41	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1
1-Methylnaphthalene	0.051	U	1.0	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
2-Methylnaphthalene	0.061	U	0.41	0.061	ug/L		01/03/22 11:47	01/04/22 12:58	1
2-Methylphenol	0.051	U	0.61	0.051	ug/L		01/03/22 11:47	01/04/22 12:58	1
3 & 4 Methylphenol	**0.10**	**J**	0.61	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1
Naphthalene	0.16	U	0.41	0.16	ug/L		01/03/22 11:47	01/04/22 12:58	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1
3-Nitroaniline	0.16	U	3.1	0.16	ug/L		01/03/22 11:47	01/04/22 12:58	1
4-Nitroaniline	0.21	U *1	2.0	0.21	ug/L		01/03/22 11:47	01/04/22 12:58	1
Nitrobenzene	0.041	U	1.0	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
4-Nitrophenol	1.7	U *- *1	10	1.7	ug/L		01/03/22 11:47	01/04/22 12:58	1
N-Nitrosodi-n-propylamine	0.061	U	0.41	0.061	ug/L		01/03/22 11:47	01/04/22 12:58	1
N-Nitrosodiphenylamine	0.072	U	1.0	0.072	ug/L		01/03/22 11:47	01/04/22 12:58	1
Pentachlorophenol	0.52	U *-	10	0.52	ug/L		01/03/22 11:47	01/04/22 12:58	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		01/03/22 11:47	01/04/22 12:58	1
Phenol	0.37	U	1.0	0.37	ug/L		01/03/22 11:47	01/04/22 12:58	1
Pyrene	0.041	U	1.0	0.041	ug/L		01/03/22 11:47	01/04/22 12:58	1
1,2,4-Trichlorobenzene	0.092	U	0.41	0.092	ug/L		01/03/22 11:47	01/04/22 12:58	1
2,4,5-Trichlorophenol	0.10	U	0.41	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1
2,4,6-Trichlorophenol	0.10	U	0.61	0.10	ug/L		01/03/22 11:47	01/04/22 12:58	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.4*	*T J*	*ug/L*		*2.46*		*01/03/22 11:47*	*01/04/22 12:58*	*1*
2-Butene, 1-bromo-3-methyl-	*5.5*	*T J N*	*ug/L*		*2.54*	*870-63-3*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
Unknown	*76*	*T J*	*ug/L*		*2.87*		*01/03/22 11:47*	*01/04/22 12:58*	*1*
Butane, 2,3-dichloro-2-methyl-	*25*	*T J N*	*ug/L*		*3.00*	*507-45-9*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
Unknown	*4.3*	*T J*	*ug/L*		*3.17*		*01/03/22 11:47*	*01/04/22 12:58*	*1*
Unknown	*15*	*T J*	*ug/L*		*3.68*		*01/03/22 11:47*	*01/04/22 12:58*	*1*
Bromotrimethylsilane	*2.4*	*T J N*	*ug/L*		*3.80*	*2857-97-8*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
Aniline	*2.6*	*J*	*ug/L*		*4.26*	*62-53-3*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
Unknown	*1.6*	*T J*	*ug/L*		*4.38*		*01/03/22 11:47*	*01/04/22 12:58*	*1*
Unknown	*1.2*	*T J*	*ug/L*		*4.54*		*01/03/22 11:47*	*01/04/22 12:58*	*1*
Unknown	*2.6*	*T J*	*ug/L*		*4.79*		*01/03/22 11:47*	*01/04/22 12:58*	*1*
Naphtho[2,3-b]thiophene, 4,9-dimethyl-	*1.2*	*T J N*	*ug/L*		*9.14*	*16587-34-1*	*01/03/22 11:47*	*01/04/22 12:58*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*70*		*44 - 119*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
2-Fluorophenol (Surr)	*1*	*S1-*	*19 - 119*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
Nitrobenzene-d5 (Surr)	*76*		*44 - 120*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
Phenol-d5 (Surr)	*0.06*	*S1-*	*10 - 120*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
Terphenyl-d14	*102*		*50 - 134*	*01/03/22 11:47*	*01/04/22 12:58*	*1*
2,4,6-Tribromophenol	*44*		*43 - 140*	*01/03/22 11:47*	*01/04/22 12:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	**0.044**	**J**	0.24	0.044	mg/L		01/03/22 11:09	01/03/22 20:51	1
C24-C40	0.088	U	0.24	0.088	mg/L		01/03/22 11:09	01/03/22 20:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*69*		*56 - 125*	*01/03/22 11:09*	*01/03/22 20:51*	*1*

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108868-1

Client Sample ID: A2-DWS-A2-3-1-123121-N

Date Collected: 12/31/21 12:45
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108868-3

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)	0.031	U	0.10	0.031	mg/L			01/04/22 12:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*69 - 133*		*01/04/22 12:03*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/04/22 15:16	1
1,1,2,2-Tetrachloroethane	0.52	U *+	1.0	0.52	ug/L			01/04/22 15:16	1
1,1,2-Trichloroethane	0.24	U *+ *1	1.0	0.24	ug/L			01/04/22 15:16	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/04/22 15:16	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/04/22 15:16	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/04/22 15:16	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/04/22 15:16	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/04/22 15:16	1
2-Hexanone	4.0	U *+	15	4.0	ug/L			01/04/22 15:16	1
4-Methyl-2-pentanone (MIBK)	2.5	U *+ *1	5.0	2.5	ug/L			01/04/22 15:16	1
Acetone	3.2	U *+ *1	15	3.2	ug/L			01/04/22 15:16	1
Benzene	0.24	U	1.0	0.24	ug/L			01/04/22 15:16	1
Bromodichloromethane	0.29	U *+	1.0	0.29	ug/L			01/04/22 15:16	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/04/22 15:16	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/04/22 15:16	1
Carbon disulfide	0.53	U *1	1.0	0.53	ug/L			01/04/22 15:16	1
Carbon tetrachloride	0.30	U *+ *1	1.0	0.30	ug/L			01/04/22 15:16	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/04/22 15:16	1
Chlorobenzene	0.44	U *+	1.0	0.44	ug/L			01/04/22 15:16	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/04/22 15:16	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/04/22 15:16	1
cis-1,3-Dichloropropene	0.20	U *+ *1	1.0	0.20	ug/L			01/04/22 15:16	1
Dibromochloromethane	0.43	U *+	1.0	0.43	ug/L			01/04/22 15:16	1
cis-1,2-Dichloroethene	0.35	U *+	1.0	0.35	ug/L			01/04/22 15:16	1
Dibromochloropropane	0.57	U *+ *1	3.0	0.57	ug/L			01/04/22 15:16	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/04/22 15:16	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/04/22 15:16	1
Ethylbenzene	0.50	U *+	1.0	0.50	ug/L			01/04/22 15:16	1
Methyl ethyl ketone (MEK)	4.7	U *+	15	4.7	ug/L			01/04/22 15:16	1
m-Xylene & p-Xylene	0.53	U *+	2.0	0.53	ug/L			01/04/22 15:16	1
o-Xylene	0.39	U *+	1.0	0.39	ug/L			01/04/22 15:16	1
Styrene	0.53	U *+	1.0	0.53	ug/L			01/04/22 15:16	1
Tetrachloroethene	0.41	U *1	1.0	0.41	ug/L			01/04/22 15:16	1
Toluene	0.39	U *+ *1	1.0	0.39	ug/L			01/04/22 15:16	1
trans-1,3-Dichloropropene	0.41	U *+ *1	1.0	0.41	ug/L			01/04/22 15:16	1
Trichloroethene	0.26	U *+ *1	1.0	0.26	ug/L			01/04/22 15:16	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/04/22 15:16	1
Xylenes, Total	0.53	U *+	2.0	0.53	ug/L			01/04/22 15:16	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1.6*	*T J*	*ug/L*		*5.03*			*01/04/22 15:16*	*1*

Client Sample ID: A2-DWS-A2-3-1-123121-N

Date Collected: 12/31/21 12:45
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108868-3

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*107*		*81 - 118*		*01/04/22 15:16*	*1*
4-Bromofluorobenzene (Surr)	*96*		*85 - 114*		*01/04/22 15:16*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 119*		*01/04/22 15:16*	*1*
Toluene-d8 (Surr)	*94*		*89 - 112*		*01/04/22 15:16*	*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		01/03/22 11:47	01/04/22 13:21	1
Acenaphthylene	0.061	U	1.0	0.061	ug/L		01/03/22 11:47	01/04/22 13:21	1
Anthracene	0.051	U	1.0	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
Benzo[a]anthracene	0.051	U	0.25	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
Benzo[a]pyrene	0.041	U	0.25	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
Benzo[b]fluoranthene	0.041	U	0.25	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
Benzo[g,h,i]perylene	0.041	U	0.25	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
Benzo[k]fluoranthene	0.051	U	0.25	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
Bis(2-chloroethoxy)methane	0.051	U	0.61	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
Bis(2-chloroethyl)ether	0.031	U	0.10	0.031	ug/L		01/03/22 11:47	01/04/22 13:21	1
Bis(2-ethylhexyl) phthalate	0.75	U	3.1	0.75	ug/L		01/03/22 11:47	01/04/22 13:21	1
4-Bromophenyl phenyl ether	0.061	U	0.61	0.061	ug/L		01/03/22 11:47	01/04/22 13:21	1
Butyl benzyl phthalate	0.27	U	4.1	0.27	ug/L		01/03/22 11:47	01/04/22 13:21	1
Carbazole	0.10	U	0.61	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1
4-Chloroaniline	0.60	U	2.0	0.60	ug/L		01/03/22 11:47	01/04/22 13:21	1
4-Chloro-3-methylphenol	0.13	U	0.61	0.13	ug/L		01/03/22 11:47	01/04/22 13:21	1
2-Chloronaphthalene	0.071	U	1.0	0.071	ug/L		01/03/22 11:47	01/04/22 13:21	1
2-Chlorophenol	0.051	U	1.0	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
4-Chlorophenyl phenyl ether	0.051	U	0.61	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
Chrysene	0.041	U	0.25	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
Dibenz(a,h)anthracene	0.071	U	0.25	0.071	ug/L		01/03/22 11:47	01/04/22 13:21	1
Dibenzofuran	0.10	U	0.41	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1
Dibutylphthalate	0.19	U	3.1	0.19	ug/L		01/03/22 11:47	01/04/22 13:21	1
1,2-Dichlorobenzene	0.051	U	0.41	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
1,3-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
1,4-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		01/03/22 11:47	01/04/22 13:21	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		01/03/22 11:47	01/04/22 13:21	1
Diethyl phthalate	0.15	U Q	1.0	0.15	ug/L		01/03/22 11:47	01/04/22 13:21	1
2,4-Dimethylphenol	0.16	U	4.1	0.16	ug/L		01/03/22 11:47	01/04/22 13:21	1
Dimethyl phthalate	0.061	U	0.61	0.061	ug/L		01/03/22 11:47	01/04/22 13:21	1
4,6-Dinitro-2-methylphenol	0.56	U	2.0	0.56	ug/L		01/03/22 11:47	01/04/22 13:21	1
2,4-Dinitrophenol	1.6	U	5.1	1.6	ug/L		01/03/22 11:47	01/04/22 13:21	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1
2,6-Dinitrotoluene	0.10	U	0.41	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		01/03/22 11:47	01/04/22 13:21	1
Fluoranthene	0.061	U	0.25	0.061	ug/L		01/03/22 11:47	01/04/22 13:21	1
Fluorene	0.051	U	0.25	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
Hexachlorobenzene	0.041	U	0.61	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
Hexachlorobutadiene	0.061	U	1.0	0.061	ug/L		01/03/22 11:47	01/04/22 13:21	1
Hexachlorocyclopentadiene	0.14	U Q	1.0	0.14	ug/L		01/03/22 11:47	01/04/22 13:21	1
Hexachloroethane	0.051	U *1	1.0	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.41	0.13	ug/L		01/03/22 11:47	01/04/22 13:21	1

Client Sample ID: A2-DWS-A2-3-1-123121-N

Date Collected: 12/31/21 12:45
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108868-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isophorone	0.10	U	0.41	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1
1-Methylnaphthalene	0.051	U	1.0	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
2-Methylnaphthalene	0.061	U	0.41	0.061	ug/L		01/03/22 11:47	01/04/22 13:21	1
2-Methylphenol	0.051	U	0.61	0.051	ug/L		01/03/22 11:47	01/04/22 13:21	1
3 & 4 Methylphenol	0.10	U	0.61	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1
Naphthalene	0.16	U	0.41	0.16	ug/L		01/03/22 11:47	01/04/22 13:21	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1
3-Nitroaniline	0.16	U	3.1	0.16	ug/L		01/03/22 11:47	01/04/22 13:21	1
4-Nitroaniline	0.21	U *1	2.0	0.21	ug/L		01/03/22 11:47	01/04/22 13:21	1
Nitrobenzene	0.041	U	1.0	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
4-Nitrophenol	1.7	U *- *1	10	1.7	ug/L		01/03/22 11:47	01/04/22 13:21	1
N-Nitrosodi-n-propylamine	0.061	U	0.41	0.061	ug/L		01/03/22 11:47	01/04/22 13:21	1
N-Nitrosodiphenylamine	0.071	U	1.0	0.071	ug/L		01/03/22 11:47	01/04/22 13:21	1
Pentachlorophenol	0.52	U *-	10	0.52	ug/L		01/03/22 11:47	01/04/22 13:21	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		01/03/22 11:47	01/04/22 13:21	1
Phenol	0.37	U	1.0	0.37	ug/L		01/03/22 11:47	01/04/22 13:21	1
Pyrene	0.041	U	1.0	0.041	ug/L		01/03/22 11:47	01/04/22 13:21	1
1,2,4-Trichlorobenzene	0.092	U	0.41	0.092	ug/L		01/03/22 11:47	01/04/22 13:21	1
2,4,5-Trichlorophenol	0.10	U	0.41	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1
2,4,6-Trichlorophenol	0.10	U	0.61	0.10	ug/L		01/03/22 11:47	01/04/22 13:21	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1.6*	*T J*	*ug/L*		*2.46*		*01/03/22 11:47*	*01/04/22 13:21*	*1*
2-Butene, 1-bromo-3-methyl-	*3.1*	*T J N*	*ug/L*		*2.54*	*870-63-3*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
3-Pentanol	*39*	*T J N*	*ug/L*		*2.86*	*584-02-1*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
1-Bromo-2(2-methoxyethoxy)ethane	*0.63*	*T J N*	*ug/L*		*2.88*	*54149-17-6*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
Butane, 2,3-dichloro-2-methyl-	*9.1*	*T J N*	*ug/L*		*3.00*	*507-45-9*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
Unknown	*2.0*	*T J*	*ug/L*		*3.16*		*01/03/22 11:47*	*01/04/22 13:21*	*1*
Unknown	*8.7*	*T J*	*ug/L*		*3.68*		*01/03/22 11:47*	*01/04/22 13:21*	*1*
Bromotrimethylsilane	*1.5*	*T J N*	*ug/L*		*3.80*	*2857-97-8*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
Aniline	*1.0*	*J*	*ug/L*		*4.26*	*62-53-3*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
Unknown	*1.2*	*T J*	*ug/L*		*4.79*		*01/03/22 11:47*	*01/04/22 13:21*	*1*
Ethane, 1,1'-oxybis[2-bromo-	*1.1*	*T J N*	*ug/L*		*4.91*	*5414-19-7*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
Unknown	*0.62*	*T J*	*ug/L*		*5.11*		*01/03/22 11:47*	*01/04/22 13:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*66*		*44 - 119*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
2-Fluorophenol (Surr)	*0.7*	*S1-*	*19 - 119*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
Nitrobenzene-d5 (Surr)	*75*		*44 - 120*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
Phenol-d5 (Surr)	*0*	*S1-*	*10 - 120*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
Terphenyl-d14	*100*		*50 - 134*	*01/03/22 11:47*	*01/04/22 13:21*	*1*
2,4,6-Tribromophenol	*38*	*S1-*	*43 - 140*	*01/03/22 11:47*	*01/04/22 13:21*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	**0.055**	**J**	0.26	0.046	mg/L		01/03/22 11:09	01/03/22 21:11	1
C24-C40	0.092	U	0.26	0.092	mg/L		01/03/22 11:09	01/03/22 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*75*		*56 - 125*	*01/03/22 11:09*	*01/03/22 21:11*	*1*

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

Lab Sample ID: MB 580-377336/4
Matrix: Water
Analysis Batch: 377336

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)	0.031	U	0.10	0.031	mg/L			01/03/22 17:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*69 - 133*		*01/03/22 17:06*	*1*

Lab Sample ID: LCS 580-377336/5
Matrix: Water
Analysis Batch: 377336

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)	1.00	0.967		mg/L		97	78 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*85*		*69 - 133*

Lab Sample ID: LCSD 580-377336/6
Matrix: Water
Analysis Batch: 377336

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)	1.00	0.955		mg/L		95	78 - 122	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*69 - 133*

Lab Sample ID: MB 580-377372/4
Matrix: Water
Analysis Batch: 377372

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)	0.031	U	0.10	0.031	mg/L			01/04/22 10:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*69 - 133*		*01/04/22 10:03*	*1*

Lab Sample ID: LCS 580-377372/5
Matrix: Water
Analysis Batch: 377372

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)	1.00	0.958		mg/L		96	78 - 122

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*69 - 133*

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

Lab Sample ID: LCSD 580-377372/6
Matrix: Water
Analysis Batch: 377372

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)			1.00	0.869		mg/L		87	78 - 122	10	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*69 - 133*

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

Lab Sample ID: MB 580-377368/4
Matrix: Water
Analysis Batch: 377368

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/03/22 17:06	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/03/22 17:06	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/03/22 17:06	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/03/22 17:06	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/03/22 17:06	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/03/22 17:06	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/03/22 17:06	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/03/22 17:06	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/03/22 17:06	1
4-Methyl-2-pentanone (MIBK)	2.5	U	5.0	2.5	ug/L			01/03/22 17:06	1
Acetone	3.2	U	15	3.2	ug/L			01/03/22 17:06	1
Benzene	0.24	U	1.0	0.24	ug/L			01/03/22 17:06	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			01/03/22 17:06	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/03/22 17:06	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/03/22 17:06	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/03/22 17:06	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/03/22 17:06	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/03/22 17:06	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/03/22 17:06	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/03/22 17:06	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/03/22 17:06	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/03/22 17:06	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			01/03/22 17:06	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/03/22 17:06	1
Dibromochloropropane	0.57	U	3.0	0.57	ug/L			01/03/22 17:06	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/03/22 17:06	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/03/22 17:06	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/03/22 17:06	1
Methyl ethyl ketone (MEK)	4.7	U	15	4.7	ug/L			01/03/22 17:06	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/03/22 17:06	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/03/22 17:06	1
Styrene	0.53	U	1.0	0.53	ug/L			01/03/22 17:06	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/03/22 17:06	1
Toluene	0.39	U	1.0	0.39	ug/L			01/03/22 17:06	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/03/22 17:06	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/03/22 17:06	1

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

Lab Sample ID: MB 580-377368/4
Matrix: Water
Analysis Batch: 377368

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/03/22 17:06	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/03/22 17:06	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*01/03/22 17:06*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*81 - 118*		*01/03/22 17:06*	*1*
4-Bromofluorobenzene (Surr)	*92*		*85 - 114*		*01/03/22 17:06*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 119*		*01/03/22 17:06*	*1*
Toluene-d8 (Surr)	*107*		*89 - 112*		*01/03/22 17:06*	*1*

Lab Sample ID: LCS 580-377368/5
Matrix: Water
Analysis Batch: 377368

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	10.0	8.87		ug/L		89	74 - 131
1,1,2,2-Tetrachloroethane	10.0	9.64		ug/L		96	71 - 121
1,1,2-Trichloroethane	10.0	11.8		ug/L		118	80 - 119
1,1-Dichloroethane	10.0	9.41		ug/L		94	77 - 125
1,1-Dichloroethene	10.0	8.53		ug/L		85	71 - 131
1,2-Dichloroethane	10.0	10.3		ug/L		103	73 - 128
1,2-Dichloroethene, Total	20.0	19.2		ug/L		96	78 - 123
1,2-Dichloropropane	10.0	10.7		ug/L		107	78 - 122
2-Hexanone	50.0	47.2		ug/L		94	57 - 139
4-Methyl-2-pentanone (MIBK)	50.0	47.8		ug/L		96	67 - 130
Acetone	50.0	47.2		ug/L		94	39 - 160
Benzene	10.0	10.0		ug/L		100	79 - 120
Bromodichloromethane	10.0	10.2		ug/L		102	79 - 125
Bromoform	10.0	10.4		ug/L		104	66 - 130
Bromomethane	10.0	14.5	*+	ug/L		145	53 - 141
Carbon disulfide	10.0	6.60		ug/L		66	64 - 133
Carbon tetrachloride	10.0	8.62		ug/L		86	72 - 136
trans-1,2-Dichloroethene	10.0	8.75		ug/L		88	75 - 124
Chlorobenzene	10.0	12.1	*+	ug/L		121	82 - 118
Chloroform	10.0	10.5		ug/L		105	79 - 124
Chloromethane	10.0	13.0		ug/L		130	50 - 139
cis-1,3-Dichloropropene	10.0	9.76		ug/L		98	75 - 124
Dibromochloromethane	10.0	10.6		ug/L		106	74 - 126
cis-1,2-Dichloroethene	10.0	10.4		ug/L		104	78 - 123
Dibromochloropropane	10.0	10.4		ug/L		104	62 - 128
Dichloromethane	10.0	9.73		ug/L		97	74 - 124
Ethyl Chloride	10.0	13.2		ug/L		132	60 - 138
Ethylbenzene	10.0	11.5		ug/L		115	79 - 121
Methyl ethyl ketone (MEK)	50.0	51.0		ug/L		102	56 - 143
m-Xylene & p-Xylene	10.0	11.4		ug/L		114	80 - 121
o-Xylene	10.0	11.2		ug/L		112	78 - 122

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

Lab Sample ID: LCS 580-377368/5
Matrix: Water
Analysis Batch: 377368

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	10.0	11.4		ug/L		114	78 - 123
Tetrachloroethene	10.0	11.1		ug/L		111	74 - 129
Toluene	10.0	11.7		ug/L		117	80 - 121
trans-1,3-Dichloropropene	10.0	9.53		ug/L		95	73 - 127
Trichloroethene	10.0	10.7		ug/L		107	79 - 123
Vinyl chloride	10.0	12.9		ug/L		129	58 - 137
Xylenes, Total	20.0	22.6		ug/L		113	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*
4-Bromofluorobenzene (Surr)	*101*		*85 - 114*
Dibromofluoromethane (Surr)	*105*		*80 - 119*
Toluene-d8 (Surr)	*108*		*89 - 112*

Lab Sample ID: LCSD 580-377368/6
Matrix: Water
Analysis Batch: 377368

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	10.0	7.69		ug/L		77	74 - 131	14	20
1,1,2,2-Tetrachloroethane	10.0	9.19		ug/L		92	71 - 121	5	20
1,1,2-Trichloroethane	10.0	11.9		ug/L		119	80 - 119	1	20
1,1-Dichloroethane	10.0	9.72		ug/L		97	77 - 125	3	20
1,1-Dichloroethene	10.0	8.81		ug/L		88	71 - 131	3	20
1,2-Dichloroethane	10.0	10.4		ug/L		104	73 - 128	1	20
1,2-Dichloroethene, Total	20.0	20.5		ug/L		103	78 - 123	7	20
1,2-Dichloropropane	10.0	10.8		ug/L		108	78 - 122	1	20
2-Hexanone	50.0	43.5		ug/L		87	57 - 139	8	20
4-Methyl-2-pentanone (MIBK)	50.0	43.8		ug/L		88	67 - 130	9	20
Acetone	50.0	41.0		ug/L		82	39 - 160	14	20
Benzene	10.0	10.1		ug/L		101	79 - 120	1	20
Bromodichloromethane	10.0	10.2		ug/L		102	79 - 125	0	20
Bromoform	10.0	9.80		ug/L		98	66 - 130	6	20
Bromomethane	10.0	12.0		ug/L		120	53 - 141	19	20
Carbon disulfide	10.0	6.93		ug/L		69	64 - 133	5	20
Carbon tetrachloride	10.0	9.50		ug/L		95	72 - 136	10	20
trans-1,2-Dichloroethene	10.0	10.3		ug/L		103	75 - 124	16	20
Chlorobenzene	10.0	12.3	*+	ug/L		123	82 - 118	2	20
Chloroform	10.0	10.9		ug/L		109	79 - 124	3	20
Chloromethane	10.0	11.9		ug/L		119	50 - 139	9	20
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	75 - 124	4	20
Dibromochloromethane	10.0	10.3		ug/L		103	74 - 126	2	20
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	78 - 123	2	20
Dibromochloropropane	10.0	9.64		ug/L		96	62 - 128	7	20
Dichloromethane	10.0	9.61		ug/L		96	74 - 124	1	20
Ethyl Chloride	10.0	12.6		ug/L		126	60 - 138	4	20
Ethylbenzene	10.0	11.5		ug/L		115	79 - 121	1	20
Methyl ethyl ketone (MEK)	50.0	40.2	*1	ug/L		80	56 - 143	24	20

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

Lab Sample ID: LCSD 580-377368/6
Matrix: Water
Analysis Batch: 377368

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
m-Xylene & p-Xylene			10.0	11.3		ug/L		113	80 - 121	0	20
o-Xylene			10.0	11.4		ug/L		114	78 - 122	1	20
Styrene			10.0	11.4		ug/L		114	78 - 123	0	20
Tetrachloroethene			10.0	11.4		ug/L		114	74 - 129	3	20
Toluene			10.0	11.9		ug/L		119	80 - 121	2	20
trans-1,3-Dichloropropene			10.0	9.63		ug/L		96	73 - 127	1	20
Trichloroethene			10.0	10.6		ug/L		106	79 - 123	1	20
Vinyl chloride			10.0	11.7		ug/L		117	58 - 137	9	20
Xylenes, Total			20.0	22.7		ug/L		114	79 - 121	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*81 - 118*
4-Bromofluorobenzene (Surr)	*98*		*85 - 114*
Dibromofluoromethane (Surr)	*103*		*80 - 119*
Toluene-d8 (Surr)	*108*		*89 - 112*

Lab Sample ID: MB 580-377410/7
Matrix: Water
Analysis Batch: 377410

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			01/04/22 14:03	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/04/22 14:03	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/04/22 14:03	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/04/22 14:03	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/04/22 14:03	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/04/22 14:03	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/04/22 14:03	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/04/22 14:03	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/04/22 14:03	1
4-Methyl-2-pentanone (MIBK)	2.5	U	5.0	2.5	ug/L			01/04/22 14:03	1
Acetone	3.2	U	15	3.2	ug/L			01/04/22 14:03	1
Benzene	0.24	U	1.0	0.24	ug/L			01/04/22 14:03	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			01/04/22 14:03	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/04/22 14:03	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/04/22 14:03	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/04/22 14:03	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/04/22 14:03	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/04/22 14:03	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/04/22 14:03	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/04/22 14:03	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/04/22 14:03	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/04/22 14:03	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			01/04/22 14:03	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/04/22 14:03	1
Dibromochloropropane	0.57	U	3.0	0.57	ug/L			01/04/22 14:03	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			01/04/22 14:03	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			01/04/22 14:03	1

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

Lab Sample ID: MB 580-377410/7
Matrix: Water
Analysis Batch: 377410

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/04/22 14:03	1
Methyl ethyl ketone (MEK)	4.7	U	15	4.7	ug/L			01/04/22 14:03	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/04/22 14:03	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/04/22 14:03	1
Styrene	0.53	U	1.0	0.53	ug/L			01/04/22 14:03	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/04/22 14:03	1
Toluene	0.39	U	1.0	0.39	ug/L			01/04/22 14:03	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/04/22 14:03	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/04/22 14:03	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/04/22 14:03	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/04/22 14:03	1

Tentatively Identified Compound	*Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*01/04/22 14:03*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*81 - 118*		*01/04/22 14:03*	*1*
4-Bromofluorobenzene (Surr)	*97*		*85 - 114*		*01/04/22 14:03*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 119*		*01/04/22 14:03*	*1*
Toluene-d8 (Surr)	*97*		*89 - 112*		*01/04/22 14:03*	*1*

Lab Sample ID: LCS 580-377410/4
Matrix: Water
Analysis Batch: 377410

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	6.35		ug/L		127	74 - 131
1,1,2,2-Tetrachloroethane	5.00	6.18	*+	ug/L		124	71 - 121
1,1,2-Trichloroethane	5.00	6.80	*+	ug/L		136	80 - 119
1,1-Dichloroethane	5.00	5.79		ug/L		116	77 - 125
1,1-Dichloroethene	5.00	5.62		ug/L		112	71 - 131
1,2-Dichloroethane	5.00	5.97		ug/L		119	73 - 128
1,2-Dichloroethene, Total	10.0	11.6		ug/L		116	78 - 123
1,2-Dichloropropane	5.00	5.98		ug/L		120	78 - 122
2-Hexanone	25.0	37.1	*+	ug/L		149	57 - 139
4-Methyl-2-pentanone (MIBK)	25.0	36.6	*+	ug/L		146	67 - 130
Acetone	25.0	51.1	*+	ug/L		205	39 - 160
Benzene	5.00	5.93		ug/L		119	79 - 120
Bromodichloromethane	5.00	6.91	*+	ug/L		138	79 - 125
Bromoform	5.00	6.23		ug/L		125	66 - 130
Bromomethane	5.00	4.72		ug/L		94	53 - 141
Carbon disulfide	5.00	5.99		ug/L		120	64 - 133
Carbon tetrachloride	5.00	7.80	*+	ug/L		156	72 - 136
trans-1,2-Dichloroethene	5.00	5.45		ug/L		109	75 - 124
Chlorobenzene	5.00	6.24	*+	ug/L		125	82 - 118
Chloroform	5.00	5.98		ug/L		120	79 - 124
Chloromethane	5.00	4.21		ug/L		84	50 - 139
cis-1,3-Dichloropropene	5.00	6.74	*+	ug/L		135	75 - 124

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

Lab Sample ID: LCS 580-377410/4
Matrix: Water
Analysis Batch: 377410

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	5.00	7.18	*+	ug/L		144	74 - 126
cis-1,2-Dichloroethene	5.00	6.19	*+	ug/L		124	78 - 123
Dibromochloropropane	5.00	8.37	*+	ug/L		167	62 - 128
Dichloromethane	5.00	5.88		ug/L		118	74 - 124
Ethyl Chloride	5.00	5.01		ug/L		100	60 - 138
Ethylbenzene	5.00	6.96	*+	ug/L		139	79 - 121
Methyl ethyl ketone (MEK)	25.0	38.1	*+	ug/L		152	56 - 143
m-Xylene & p-Xylene	5.00	7.15	*+	ug/L		143	80 - 121
o-Xylene	5.00	6.80	*+	ug/L		136	78 - 122
Styrene	5.00	6.97	*+	ug/L		139	78 - 123
Tetrachloroethene	5.00	5.96		ug/L		119	74 - 129
Toluene	5.00	6.21	*+	ug/L		124	80 - 121
trans-1,3-Dichloropropene	5.00	7.59	*+	ug/L		152	73 - 127
Trichloroethene	5.00	6.29	*+	ug/L		126	79 - 123
Vinyl chloride	5.00	4.60		ug/L		92	58 - 137
Xylenes, Total	10.0	14.0	*+	ug/L		140	79 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*81 - 118*
4-Bromofluorobenzene (Surr)	*103*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*98*		*89 - 112*

Lab Sample ID: LCSD 580-377410/5
Matrix: Water
Analysis Batch: 377410

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	5.00	5.27		ug/L		105	74 - 131	19	20
1,1,2,2-Tetrachloroethane	5.00	5.27		ug/L		105	71 - 121	16	20
1,1,2-Trichloroethane	5.00	5.12	*1	ug/L		102	80 - 119	28	20
1,1-Dichloroethane	5.00	4.90		ug/L		98	77 - 125	17	20
1,1-Dichloroethene	5.00	4.70		ug/L		94	71 - 131	18	20
1,2-Dichloroethane	5.00	4.98		ug/L		100	73 - 128	18	20
1,2-Dichloroethene, Total	10.0	9.75		ug/L		98	78 - 123	18	20
1,2-Dichloropropane	5.00	5.08		ug/L		102	78 - 122	16	20
2-Hexanone	25.0	32.2		ug/L		129	57 - 139	14	20
4-Methyl-2-pentanone (MIBK)	25.0	29.2	*1	ug/L		117	67 - 130	23	20
Acetone	25.0	40.4	*+ *1	ug/L		162	39 - 160	23	20
Benzene	5.00	4.96		ug/L		99	79 - 120	18	20
Bromodichloromethane	5.00	5.66		ug/L		113	79 - 125	20	20
Bromoform	5.00	5.23		ug/L		105	66 - 130	17	20
Bromomethane	5.00	3.87		ug/L		77	53 - 141	20	20
Carbon disulfide	5.00	4.87	*1	ug/L		97	64 - 133	21	20
Carbon tetrachloride	5.00	6.16	*1	ug/L		123	72 - 136	24	20
trans-1,2-Dichloroethene	5.00	4.53		ug/L		91	75 - 124	18	20
Chlorobenzene	5.00	5.27		ug/L		105	82 - 118	17	20
Chloroform	5.00	5.06		ug/L		101	79 - 124	17	20

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

Lab Sample ID: LCSD 580-377410/5
Matrix: Water
Analysis Batch: 377410

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
Chloromethane	5.00	3.56		ug/L		71	50 - 139	17	20
cis-1,3-Dichloropropene	5.00	5.18	*1	ug/L		104	75 - 124	26	20
Dibromochloromethane	5.00	6.15		ug/L		123	74 - 126	15	20
cis-1,2-Dichloroethene	5.00	5.22		ug/L		104	78 - 123	17	20
Dibromochloropropane	5.00	6.64	*+ *1	ug/L		133	62 - 128	23	20
Dichloromethane	5.00	4.85		ug/L		97	74 - 124	19	20
Ethyl Chloride	5.00	4.21		ug/L		84	60 - 138	17	20
Ethylbenzene	5.00	5.90		ug/L		118	79 - 121	17	20
Methyl ethyl ketone (MEK)	25.0	31.2		ug/L		125	56 - 143	20	20
m-Xylene & p-Xylene	5.00	6.01		ug/L		120	80 - 121	17	20
o-Xylene	5.00	5.75		ug/L		115	78 - 122	17	20
Styrene	5.00	5.94		ug/L		119	78 - 123	16	20
Tetrachloroethene	5.00	4.79	*1	ug/L		96	74 - 129	22	20
Toluene	5.00	4.89	*1	ug/L		98	80 - 121	24	20
trans-1,3-Dichloropropene	5.00	5.77	*1	ug/L		115	73 - 127	27	20
Trichloroethene	5.00	5.08	*1	ug/L		102	79 - 123	21	20
Vinyl chloride	5.00	3.76		ug/L		75	58 - 137	20	20
Xylenes, Total	10.0	11.8		ug/L		118	79 - 121	17	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*81 - 118*
4-Bromofluorobenzene (Surr)	*102*		*85 - 114*
Dibromofluoromethane (Surr)	*99*		*80 - 119*
Toluene-d8 (Surr)	*93*		*89 - 112*

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

Lab Sample ID: MB 580-377294/1-A
Matrix: Water
Analysis Batch: 377363

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.050	U	0.40	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
Acenaphthylene	0.060	U	1.0	0.060	ug/L		01/03/22 11:47	01/04/22 11:49	1
Anthracene	0.050	U	1.0	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
Benzo[a]anthracene	0.050	U	0.25	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
Benzo[a]pyrene	0.040	U	0.25	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
Benzo[b]fluoranthene	0.040	U	0.25	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
Benzo[g,h,i]perylene	0.040	U	0.25	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
Benzo[k]fluoranthene	0.050	U	0.25	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
Bis(2-chloroethoxy)methane	0.050	U	0.60	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
Bis(2-chloroethyl)ether	0.030	U	0.10	0.030	ug/L		01/03/22 11:47	01/04/22 11:49	1
Bis(2-ethylhexyl) phthalate	0.74	U	3.0	0.74	ug/L		01/03/22 11:47	01/04/22 11:49	1
4-Bromophenyl phenyl ether	0.060	U	0.60	0.060	ug/L		01/03/22 11:47	01/04/22 11:49	1
Butyl benzyl phthalate	0.27	U	4.0	0.27	ug/L		01/03/22 11:47	01/04/22 11:49	1
Carbazole	0.10	U	0.60	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1
4-Chloroaniline	0.59	U	2.0	0.59	ug/L		01/03/22 11:47	01/04/22 11:49	1
4-Chloro-3-methylphenol	0.13	U	0.60	0.13	ug/L		01/03/22 11:47	01/04/22 11:49	1
2-Chloronaphthalene	0.070	U	1.0	0.070	ug/L		01/03/22 11:47	01/04/22 11:49	1

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

Lab Sample ID: MB 580-377294/1-A
Matrix: Water
Analysis Batch: 377363

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377294

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	0.050	U	1.0	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
4-Chlorophenyl phenyl ether	0.050	U	0.60	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
Chrysene	0.040	U	0.25	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
Dibenz(a,h)anthracene	0.070	U	0.25	0.070	ug/L		01/03/22 11:47	01/04/22 11:49	1
Dibenzofuran	0.10	U	0.40	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1
Dibutylphthalate	0.19	U	3.0	0.19	ug/L		01/03/22 11:47	01/04/22 11:49	1
1,2-Dichlorobenzene	0.050	U	0.40	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
1,3-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
1,4-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		01/03/22 11:47	01/04/22 11:49	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		01/03/22 11:47	01/04/22 11:49	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		01/03/22 11:47	01/04/22 11:49	1
2,4-Dimethylphenol	0.16	U	4.0	0.16	ug/L		01/03/22 11:47	01/04/22 11:49	1
Dimethyl phthalate	0.060	U	0.60	0.060	ug/L		01/03/22 11:47	01/04/22 11:49	1
4,6-Dinitro-2-methylphenol	0.55	U	2.0	0.55	ug/L		01/03/22 11:47	01/04/22 11:49	1
2,4-Dinitrophenol	1.6	U	5.0	1.6	ug/L		01/03/22 11:47	01/04/22 11:49	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1
2,6-Dinitrotoluene	0.10	U	0.40	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		01/03/22 11:47	01/04/22 11:49	1
Fluoranthene	0.060	U	0.25	0.060	ug/L		01/03/22 11:47	01/04/22 11:49	1
Fluorene	0.050	U	0.25	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
Hexachlorobenzene	0.040	U	0.60	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
Hexachlorobutadiene	0.060	U	1.0	0.060	ug/L		01/03/22 11:47	01/04/22 11:49	1
Hexachlorocyclopentadiene	0.14	U	1.0	0.14	ug/L		01/03/22 11:47	01/04/22 11:49	1
Hexachloroethane	0.050	U	1.0	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.40	0.13	ug/L		01/03/22 11:47	01/04/22 11:49	1
Isophorone	0.10	U	0.40	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1
1-Methylnaphthalene	0.050	U	1.0	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
2-Methylnaphthalene	0.060	U	0.40	0.060	ug/L		01/03/22 11:47	01/04/22 11:49	1
2-Methylphenol	0.050	U	0.60	0.050	ug/L		01/03/22 11:47	01/04/22 11:49	1
3 & 4 Methylphenol	0.10	U	0.60	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1
Naphthalene	0.16	U	0.40	0.16	ug/L		01/03/22 11:47	01/04/22 11:49	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1
3-Nitroaniline	0.16	U	3.0	0.16	ug/L		01/03/22 11:47	01/04/22 11:49	1
4-Nitroaniline	0.21	U	2.0	0.21	ug/L		01/03/22 11:47	01/04/22 11:49	1
Nitrobenzene	0.040	U	1.0	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
4-Nitrophenol	1.7	U	10	1.7	ug/L		01/03/22 11:47	01/04/22 11:49	1
N-Nitrosodi-n-propylamine	0.060	U	0.40	0.060	ug/L		01/03/22 11:47	01/04/22 11:49	1
N-Nitrosodiphenylamine	0.070	U	1.0	0.070	ug/L		01/03/22 11:47	01/04/22 11:49	1
Pentachlorophenol	0.51	U	10	0.51	ug/L		01/03/22 11:47	01/04/22 11:49	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		01/03/22 11:47	01/04/22 11:49	1
Phenol	0.36	U	1.0	0.36	ug/L		01/03/22 11:47	01/04/22 11:49	1
Pyrene	0.040	U	1.0	0.040	ug/L		01/03/22 11:47	01/04/22 11:49	1
1,2,4-Trichlorobenzene	0.090	U	0.40	0.090	ug/L		01/03/22 11:47	01/04/22 11:49	1
2,4,5-Trichlorophenol	0.10	U	0.40	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1
2,4,6-Trichlorophenol	0.10	U	0.60	0.10	ug/L		01/03/22 11:47	01/04/22 11:49	1

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

Lab Sample ID: MB 580-377294/1-A
Matrix: Water
Analysis Batch: 377363

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377294

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				01/03/22 11:47	01/04/22 11:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	112		44 - 119	01/03/22 11:47	01/04/22 11:49	1
2-Fluorophenol (Surr)	62		19 - 119	01/03/22 11:47	01/04/22 11:49	1
Nitrobenzene-d5 (Surr)	106		44 - 120	01/03/22 11:47	01/04/22 11:49	1
Phenol-d5 (Surr)	37		10 - 120	01/03/22 11:47	01/04/22 11:49	1
Terphenyl-d14	104		50 - 134	01/03/22 11:47	01/04/22 11:49	1
2,4,6-Tribromophenol	75		43 - 140	01/03/22 11:47	01/04/22 11:49	1

Lab Sample ID: LCS 580-377294/2-A
Matrix: Water
Analysis Batch: 377363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	1.71		ug/L		85	47 - 122
Acenaphthylene	2.00	1.77		ug/L		89	41 - 130
Anthracene	2.00	1.77		ug/L		88	57 - 123
Benzo[a]anthracene	2.00	1.68		ug/L		84	58 - 125
Benzo[a]pyrene	2.00	1.77		ug/L		88	54 - 128
Benzo[b]fluoranthene	2.00	1.79		ug/L		89	53 - 131
Benzo[g,h,i]perylene	2.00	1.69		ug/L		85	50 - 134
Benzo[k]fluoranthene	2.00	1.77		ug/L		89	57 - 129
Bis(2-chloroethoxy)methane	2.00	1.89		ug/L		94	48 - 120
Bis(2-ethylhexyl) phthalate	2.00	1.93	J	ug/L		96	55 - 135
4-Bromophenyl phenyl ether	2.00	1.76		ug/L		88	55 - 124
Butyl benzyl phthalate	2.00	1.98	J	ug/L		99	53 - 134
Carbazole	2.00	1.97		ug/L		98	60 - 122
4-Chloroaniline	2.00	1.50	J	ug/L		75	33 - 117
4-Chloro-3-methylphenol	2.00	1.76		ug/L		88	52 - 119
2-Chloronaphthalene	2.00	1.78		ug/L		89	40 - 116
2-Chlorophenol	2.00	1.66		ug/L		83	38 - 117
4-Chlorophenyl phenyl ether	2.00	1.87		ug/L		94	53 - 121
Chrysene	2.00	1.90		ug/L		95	59 - 123
Dibenz(a,h)anthracene	2.00	1.64		ug/L		82	51 - 134
Dibenzofuran	2.00	1.90		ug/L		95	53 - 118
Dibutylphthalate	2.00	1.94	J	ug/L		97	59 - 127
1,2-Dichlorobenzene	2.00	1.40		ug/L		70	32 - 111
1,3-Dichlorobenzene	2.00	1.34		ug/L		67	28 - 110
1,4-Dichlorobenzene	2.00	1.35		ug/L		68	29 - 112
3,3'-Dichlorobenzidine	4.00	3.68		ug/L		92	27 - 129
2,4-Dichlorophenol	2.00	1.53		ug/L		76	47 - 121
Diethyl phthalate	2.00	2.09		ug/L		105	56 - 125
2,4-Dimethylphenol	2.00	1.85	J	ug/L		93	31 - 124
Dimethyl phthalate	2.00	2.00		ug/L		100	45 - 127
4,6-Dinitro-2-methylphenol	4.00	3.26		ug/L		81	44 - 137
2,4-Dinitrophenol	4.00	3.04	J	ug/L		76	23 - 143
2,4-Dinitrotoluene	2.00	1.96		ug/L		98	57 - 128

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

Lab Sample ID: LCS 580-377294/2-A
Matrix: Water
Analysis Batch: 377363

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377294

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,6-Dinitrotoluene	2.00	1.82		ug/L		91	57 - 124
Di-n-octyl phthalate	2.00	1.89		ug/L		95	51 - 140
Fluoranthene	2.00	1.90		ug/L		95	57 - 128
Fluorene	2.00	1.99		ug/L		100	52 - 124
Hexachlorobenzene	2.00	1.71		ug/L		86	53 - 125
Hexachlorobutadiene	2.00	1.19		ug/L		60	22 - 124
Hexachlorocyclopentadiene	2.00	0.921	J	ug/L		46	20 - 125
Hexachloroethane	2.00	1.37		ug/L		69	21 - 115
Indeno[1,2,3-cd]pyrene	2.00	1.42		ug/L		71	52 - 134
Isophorone	2.00	1.88		ug/L		94	42 - 124
1-Methylnaphthalene	2.00	1.51		ug/L		76	41 - 119
2-Methylnaphthalene	2.00	1.63		ug/L		81	40 - 121
2-Methylphenol	2.00	1.64		ug/L		82	30 - 117
3 & 4 Methylphenol	2.00	1.49		ug/L		74	29 - 110
Naphthalene	2.00	1.46		ug/L		73	40 - 121
2-Nitroaniline	2.00	1.80		ug/L		90	55 - 127
3-Nitroaniline	2.00	1.80	J	ug/L		90	41 - 128
4-Nitroaniline	2.00	2.28		ug/L		114	70 - 125
Nitrobenzene	2.00	1.80		ug/L		90	45 - 121
4-Nitrophenol	4.00	1.7	U *-	ug/L		19	35 - 145
N-Nitrosodi-n-propylamine	2.00	2.10		ug/L		105	49 - 119
N-Nitrosodiphenylamine	2.00	1.69		ug/L		85	51 - 123
Pentachlorophenol	4.00	0.911	J *-	ug/L		23	35 - 138
Phenanthrene	2.00	1.77		ug/L		89	59 - 120
Phenol	2.00	0.843	J	ug/L		42	13 - 120
Pyrene	2.00	1.87		ug/L		93	57 - 126
1,2,4-Trichlorobenzene	2.00	1.38		ug/L		69	29 - 116
2,4,5-Trichlorophenol	2.00	1.69		ug/L		84	53 - 123
2,4,6-Trichlorophenol	2.00	1.61		ug/L		81	50 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*85*		*44 - 119*
2-Fluorophenol (Surr)	*57*		*19 - 119*
Nitrobenzene-d5 (Surr)	*88*		*44 - 120*
Phenol-d5 (Surr)	*42*		*10 - 120*
Terphenyl-d14	*106*		*50 - 134*
2,4,6-Tribromophenol	*95*		*43 - 140*

Lab Sample ID: LCSD 580-377294/3-A
Matrix: Water
Analysis Batch: 377363

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377294

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	2.00	1.70		ug/L		85	47 - 122	1	20
Acenaphthylene	2.00	1.73		ug/L		86	41 - 130	3	20
Anthracene	2.00	1.84		ug/L		92	57 - 123	4	20
Benzo[a]anthracene	2.00	1.76		ug/L		88	58 - 125	5	20
Benzo[a]pyrene	2.00	1.90		ug/L		95	54 - 128	7	20

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

Lab Sample ID: LCSD 580-377294/3-A
Matrix: Water
Analysis Batch: 377363

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377294

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[b]fluoranthene	2.00	1.91		ug/L		96	53 - 131	7	20
Benzo[g,h,i]perylene	2.00	1.79		ug/L		90	50 - 134	6	20
Benzo[k]fluoranthene	2.00	1.90		ug/L		95	57 - 129	7	20
Bis(2-chloroethoxy)methane	2.00	2.02		ug/L		101	48 - 120	7	20
Bis(2-ethylhexyl) phthalate	2.00	2.01	J	ug/L		100	55 - 135	4	20
4-Bromophenyl phenyl ether	2.00	1.87		ug/L		93	55 - 124	6	20
Butyl benzyl phthalate	2.00	2.03	J	ug/L		101	53 - 134	3	20
Carbazole	2.00	2.01		ug/L		101	60 - 122	2	20
4-Chloroaniline	2.00	1.54	J	ug/L		77	33 - 117	2	20
4-Chloro-3-methylphenol	2.00	1.75		ug/L		87	52 - 119	1	20
2-Chloronaphthalene	2.00	1.77		ug/L		89	40 - 116	1	20
2-Chlorophenol	2.00	1.76		ug/L		88	38 - 117	6	20
4-Chlorophenyl phenyl ether	2.00	1.85		ug/L		93	53 - 121	1	20
Chrysene	2.00	2.00		ug/L		100	59 - 123	5	20
Dibenz(a,h)anthracene	2.00	1.76		ug/L		88	51 - 134	7	20
Dibenzofuran	2.00	1.91		ug/L		95	53 - 118	0	20
Dibutylphthalate	2.00	2.05	J	ug/L		102	59 - 127	5	20
1,2-Dichlorobenzene	2.00	1.62		ug/L		81	32 - 111	14	20
1,3-Dichlorobenzene	2.00	1.55		ug/L		77	28 - 110	14	20
1,4-Dichlorobenzene	2.00	1.60		ug/L		80	29 - 112	17	20
3,3'-Dichlorobenzidine	4.00	3.96		ug/L		99	27 - 129	8	20
2,4-Dichlorophenol	2.00	1.68		ug/L		84	47 - 121	10	20
Diethyl phthalate	2.00	2.08		ug/L		104	56 - 125	1	20
2,4-Dimethylphenol	2.00	1.90	J	ug/L		95	31 - 124	3	20
Dimethyl phthalate	2.00	1.92		ug/L		96	45 - 127	4	20
4,6-Dinitro-2-methylphenol	4.00	3.26		ug/L		81	44 - 137	0	20
2,4-Dinitrophenol	4.00	3.60	J	ug/L		90	23 - 143	17	20
2,4-Dinitrotoluene	2.00	1.87		ug/L		94	57 - 128	5	20
2,6-Dinitrotoluene	2.00	1.90		ug/L		95	57 - 124	4	20
Di-n-octyl phthalate	2.00	2.07		ug/L		104	51 - 140	9	20
Fluoranthene	2.00	1.99		ug/L		100	57 - 128	4	20
Fluorene	2.00	1.93		ug/L		97	52 - 124	3	20
Hexachlorobenzene	2.00	1.76		ug/L		88	53 - 125	3	20
Hexachlorobutadiene	2.00	1.45		ug/L		72	22 - 124	19	20
Hexachlorocyclopentadiene	2.00	1.10		ug/L		55	20 - 125	18	20
Hexachloroethane	2.00	1.74	*1	ug/L		87	21 - 115	23	20
Indeno[1,2,3-cd]pyrene	2.00	1.62		ug/L		81	52 - 134	13	20
Isophorone	2.00	1.99		ug/L		99	42 - 124	5	20
1-Methylnaphthalene	2.00	1.67		ug/L		83	41 - 119	10	20
2-Methylnaphthalene	2.00	1.77		ug/L		88	40 - 121	8	20
2-Methylphenol	2.00	1.68		ug/L		84	30 - 117	2	20
3 & 4 Methylphenol	2.00	1.57		ug/L		79	29 - 110	6	20
Naphthalene	2.00	1.57		ug/L		78	40 - 121	7	20
2-Nitroaniline	2.00	1.84		ug/L		92	55 - 127	2	20
3-Nitroaniline	2.00	1.67	J	ug/L		83	41 - 128	8	20
4-Nitroaniline	2.00	1.85	J *1	ug/L		92	70 - 125	21	20
Nitrobenzene	2.00	1.97		ug/L		99	45 - 121	9	20
4-Nitrophenol	4.00	1.7	U *- *1	ug/L		12	35 - 145	47	20
N-Nitrosodi-n-propylamine	2.00	2.19		ug/L		109	49 - 119	4	20

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

Lab Sample ID: LCSD 580-377294/3-A
Matrix: Water
Analysis Batch: 377363

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377294

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodiphenylamine			2.00	1.84		ug/L		92	51 - 123	8	20
Pentachlorophenol			4.00	1.06	J *-	ug/L		27	35 - 138	16	20
Phenanthrene			2.00	1.86		ug/L		93	59 - 120	5	20
Phenol			2.00	0.872	J	ug/L		44	13 - 120	3	20
Pyrene			2.00	1.98		ug/L		99	57 - 126	6	20
1,2,4-Trichlorobenzene			2.00	1.57		ug/L		78	29 - 116	13	20
2,4,5-Trichlorophenol			2.00	2.03		ug/L		101	53 - 123	18	20
2,4,6-Trichlorophenol			2.00	1.65		ug/L		83	50 - 125	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*84*		*44 - 119*
2-Fluorophenol (Surr)	*65*		*19 - 119*
Nitrobenzene-d5 (Surr)	*96*		*44 - 120*
Phenol-d5 (Surr)	*44*		*10 - 120*
Terphenyl-d14	*106*		*50 - 134*
2,4,6-Tribromophenol	*94*		*43 - 140*

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

Lab Sample ID: MB 580-377287/1-A
Matrix: Water
Analysis Batch: 377293

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377287

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.045	U	0.25	0.045	mg/L		01/03/22 11:09	01/03/22 19:51	1
C24-C40	0.090	U	0.25	0.090	mg/L		01/03/22 11:09	01/03/22 19:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*56 - 125*	*01/03/22 11:09*	*01/03/22 19:51*	*1*

Lab Sample ID: LCS 580-377287/2-A
Matrix: Water
Analysis Batch: 377293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377287

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C9-C25			4.00	2.74		mg/L		68	36 - 132
C24-C40			4.00	3.86		mg/L		97	41 - 113

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*70*		*56 - 125*

Lab Sample ID: LCSD 580-377287/3-A
Matrix: Water
Analysis Batch: 377293

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377287

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C25			4.00	2.87		mg/L		72	36 - 132	5	20
C24-C40			4.00	3.98		mg/L		99	41 - 113	3	20

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

Lab Sample ID: LCSD 580-377287/3-A
Matrix: Water
Analysis Batch: 377293

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377287

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	*78*		*56 - 125*

Lab Chronicle

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108868-1

Client Sample ID: D2-DWS-TB02-429-123121-N

Lab Sample ID: 580-108868-1

Date Collected: 12/31/21 11:53

Matrix: Water

Date Received: 01/02/22 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377336	01/03/22 23:02	JBT	FGS SEA
Total/NA	Analysis	8260D		1	377368	01/03/22 23:02	JSM	FGS SEA

Client Sample ID: D2-DWS-D2-429-123121-N

Lab Sample ID: 580-108868-2

Date Collected: 12/31/21 11:58

Matrix: Water

Date Received: 01/02/22 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377336	01/03/22 23:26	JBT	FGS SEA
Total/NA	Analysis	8260D		1	377410	01/04/22 14:51	JSM	FGS SEA
Total/NA	Prep	3510C			377294	01/03/22 11:47	M1E	FGS SEA
Total/NA	Analysis	8270E		1	377363	01/04/22 12:58	E1L	FGS SEA
Total/NA	Prep	3510C			377287	01/03/22 11:09	JHR	FGS SEA
Total/NA	Analysis	8015D DRO		1	377293	01/03/22 20:51	JAE	FGS SEA

Client Sample ID: A2-DWS-A2-3-1-123121-N

Lab Sample ID: 580-108868-3

Date Collected: 12/31/21 12:45

Matrix: Water

Date Received: 01/02/22 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377372	01/04/22 12:03	JSM	FGS SEA
Total/NA	Analysis	8260D		1	377410	01/04/22 15:16	JSM	FGS SEA
Total/NA	Prep	3510C			377294	01/03/22 11:47	M1E	FGS SEA
Total/NA	Analysis	8270E		1	377363	01/04/22 13:21	E1L	FGS SEA
Total/NA	Prep	3510C			377287	01/03/22 11:09	JHR	FGS SEA
Total/NA	Analysis	8015D DRO		1	377293	01/03/22 21:11	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
Project/Site: CV22F0106

Job ID: 580-108868-1

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: CV22F0106

Job ID: 580-108868-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-108868-1	D2-DWS-TB02-429-123121-N	Water	12/31/21 11:53	01/02/22 11:05
580-108868-2	D2-DWS-D2-429-123121-N	Water	12/31/21 11:58	01/02/22 11:05
580-108868-3	A2-DWS-A2-3-1-123121-N	Water	12/31/21 12:45	01/02/22 11:05

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

Chain of Custody Record

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Client Information	Sampler: AECOM	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 01012022 DW-2
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: 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:
City: Honolulu	TAT Requested (days): Rush			
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: CV18F0126	Project #: 60674414			
Site: RHSF	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VOCs (Full Suite + TIC) by 8260	TPH-g (C6-C10) by 8260	SVOCs (Full Suite + TIC) by 8270	TPH-d, TPH-o (C10-C24, C24-C40) by 8015	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	A	I	I		
D2-DW5-TBD2-429-123121-N	12/31/21	1153	G	W	N	N	X	Y			2	
D2-DW5-D2-429-123121-N	12/31/21	1158	G	W	N	N	X	X	X	X	10	
A2-DW5-A2-3-1-123121-N	12/31/21	1245	G	W	N	N	X	X	X	X	10	

580-108868 Chain of Custody

Therm. ID: A2 Cor: 1.7 ° Unc: 2.4 °
Cooler Dsc: cooler #1
Packing: Bub
Cust. Seal: Yes ___ No ___
Blue Ice, Wet, Dry, None
FedEx: ___
UPS: ___
Lab Cour: ___
Other: CD

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
1	[signature]	12/31/21 1335	AECOM	[signature]	12-31-21 1340	AECOM
2	[signature]	1/1/21 1500	AECOM	[signature]	1/2/2022 1020	AECOM
3	[signature]	1/2/2022 1105	AECOM	[signature]	1/2/22 1105	EFGS

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: 580-108868-1

Login Number: 108868
List Number: 1
Creator: Vallelunga, Diana L

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.	N/A	
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 Northwest, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-108869-1
Laboratory Sample Delivery Group: RHSF
Client Project/Site: CV22F0106 Compliance Samples - Homes

For:
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

Attn: Margie F Pascua

M. Elaine Walker

Authorized for release by:
1/4/2022 4:44:53 PM

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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: AECOM
Project/Site: CV22F0106 Compliance Samples - Homes

Job ID: 580-108869-1
SDG: RHSF

Job ID: 580-108869-1

Laboratory: Eurofins Northwest, Seattle

Narrative

Job Narrative
580-108869-1

Receipt
Three samples were received on 1/2/2022 11:05 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.2º C.

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

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

Definitions/Glossary

Client: AECOM
Project/Site: CV22F0106 Compliance Samples - Homes

Job ID: 580-108869-1
SDG: RHSF

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
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: AECOM
Project/Site: CV22F0106 Compliance Samples - Homes

Job ID: 580-108869-1
SDG: RHSF

Client Sample ID: D2-DWS-TBD2-429-010122-N
Date Collected: 01/01/22 11:58
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108869-1
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)	0.031	U	0.10	0.031	mg/L			01/04/22 06:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*80*		*78 - 120*		*01/04/22 06:34*	*1*

Client Sample Results

Client: AECOM
Project/Site: CV22F0106 Compliance Samples - Homes

Job ID: 580-108869-1
SDG: RHSF

Client Sample ID: D2-DWS-D2-429-010122-N

Date Collected: 01/01/22 12:03
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108869-2

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)	0.031	U	0.10	0.031	mg/L			01/04/22 12:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*78 - 120*		*01/04/22 12:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.089	U	0.49	0.089	mg/L		01/02/22 17:20	01/03/22 12:22	1
C24-C40	0.18	U	0.49	0.18	mg/L		01/02/22 17:20	01/03/22 12:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*85*		*53 - 120*	*01/02/22 17:20*	*01/03/22 12:22*	*1*

Client: AECOM
Project/Site: CV22F0106 Compliance Samples - Homes

Job ID: 580-108869-1
SDG: RHSF

Client Sample ID: A2-DWS-A2-3-1-010122-N

Date Collected: 01/01/22 12:47
Date Received: 01/02/22 11:05

Lab Sample ID: 580-108869-3

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)	0.031	U	0.10	0.031	mg/L			01/04/22 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*89*		*78 - 120*		*01/04/22 12:51*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.087	U	0.48	0.087	mg/L		01/02/22 17:20	01/03/22 12:42	1
C24-C40	0.17	U	0.48	0.17	mg/L		01/02/22 17:20	01/03/22 12:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*78*		*53 - 120*	*01/02/22 17:20*	*01/03/22 12:42*	*1*

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

Lab Sample ID: MB 580-377348/4
Matrix: Water
Analysis Batch: 377348

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)	0.031	U	0.10	0.031	mg/L			01/03/22 20:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*85*		*78 - 120*		*01/03/22 20:40*	*1*

Lab Sample ID: LCS 580-377348/5
Matrix: Water
Analysis Batch: 377348

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)	1.00	1.01		mg/L		101	75 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*89*		*78 - 120*

Lab Sample ID: LCSD 580-377348/6
Matrix: Water
Analysis Batch: 377348

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)	1.00	0.952		mg/L		95	75 - 127	6	13

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*86*		*78 - 120*

Lab Sample ID: MB 580-377372/4
Matrix: Water
Analysis Batch: 377372

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)	0.031	U	0.10	0.031	mg/L			01/04/22 10:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*78 - 120*		*01/04/22 10:03*	*1*

Lab Sample ID: LCS 580-377372/5
Matrix: Water
Analysis Batch: 377372

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)	1.00	0.958		mg/L		96	75 - 127

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*78 - 120*

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

Lab Sample ID: LCSD 580-377372/6
Matrix: Water
Analysis Batch: 377372

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)			1.00	0.869		mg/L		87	75 - 127	10	13

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*78 - 120*

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

Lab Sample ID: MB 580-377266/1-A
Matrix: Water
Analysis Batch: 377293

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.090	U	0.50	0.090	mg/L		01/02/22 17:20	01/03/22 11:22	1
C24-C40	0.18	U	0.50	0.18	mg/L		01/02/22 17:20	01/03/22 11:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*82*		*53 - 120*	*01/02/22 17:20*	*01/03/22 11:22*	*1*

Lab Sample ID: LCS 580-377266/2-A
Matrix: Water
Analysis Batch: 377293

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377266

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C9-C25			4.00	3.11		mg/L		78	55 - 134
C24-C40			4.00	3.49		mg/L		87	36 - 143

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*75*		*53 - 120*

Lab Sample ID: LCSD 580-377266/3-A
Matrix: Water
Analysis Batch: 377293

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377266

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C25			4.00	3.30		mg/L		82	55 - 134	6	26
C24-C40			4.00	3.81		mg/L		95	36 - 143	9	24

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*79*		*53 - 120*

Lab Chronicle

Client: AECOM
Project/Site: CV22F0106 Compliance Samples - Homes

Job ID: 580-108869-1
SDG: RHSF

Client Sample ID: D2-DWS-TBD2-429-010122-N
Lab Sample ID: 580-108869-1
Date Collected: 01/01/22 11:58
Matrix: Water
Date Received: 01/02/22 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	377348	01/04/22 06:34	JBT	FGS SEA

Client Sample ID: D2-DWS-D2-429-010122-N
Lab Sample ID: 580-108869-2
Date Collected: 01/01/22 12:03
Matrix: Water
Date Received: 01/02/22 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	377372	01/04/22 12:27	JSM	FGS SEA
Total/NA	Prep	3510C			377266	01/02/22 17:20	M1E	FGS SEA
Total/NA	Analysis	8015D		1	377293	01/03/22 12:22	JAE	FGS SEA

Client Sample ID: A2-DWS-A2-3-1-010122-N
Lab Sample ID: 580-108869-3
Date Collected: 01/01/22 12:47
Matrix: Water
Date Received: 01/02/22 11:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	377372	01/04/22 12:51	JSM	FGS SEA
Total/NA	Prep	3510C			377266	01/02/22 17:20	M1E	FGS SEA
Total/NA	Analysis	8015D		1	377293	01/03/22 12:42	JAE	FGS SEA

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 580-108869-1
Project/Site: CV22F0106 Compliance Samples - Homes
SDG: RHSF

Laboratory: Eurofins Northwest, Seattle

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

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

Sample Summary

Client: AECOM
Project/Site: CV22F0106 Compliance Samples - Homes

Job ID: 580-108869-1
SDG: RHSF

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-108869-1	D2-DWS-TBD2-429-010122-N	Water	01/01/22 11:58	01/02/22 11:05
580-108869-2	D2-DWS-D2-429-010122-N	Water	01/01/22 12:03	01/02/22 11:05
580-108869-3	A2-DWS-A2-3-1-010122-N	Water	01/01/22 12:47	01/02/22 11:05

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: 01012022 DW - 2
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): 48hrs			
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 TPH-g (HCl)	EPA 8015 TPH-d/o (HCl)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	A		
D2-DWS-TBD2-429-010122-N	1/1/22	1158	G	W	N	N	X		2	
D2-DWS-D2-429-010122-N		1203	G	W	N	N	X	X	5	
A2-DWS-A2-3-1-010122-N		1247	G	W	N	N	X	X	5	

580-108869 Chain of Custody

Therm. ID: [illegible] Cor: 0.2° Unc: 1.9°
Cooler Dsc: Ice blue
Packing: bubble bags
Cust. Seal: Yes X No
Blue Ice, Wet, Dry, None
FedEx:
UPS:
Lab Cour:
Other: Client

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
[signature]	1/1/22 1420	AECOM	Brandon Yang	1/1/22 1940	AECOM
Brandon Yang	1/1/22 1500	AECOM	[signature]	1/2/2022 1020	AECOM
[signature]	1/2/2022 1105	AECOM	Tracy Button	1/2/2022 1105	EFGS

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: 580-108869-1
SDG Number: RHSF

Login Number: 108869
List Number: 1
Creator: Allen, Kristine D

List Source: Eurofins Northwest, 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	

eurofins | Environment Testing America

ANALYTICAL REPORT

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

Laboratory Job ID: 580-109009-1
Client Project/Site: Red Hill CV22F0106
Revision: 1

For:
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

Attn: Margie F Pascua

Kristine D. Allen

Authorized for release by:
1/9/2022 9:13:14 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

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: AECOM
Project/Site: Red Hill CV22F0106

Job ID: 580-109009-1

Job ID: 580-109009-1

Laboratory: Eurofins Seattle

Narrative

Report was revised to change the report formatter per client request.

Job Narrative
580-109009-1

Comments
No additional comments.

Receipt
The samples were received on 1/6/2022 10:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.0º C.

GC/MS VOA
Method 8260/CALUFT DOD: The surrogate recovery for the blank associated with analytical batch 580-377733 was outside the upper control limits. Sample surrogate recovery was within the acceptance criteria; therefore data have been reported.

Methods 8260B/CA_LUFTMS: Internal standard, Chlorobenzene-d5, is low in the method blank. This creates a high bias in the surrogate for the method blank. IS recovery is within limits for all samples and have been reported. (MB 580-377733/5)

Methods 8260B/CA_LUFTMS: The surrogate recovery for the closing CCV associated with analytical batch 580-377733 was outside the upper control limits. All of the samples are all non detect.

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

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

Definitions/Glossary

Client: AECOM
Job ID: 580-109009-1
Project/Site: Red Hill CV22F0106

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
Q	One or more quality control criteria failed.
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: AECOM
Project/Site: Red Hill CV22F0106

Job ID: 580-109009-1

Client Sample ID: 20220104-A2-ZT06
Date Collected: 01/04/22 14:10
Date Received: 01/06/22 10:50

Lab Sample ID: 580-109009-1
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)	0.031	U	0.10	0.031	mg/L			01/06/22 15:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*	*Q*	*69 - 133*		*01/06/22 15:27*	*1*

Client: AECOM
Project/Site: Red Hill CV22F0106

Job ID: 580-109009-1

Client Sample ID: 20220104-A2-ZT07

Date Collected: 01/04/22 14:30
Date Received: 01/06/22 10:50

Lab Sample ID: 580-109009-2

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)	0.031	U	0.10	0.031	mg/L			01/06/22 15:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*116*	*Q*	*69 - 133*		*01/06/22 15:52*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.092	U	0.11	0.092	mg/L		01/06/22 17:38	01/07/22 00:09	1
C24-C40	0.18	U	0.36	0.18	mg/L		01/06/22 17:38	01/07/22 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*81*		*56 - 125*	*01/06/22 17:38*	*01/07/22 00:09*	*1*

Client: AECOM
Project/Site: Red Hill CV22F0106

Job ID: 580-109009-1

Client Sample ID: 20220104-A2-ZT08

Date Collected: 01/04/22 15:35
Date Received: 01/06/22 10:50

Lab Sample ID: 580-109009-3

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)	0.031	U	0.10	0.031	mg/L			01/06/22 16:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*	*Q*	*69 - 133*		*01/06/22 16:18*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.093	U	0.11	0.093	mg/L		01/06/22 17:38	01/07/22 00:49	1
C24-C40	0.19	U	0.36	0.19	mg/L		01/06/22 17:38	01/07/22 00:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*56 - 125*	*01/06/22 17:38*	*01/07/22 00:49*	*1*

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

Lab Sample ID: MB 580-377733/5
Matrix: Water
Analysis Batch: 377733

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)	0.031	U	0.10	0.031	mg/L			01/06/22 12:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*130*	**3*	*69 - 133*		*01/06/22 12:54*	*1*

Lab Sample ID: LCS 580-377733/8
Matrix: Water
Analysis Batch: 377733

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)			1.00	0.995		mg/L		99	78 - 122		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*69 - 133*

Lab Sample ID: LCSD 580-377733/9
Matrix: Water
Analysis Batch: 377733

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)			1.00	1.07		mg/L		107	78 - 122	8	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*118*		*69 - 133*

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

Lab Sample ID: MB 580-377585/1-A
Matrix: Water
Analysis Batch: 377651

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 377585

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.090	U	0.11	0.090	mg/L		01/06/22 10:45	01/06/22 21:07	1
C24-C40	0.18	U	0.35	0.18	mg/L		01/06/22 10:45	01/06/22 21:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*77*		*56 - 125*	*01/06/22 10:45*	*01/06/22 21:07*	*1*

Lab Sample ID: LCS 580-377585/2-A
Matrix: Water
Analysis Batch: 377651

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377585

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C9-C25			4.00	2.79		mg/L		70	36 - 132		
C24-C40			4.00	3.32		mg/L		83	41 - 113		

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

Lab Sample ID: LCS 580-377585/2-A
Matrix: Water
Analysis Batch: 377651

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 377585

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	*70*		*56 - 125*

Lab Sample ID: LCSD 580-377585/3-A
Matrix: Water
Analysis Batch: 377651

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 377585

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C25			4.00	2.98		mg/L		74	36 - 132	7	20
C24-C40			4.00	3.67		mg/L		92	41 - 113	10	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	*80*		*56 - 125*

Lab Chronicle

Client: AECOM
Job ID: 580-109009-1
Project/Site: Red Hill CV22F0106

Client Sample ID: 20220104-A2-ZT06
Lab Sample ID: 580-109009-1
Date Collected: 01/04/22 14:10
Matrix: Water
Date Received: 01/06/22 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377733	01/06/22 15:27	JSM	FGS SEA

Client Sample ID: 20220104-A2-ZT07
Lab Sample ID: 580-109009-2
Date Collected: 01/04/22 14:30
Matrix: Water
Date Received: 01/06/22 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377733	01/06/22 15:52	JSM	FGS SEA
Total/NA	Prep	3510C			377585	01/06/22 17:38	M1E	FGS SEA
Total/NA	Analysis	8015D DRO		1	377651	01/07/22 00:09	JAE	FGS SEA

Client Sample ID: 20220104-A2-ZT08
Lab Sample ID: 580-109009-3
Date Collected: 01/04/22 15:35
Matrix: Water
Date Received: 01/06/22 10:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377733	01/06/22 16:18	JSM	FGS SEA
Total/NA	Prep	3510C			377585	01/06/22 17:38	M1E	FGS SEA
Total/NA	Analysis	8015D DRO		1	377651	01/07/22 00:49	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: 580-109009-1
Project/Site: Red Hill CV22F0106

Laboratory: Eurofins Seattle

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

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

Sample Summary

Client: AECOM
Project/Site: Red Hill CV22F0106

Job ID: 580-109009-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-109009-1	20220104-A2-ZT06	Water	01/04/22 14:10	01/06/22 10:50
580-109009-2	20220104-A2-ZT07	Water	01/04/22 14:30	01/06/22 10:50
580-109009-3	20220104-A2-ZT08	Water	01/04/22 15:35	01/06/22 10:50

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: AO, MG	Lab PM: Elaine Walker	Carrier Tracking No(s): FedEx	COC No: 01052022 DW-01
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): 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)	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		
20220104-A2-ZT06	1/4/2022	1410	~~RB~~	W			X		2	
20220104-A2-ZT07	1/4/2022	1430	G	W			X	X	5	250ML labeled with HCL, NO HCL present
20220104-A2-ZT08	1/4/2022	1535	G	W			X	X	5	

01/04/22

580-109009 Chain of Custody

Therm. ID: A1 Cor: 0.0 ° Unc: 0.3 °
Cooler Dsc: Lg Bl
Packing: Bub
Cust. Seal: Yes X No
Blue Ice, Wet, Dry, None
FedEx: PD
UPS:
Lab Cour:
Other:

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
Aaron Oliver	01/04/22 1600	AECOM	Thomas Aguib	01/04/22 1600	AECOM
Thomas Aguib	01/05/22 1200	AECOM		1/6/22 1050	EFGS

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: 580-109009-1

Login Number: 109009
List Number: 1
Creator: Vallelunga, Diana L

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.	N/A	
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:	2A02022	**Report Date:**	1/08/2022
		Received Date:	01/02/2022
Project:	60571032.00.93.01	**Turnaround Time:**	Normal
		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 1/02/22 with the Chain-of-Custody document. The samples were received in good condition, at 3.0 °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

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634

www.wecklabs.com

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

Project Number: 60571032.00.93.01

Project Manager: Margie Pascua

Reported:
01/08/2022 10:50

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
D2-DWS-D2-429-010122-N	AECOM	2A02022-02	Water	01/01/22 12:03	
A2-DWS-A2-3-1-010122-N	AECOM	2A02022-03	Water	01/01/22 12:47	

14859 Clark Avenue,City of Industry CA, 91745 | Phone: (626) 336-2139 | Fax: (626) 336-2634

www.wecklabs.com

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

Project Number: 60571032.00.93.01

Project Manager: Margie Pascua

Reported:
01/08/2022 10:50

Sample Results

Sample: D2-DWS-D2-429-010122-N
2A02022-02 (Water)

Sampled: 01/01/22 12:03 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: W2A0143 **Preparation:** EPA 508.1/SPE			**Prepared:** 01/04/22 11:59				**Analyst:** rjg
Aroclor 1016	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1221	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1232	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1242	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1248	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1254	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1260	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Chlordane (tech)	ND	0.067	0.10	ug/l	1	01/05/22	U
PCBs, Total	ND		0.50	ug/l	1	01/05/22	U
Surrogate(s)							
4,4-Dibromobiphenyl	*107%*	*Conc: 0.108*	*70-130*			*01/05/22*	
Metals by EPA 200 Series Methods							
Method: EPA 200.8			**Instr:** ICPMS04				
Batch ID: W2A0024 **Preparation:** EPA 200.2			**Prepared:** 01/02/22 15:25				**Analyst:** chc
Antimony, Total	ND	0.089	0.50	ug/l	1	01/03/22	U
Arsenic, Total	ND	0.074	0.40	ug/l	1	01/04/22	U
Barium, Total	**2.2**	0.14	1.0	ug/l	1	01/03/22	
Beryllium, Total	ND	0.062	0.10	ug/l	1	01/03/22	U
Cadmium, Total	ND	0.042	0.20	ug/l	1	01/04/22	U
Chromium, Total	**1.4**	0.089	0.20	ug/l	1	01/04/22	
Copper, Total	**2.9**	0.23	0.50	ug/l	1	01/03/22	
Lead, Total	**0.38**	0.083	0.20	ug/l	1	01/03/22	
Selenium, Total	ND	0.067	0.40	ug/l	1	01/04/22	U
Thallium, Total	ND	0.021	0.20	ug/l	1	01/03/22	U
Method: EPA 245.1			**Instr:** HG03				
Batch ID: W2A0037 **Preparation:** EPA 245.1			**Prepared:** 01/04/22 10:10				**Analyst:** kvm
Mercury, Total	ND	0.017	0.050	ug/l	1	01/04/22	U
Semivolatile Organic Compounds by GC/MS							
Method: EPA 525.2			**Instr:** GCMS16				
Batch ID: W2A0029 **Preparation:** EPA 525.2/SPE			**Prepared:** 01/03/22 08:34				**Analyst:** rmr
1-Methylnaphthalene	ND	0.0080	0.050	ug/l	1	01/05/22	U
2-Methylnaphthalene	ND	0.0090	0.050	ug/l	1	01/05/22	U
Alachlor	ND	0.011	0.10	ug/l	1	01/05/22	U
Atrazine	ND	0.0073	0.10	ug/l	1	01/05/22	U
Benzo (a) pyrene	ND	0.012	0.050	ug/l	1	01/05/22	BS-04, U
Bis(2-ethylhexyl)adipate	**0.12**	0.0096	5.0	ug/l	1	01/05/22	J

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Sample Results

(Continued)

Sample: D2-DWS-D2-429-010122-N
2A02022-02 (Water)

Sampled: 01/01/22 12:03 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: W2A0029 **Preparation:** EPA 525.2/SPE			**Prepared:** 01/03/22 08:34				**Analyst:** rmr
Bis(2-ethylhexyl)phthalate	ND	0.44	3.0	ug/l	1	01/05/22	U
Endrin	ND	0.0099	0.20	ug/l	1	01/05/22	U
gamma-BHC (Lindane)	ND	0.0063	0.10	ug/l	1	01/05/22	U
Heptachlor	ND	0.0096	0.10	ug/l	1	01/05/22	BS-04, U
Heptachlor epoxide	ND	0.012	0.10	ug/l	1	01/05/22	U
Hexachlorobenzene	ND	0.098	0.10	ug/l	1	01/05/22	Q-02, U
Hexachlorocyclopentadiene	ND	0.0059	1.0	ug/l	1	01/05/22	U
Methoxychlor	ND	0.0086	0.20	ug/l	1	01/05/22	U
Naphthalene	ND	0.010	0.050	ug/l	1	01/05/22	U
Pentachlorophenol	ND	0.024	1.0	ug/l	1	01/05/22	U
Simazine	ND	0.0073	0.10	ug/l	1	01/05/22	U
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*113%*	*Conc: 0.592*	*70-130*			*01/05/22*	
Perylene-d12	*92%*	*Conc: 0.481*	*70-130*			*01/05/22*	
Triphenyl phosphate	*106%*	*Conc: 0.556*	*70-130*			*01/05/22*	

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Sample Results

(Continued)

Sample: A2-DWS-A2-3-1-010122-N
2A02022-03 (Water)

Sampled: 01/01/22 12:47 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: W2A0143 **Preparation:** EPA 508.1/SPE			**Prepared:** 01/04/22 11:59				**Analyst:** rjg
Aroclor 1016	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1221	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1232	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1242	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1248	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1254	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Aroclor 1260	ND	0.10	0.10	ug/l	1	01/05/22	R-01, U
Chlordane (tech)	ND	0.067	0.10	ug/l	1	01/05/22	U
PCBs, Total	ND		0.50	ug/l	1	01/05/22	U
Surrogate(s)							
4,4-Dibromobiphenyl	*115%*	*Conc: 0.116*	*70-130*			*01/05/22*	
Metals by EPA 200 Series Methods							
Method: EPA 200.8			**Instr:** ICPMS04				
Batch ID: W2A0024 **Preparation:** EPA 200.2			**Prepared:** 01/02/22 15:25				**Analyst:** chc
Antimony, Total	ND	0.089	0.50	ug/l	1	01/03/22	U
Arsenic, Total	ND	0.074	0.40	ug/l	1	01/04/22	U
Barium, Total	**1.9**	0.14	1.0	ug/l	1	01/03/22	
Beryllium, Total	ND	0.062	0.10	ug/l	1	01/03/22	U
Cadmium, Total	ND	0.042	0.20	ug/l	1	01/04/22	U
Chromium, Total	**1.5**	0.089	0.20	ug/l	1	01/04/22	
Copper, Total	**2.2**	0.23	0.50	ug/l	1	01/03/22	
Lead, Total	**0.19**	0.083	0.20	ug/l	1	01/03/22	J
Nickel, Total	ND		2.0	ug/l	1	01/03/22	
Selenium, Total	**0.12**	0.067	0.40	ug/l	1	01/04/22	J
Thallium, Total	ND	0.021	0.20	ug/l	1	01/03/22	U
Method: EPA 245.1			**Instr:** HG03				
Batch ID: W2A0037 **Preparation:** EPA 245.1			**Prepared:** 01/04/22 10:10				**Analyst:** kvm
Mercury, Total	ND	0.017	0.050	ug/l	1	01/04/22	U
Semivolatile Organic Compounds by GC/MS							
Method: EPA 525.2			**Instr:** GCMS16				
Batch ID: W2A0029 **Preparation:** EPA 525.2/SPE			**Prepared:** 01/03/22 08:34				**Analyst:** rmr
1-Methylnaphthalene	ND	0.0080	0.050	ug/l	1	01/05/22	U
2-Methylnaphthalene	ND	0.0090	0.050	ug/l	1	01/05/22	U
Alachlor	ND	0.011	0.10	ug/l	1	01/05/22	U
Atrazine	ND	0.0073	0.10	ug/l	1	01/05/22	U
Benzo (a) pyrene	ND	0.012	0.050	ug/l	1	01/05/22	BS-04, U

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01/08/2022 10:50

Sample Results

(Continued)

Sample: A2-DWS-A2-3-1-010122-N
2A02022-03 (Water)

Sampled: 01/01/22 12:47 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: W2A0029 **Preparation:** EPA 525.2/SPE			**Prepared:** 01/03/22 08:34				**Analyst:** rmr
Bis(2-ethylhexyl)adipate	ND	0.0096	5.0	ug/l	1	01/05/22	U
Bis(2-ethylhexyl)phthalate	ND	0.44	3.0	ug/l	1	01/05/22	U
Endrin	ND	0.0099	0.20	ug/l	1	01/05/22	U
gamma-BHC (Lindane)	ND	0.0063	0.10	ug/l	1	01/05/22	U
Heptachlor	ND	0.0096	0.10	ug/l	1	01/05/22	BS-04, U
Heptachlor epoxide	ND	0.012	0.10	ug/l	1	01/05/22	U
Hexachlorobenzene	ND	0.098	0.10	ug/l	1	01/05/22	Q-02, U
Hexachlorocyclopentadiene	ND	0.0059	1.0	ug/l	1	01/05/22	U
Methoxychlor	**0.0098**	0.0086	0.20	ug/l	1	01/05/22	J
Naphthalene	ND	0.010	0.050	ug/l	1	01/05/22	U
Pentachlorophenol	ND	0.024	1.0	ug/l	1	01/05/22	U
Simazine	ND	0.0073	0.10	ug/l	1	01/05/22	U
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*117%*	*Conc: 0.597*	*70-130*			*01/05/22*	
Perylene-d12	*104%*	*Conc: 0.532*	*70-130*			*01/05/22*	
Triphenyl phosphate	*107%*	*Conc: 0.545*	*70-130*			*01/05/22*	

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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: W2A0143 - EPA 508.1											
Blank (W2A0143-BLK1)					**Prepared: 01/04/22 Analyzed: 01/05/22**						
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	*0.0920*			*ug/l*	*0.100*		*92*	*70-130*			
LCS (W2A0143-BS1)					**Prepared: 01/04/22 Analyzed: 01/05/22**						
Aroclor 1016	1.08	0.016	0.10	ug/l	0.500		216	70-130			Q-08
Aroclor 1260	0.483	0.038	0.10	ug/l	0.500		97	70-130			
Surrogate(s)											
4,4-Dibromobiphenyl	*0.102*			*ug/l*	*0.100*		*102*	*70-130*			
LCS (W2A0143-BS2)					**Prepared: 01/04/22 Analyzed: 01/05/22**						
Chlordane (tech)	0.455	0.067	0.10	ug/l	0.500		91	70-130			
Surrogate(s)											
4,4-Dibromobiphenyl	*0.106*			*ug/l*	*0.100*		*106*	*70-130*			
LCS Dup (W2A0143-BSD1)					**Prepared: 01/04/22 Analyzed: 01/05/22**						
Aroclor 1016	1.71	0.016	0.10	ug/l	0.500		342	70-130	45	30	Q-08
Aroclor 1260	0.568	0.038	0.10	ug/l	0.500		114	70-130	16	30	
Surrogate(s)											
4,4-Dibromobiphenyl	*0.108*			*ug/l*	*0.100*		*108*	*70-130*			

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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: W2A0024 - EPA 200.8											
Blank (W2A0024-BLK1)					**Prepared: 01/02/22 Analyzed: 01/03/22**						
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 (W2A0024-BS1)					**Prepared: 01/02/22 Analyzed: 01/03/22**						
Antimony, Total	47.3	0.089	0.50	ug/l	50.0		95	85-115			
Arsenic, Total	51.5	0.074	0.40	ug/l	50.0		103	85-115			
Barium, Total	48.3	0.14	1.0	ug/l	50.0		97	85-115			
Beryllium, Total	45.7	0.062	0.10	ug/l	50.0		91	85-115			
Cadmium, Total	50.4	0.042	0.20	ug/l	50.0		101	85-115			
Chromium, Total	51.8	0.089	0.20	ug/l	50.0		104	85-115			
Copper, Total	48.4	0.23	0.50	ug/l	50.0		97	85-115			
Lead, Total	48.0	0.083	0.20	ug/l	50.0		96	85-115			
Selenium, Total	51.5	0.067	0.40	ug/l	50.0		103	85-115			
Thallium, Total	48.0	0.021	0.20	ug/l	50.0		96	85-115			
Matrix Spike (W2A0024-MS1)	**Source: 2A02019-01**				**Prepared: 01/02/22 Analyzed: 01/03/22**						
Antimony, Total	50.9	0.089	0.50	ug/l	50.0	ND	102	70-130			
Arsenic, Total	49.9	0.074	0.40	ug/l	50.0	ND	100	70-130			
Barium, Total	53.6	0.14	1.0	ug/l	50.0	1.88	104	70-130			
Beryllium, Total	50.6	0.062	0.10	ug/l	50.0	ND	101	70-130			
Cadmium, Total	49.8	0.042	0.20	ug/l	50.0	ND	100	70-130			
Chromium, Total	51.8	0.089	0.20	ug/l	50.0	1.48	101	70-130			
Copper, Total	68.2	0.23	0.50	ug/l	50.0	18.1	100	70-130			
Lead, Total	49.8	0.083	0.20	ug/l	50.0	0.0992	99	70-130			
Selenium, Total	49.3	0.067	0.40	ug/l	50.0	0.153	98	70-130			
Thallium, Total	49.7	0.021	0.20	ug/l	50.0	ND	99	70-130			
Matrix Spike Dup (W2A0024-MSD1)	**Source: 2A02019-01**				**Prepared: 01/02/22 Analyzed: 01/03/22**						
Antimony, Total	49.7	0.089	0.50	ug/l	50.0	ND	99	70-130	2	30	
Arsenic, Total	48.4	0.074	0.40	ug/l	50.0	ND	97	70-130	3	30	
Barium, Total	52.6	0.14	1.0	ug/l	50.0	1.88	101	70-130	2	30	
Beryllium, Total	49.7	0.062	0.10	ug/l	50.0	ND	99	70-130	2	30	
Cadmium, Total	48.5	0.042	0.20	ug/l	50.0	ND	97	70-130	3	30	
Chromium, Total	50.0	0.089	0.20	ug/l	50.0	1.48	97	70-130	3	30	

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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: W2A0024 - EPA 200.8 (Continued)											
Matrix Spike Dup (W2A0024-MSD1)	**Source: 2A02019-01**				**Prepared: 01/02/22**	**Analyzed: 01/04/22**					
Copper, Total	66.8	0.23	0.50	ug/l	50.0	18.1	97	70-130	2	30	
Lead, Total	49.4	0.083	0.20	ug/l	50.0	0.0992	99	70-130	0.6	30	
Selenium, Total	47.7	0.067	0.40	ug/l	50.0	0.153	95	70-130	3	30	
Thallium, Total	48.8	0.021	0.20	ug/l	50.0	ND	98	70-130	2	30	
Batch: W2A0037 - EPA 245.1											
Blank (W2A0037-BLK1)					**Prepared & Analyzed: 01/04/22**						
Mercury, Total	ND	0.017	0.050	ug/l							U
LCS (W2A0037-BS1)					**Prepared & Analyzed: 01/04/22**						
Mercury, Total	1.02	0.017	0.050	ug/l	1.00		102	85-115			
Matrix Spike (W2A0037-MS1)	**Source: 2A02016-01**				**Prepared & Analyzed: 01/04/22**						
Mercury, Total	1.09	0.017	0.050	ug/l	1.00	ND	109	70-130			
Matrix Spike (W2A0037-MS2)	**Source: 2A02024-01**				**Prepared & Analyzed: 01/04/22**						
Mercury, Total	1.05	0.017	0.050	ug/l	1.00	ND	105	70-130			
Matrix Spike Dup (W2A0037-MSD1)	**Source: 2A02016-01**				**Prepared & Analyzed: 01/04/22**						
Mercury, Total	1.05	0.017	0.050	ug/l	1.00	ND	105	70-130	4	20	
Matrix Spike Dup (W2A0037-MSD2)	**Source: 2A02024-01**				**Prepared & Analyzed: 01/04/22**						
Mercury, Total	1.05	0.017	0.050	ug/l	1.00	ND	105	70-130	0.3	20	

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01/08/2022 10:50

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: W2A0029 - EPA 525.2											
Blank (W2A0029-BLK1)					**Prepared: 01/03/22 Analyzed: 01/04/22**						
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	ND	0.0096	5.0	ug/l							U
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	*0.534*			*ug/l*	*0.500*		*107*	*70-130*			
Perylene-d12	*0.472*			*ug/l*	*0.500*		*94*	*70-130*			
Triphenyl phosphate	*0.515*			*ug/l*	*0.500*		*103*	*70-130*			
LCS (W2A0029-BS1)					**Prepared: 01/03/22 Analyzed: 01/04/22**						
1-Methylnaphthalene	0.212	0.0080	0.050	ug/l	0.250		85	70-130			
2-Methylnaphthalene	0.227	0.0090	0.050	ug/l	0.250		91	70-130			
Alachlor	0.470	0.011	0.10	ug/l	0.500		94	70-130			
Atrazine	0.232	0.0073	0.10	ug/l	0.250		93	70-130			
Benzo (a) pyrene	0.172	0.012	0.050	ug/l	0.250		69	60-130			
Bis(2-ethylhexyl)adipate	0.179	0.0096	5.0	ug/l	0.250		72	70-130			J
Bis(2-ethylhexyl)phthalate	0.232	0.0	3.0	ug/l	0.250		93	70-130			J
Endrin	0.197	0.0099	0.20	ug/l	0.250		79	70-130			J
gamma-BHC (Lindane)	0.240	0.0063	0.10	ug/l	0.250		96	70-130			
Heptachlor	0.185	0.0096	0.10	ug/l	0.250		74	70-130			
Heptachlor epoxide	0.218	0.012	0.10	ug/l	0.250		87	70-130			
Hexachlorobenzene	0.0311	0.0	0.10	ug/l	0.0500		62	70-130			Q-02, J
Hexachlorocyclopentadiene	0.128	0.0059	1.0	ug/l	0.250		51	33-106			J
Methoxychlor	0.206	0.0086	0.20	ug/l	0.250		83	70-130			
Naphthalene	0.228	0.010	0.050	ug/l	0.250		91	70-130			
Pentachlorophenol	0.239	0.024	1.0	ug/l	0.250		95	50-120			J
Simazine	0.227	0.0073	0.10	ug/l	0.250		91	60-130			

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Honolulu, HI 96813

Project Number: 60571032.00.93.01

Project Manager: Margie Pascua

Reported:
01/08/2022 10:50

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: W2A0029 - EPA 525.2 (Continued)											
LCS (W2A0029-BS1)					**Prepared: 01/03/22 Analyzed: 01/04/22**						
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*0.553*			*ug/l*	*0.500*		*111*	*70-130*			
Perylene-d12	*0.511*			*ug/l*	*0.500*		*102*	*70-130*			
Triphenyl phosphate	*0.546*			*ug/l*	*0.500*		*109*	*70-130*			
LCS Dup (W2A0029-BSD1)					**Prepared: 01/03/22 Analyzed: 01/04/22**						
1-Methylnaphthalene	0.218	0.0080	0.050	ug/l	0.250		87	70-130	3	30	
2-Methylnaphthalene	0.231	0.0090	0.050	ug/l	0.250		92	70-130	2	30	
Alachlor	0.511	0.011	0.10	ug/l	0.500		102	70-130	8	30	
Atrazine	0.211	0.0073	0.10	ug/l	0.250		85	70-130	9	30	
Benzo (a) pyrene	0.142	0.012	0.050	ug/l	0.250		57	60-130	19	30	BS-04
Bis(2-ethylhexyl)adipate	0.192	0.0096	5.0	ug/l	0.250		77	70-130	7	30	J
Bis(2-ethylhexyl)phthalate	0.235	0.0	3.0	ug/l	0.250		94	70-130	1	30	J
Endrin	0.216	0.0099	0.20	ug/l	0.250		86	70-130	9	30	
gamma-BHC (Lindane)	0.240	0.0063	0.10	ug/l	0.250		96	70-130	0.04	30	
Heptachlor	0.167	0.0096	0.10	ug/l	0.250		67	70-130	11	30	BS-04
Heptachlor epoxide	0.223	0.012	0.10	ug/l	0.250		89	70-130	2	30	
Hexachlorobenzene	0.0291	0.0	0.10	ug/l	0.0500		58	70-130	7	30	Q-02, J
Hexachlorocyclopentadiene	0.111	0.0059	1.0	ug/l	0.250		44	33-106	14	30	J
Methoxychlor	0.200	0.0086	0.20	ug/l	0.250		80	70-130	3	30	
Naphthalene	0.237	0.010	0.050	ug/l	0.250		95	70-130	4	30	
Pentachlorophenol	0.179	0.024	1.0	ug/l	0.250		71	50-120	29	30	J
Simazine	0.245	0.0073	0.10	ug/l	0.250		98	60-130	7	30	
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*0.566*			*ug/l*	*0.500*		*113*	*70-130*			
Perylene-d12	*0.485*			*ug/l*	*0.500*		*97*	*70-130*			
Triphenyl phosphate	*0.536*			*ug/l*	*0.500*		*107*	*70-130*			

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Project Number: 60571032.00.93.01

Project Manager: Margie Pascua

Reported:
01/08/2022 10:50

Notes and Definitions

Item	Definition
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
J	Estimated conc. detected <MRL and >MDL.
Q-02	Low recovery of this analyte in the QC sample. The analysis of the low level standard produced acceptable recovery indicating that the sample result might be accurately reported as Not Detected.
Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit.
R-01	The MDL and/or MRL for this analyte has been raised to account for matrix interference.
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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Certificate of Analysis

FINAL REPORT

Work Orders:	2A06017	**Report Date:**	1/11/2022
		Received Date:	01/06/2022
Project:	60674414, COC # 01052022 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 1/06/22 with the Chain-of-Custody document. The samples were received in good condition, at 2.2 °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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Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported:
01/11/2022 17:38

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
20220104-A2-ZT05	AECOM	2A06017-01	Water	01/04/22 14:10	
20220104-A2-ZT07	AECOM	2A06017-02	Water	01/04/22 14:30	
20220104-D2-ZT08	AECOM	2A06017-03	Water	01/04/22 15:35	

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Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported: 01/11/2022 17:38

Sample Results

Sample: 20220104-A2-ZT05
2A06017-01 (Water)

Sampled: 01/04/22 14:10 by AECOM

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2 **Instr:** GCMS14

Batch ID: W2A0422 **Preparation:** EPA 5030 **Prepared:** 01/09/22 09:16 **Analyst:** cam

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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	*96%*	*Conc: 9.59*	*70-130*		*01/09/22*
4-Bromofluorobenzene	*101%*	*Conc: 10.1*	*70-130*		*01/09/22*

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Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported: 01/11/2022 17:38

Sample Results

(Continued)

Sample: 20220104-A2-ZT07
2A06017-02 (Water)

Sampled: 01/04/22 14:30 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: W2A0464 **Preparation:** EPA 508.1/SPE			**Prepared:** 01/07/22 09:50				**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	*134%*	*Conc: 0.135*	*70-130*			*01/10/22*	*S-03*
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B			**Instr:** TOC02				
Batch ID: W2A0445 **Preparation:** _NONE (TOC/TOX)			**Prepared:** 01/07/22 09:11				**Analyst:** ajc
Total Organic Carbon (TOC)	**0.51**	0.19	0.30	mg/l	1	01/07/22	
Metals by EPA 200 Series Methods							
Method: EPA 200.8			**Instr:** ICPMS04				
Batch ID: W2A0426 **Preparation:** EPA 200.2			**Prepared:** 01/06/22 19:30				**Analyst:** mpn
Antimony, Total	ND	0.089	0.50	ug/l	1	01/10/22	U
Arsenic, Total	**0.10**	0.074	0.40	ug/l	1	01/10/22	J
Barium, Total	**2.0**	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	**1.4**	0.089	0.20	ug/l	1	01/10/22	
Copper, Total	**2.4**	0.23	0.50	ug/l	1	01/10/22	
Lead, Total	**0.23**	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: W2A0447 **Preparation:** EPA 245.1			**Prepared:** 01/07/22 09:19				**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: W2A0460 **Preparation:** EPA 525.2/SPE			**Prepared:** 01/07/22 09:45				**Analyst:** rmr
1-Methylnaphthalene	ND	0.0080	0.050	ug/l	1	01/10/22	U
2-Methylnaphthalene	ND	0.0090	0.050	ug/l	1	01/10/22	U

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Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported: 01/11/2022 17:38

Sample Results

(Continued)

Sample: 20220104-A2-ZT07
2A06017-02 (Water)

Sampled: 01/04/22 14:30 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: W2A0460 **Preparation:** EPA 525.2/SPE			**Prepared:** 01/07/22 09:45				**Analyst:** rmr
Alachlor	ND	0.011	0.10	ug/l	1	01/10/22	U
Atrazine	ND	0.0073	0.10	ug/l	1	01/10/22	U
Benzo (a) pyrene	ND	0.012	0.050	ug/l	1	01/10/22	U
Bis(2-ethylhexyl)adipate	**0.078**	0.0096	5.0	ug/l	1	01/10/22	J
Bis(2-ethylhexyl)phthalate	ND	0.44	3.0	ug/l	1	01/10/22	U
Endrin	ND	0.0099	0.20	ug/l	1	01/10/22	U
gamma-BHC (Lindane)	ND	0.0063	0.10	ug/l	1	01/10/22	U
Heptachlor	ND	0.0096	0.10	ug/l	1	01/10/22	U
Heptachlor epoxide	ND	0.012	0.10	ug/l	1	01/10/22	U
Hexachlorobenzene	ND	0.098	0.10	ug/l	1	01/10/22	BS-04, U
Hexachlorocyclopentadiene	ND	0.0059	1.0	ug/l	1	01/10/22	U
Methoxychlor	ND	0.0086	0.20	ug/l	1	01/10/22	U
Naphthalene	ND	0.010	0.050	ug/l	1	01/10/22	U
Pentachlorophenol	ND	0.024	1.0	ug/l	1	01/10/22	U
Simazine	ND	0.0073	0.10	ug/l	1	01/10/22	U
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*102%*	*Conc: 0.515*	*70-130*			*01/10/22*	
Perylene-d12	*142%*	*Conc: 0.715*	*70-130*			*01/10/22*	*S-11*
Triphenyl phosphate	*149%*	*Conc: 0.753*	*70-130*			*01/10/22*	*S-11*
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			**Instr:** GCMS14				
Batch ID: W2A0422 **Preparation:** EPA 5030			**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 # 01052022 DW-02

Project Manager: Margie Pascua

Reported:
01/11/2022 17:38

Sample Results

(Continued)

Sample: 20220104-A2-ZT07
2A06017-02 (Water)

Sampled: 01/04/22 14:30 by AECOM

(Continued)

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

Method: EPA 524.2 **Instr:** GCMS14

Batch ID: W2A0422 **Preparation:** EPA 5030 **Prepared:** 01/09/22 09:16 **Analyst:** cam

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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	*97%*	*Conc: 9.68*	*70-130*			*01/09/22*	
4-Bromofluorobenzene	*95%*	*Conc: 9.46*	*70-130*			*01/09/22*	

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Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported: 01/11/2022 17:38

Sample Results

(Continued)

Sample: 20220104-D2-ZT08
2A06017-03 (Water)

Sampled: 01/04/22 15:35 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: W2A0464 **Preparation:** EPA 508.1/SPE			**Prepared:** 01/07/22 09:50				**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	*136%*	*Conc: 0.138*	*70-130*			*01/10/22*	*S-03*
Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods							
Method: SM 5310B			**Instr:** TOC02				
Batch ID: W2A0445 **Preparation:** _NONE (TOC/TOX)			**Prepared:** 01/07/22 09:11				**Analyst:** ajc
Total Organic Carbon (TOC)	**0.24**	0.19	0.30	mg/l	1	01/07/22	J
Metals by EPA 200 Series Methods							
Method: EPA 200.8			**Instr:** ICPMS04				
Batch ID: W2A0426 **Preparation:** EPA 200.2			**Prepared:** 01/06/22 19:30				**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	**2.1**	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	**1.4**	0.089	0.20	ug/l	1	01/10/22	
Copper, Total	**1.3**	0.23	0.50	ug/l	1	01/10/22	
Lead, Total	**0.15**	0.083	0.20	ug/l	1	01/10/22	J
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: W2A0447 **Preparation:** EPA 245.1			**Prepared:** 01/07/22 09:19				**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: W2A0460 **Preparation:** EPA 525.2/SPE			**Prepared:** 01/07/22 09:45				**Analyst:** rmr
1-Methylnaphthalene	ND	0.0080	0.050	ug/l	1	01/10/22	U
2-Methylnaphthalene	ND	0.0090	0.050	ug/l	1	01/10/22	U

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Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported: 01/11/2022 17:38

Sample Results

(Continued)

Sample: 20220104-D2-ZT08
2A06017-03 (Water)

Sampled: 01/04/22 15:35 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: W2A0460 **Preparation:** EPA 525.2/SPE			**Prepared:** 01/07/22 09:45				**Analyst:** rmr
Alachlor	ND	0.011	0.10	ug/l	1	01/10/22	U
Atrazine	ND	0.0073	0.10	ug/l	1	01/10/22	U
Benzo (a) pyrene	ND	0.012	0.050	ug/l	1	01/10/22	U
Bis(2-ethylhexyl)adipate	**0.048**	0.0096	5.0	ug/l	1	01/10/22	J
Bis(2-ethylhexyl)phthalate	ND	0.44	3.0	ug/l	1	01/10/22	U
Endrin	ND	0.0099	0.20	ug/l	1	01/10/22	U
gamma-BHC (Lindane)	ND	0.0063	0.10	ug/l	1	01/10/22	U
Heptachlor	ND	0.0096	0.10	ug/l	1	01/10/22	U
Heptachlor epoxide	ND	0.012	0.10	ug/l	1	01/10/22	U
Hexachlorobenzene	ND	0.098	0.10	ug/l	1	01/10/22	BS-04, U
Hexachlorocyclopentadiene	ND	0.0059	1.0	ug/l	1	01/10/22	U
Methoxychlor	ND	0.0086	0.20	ug/l	1	01/10/22	U
Naphthalene	ND	0.010	0.050	ug/l	1	01/10/22	U
Pentachlorophenol	ND	0.024	1.0	ug/l	1	01/10/22	U
Simazine	ND	0.0073	0.10	ug/l	1	01/10/22	U
Surrogate(s)							
1,3-Dimethyl-2-nitrobenzene	*108%*	*Conc: 0.548*	*70-130*			*01/10/22*	
Perylene-d12	*124%*	*Conc: 0.627*	*70-130*			*01/10/22*	
Triphenyl phosphate	*154%*	*Conc: 0.783*	*70-130*			*01/10/22*	*S-11*
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2			**Instr:** GCMS14				
Batch ID: W2A0422 **Preparation:** EPA 5030			**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 # 01052022 DW-02

Project Manager: Margie Pascua

Reported:
01/11/2022 17:38

Sample Results

(Continued)

Sample: 20220104-D2-ZT08
2A06017-03 (Water)

Sampled: 01/04/22 15:35 by AECOM

(Continued)

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

Method: EPA 524.2 **Instr:** GCMS14

Batch ID: W2A0422 **Preparation:** EPA 5030 **Prepared:** 01/09/22 09:16 **Analyst:** cam

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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	*91%*	*Conc: 9.12*	*70-130*			*01/09/22*	
4-Bromofluorobenzene	*90%*	*Conc: 8.99*	*70-130*			*01/09/22*	

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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: W2A0464 - EPA 508.1											
Blank (W2A0464-BLK1)					**Prepared: 01/07/22 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	*0.112*			*ug/l*	*0.100*		*112*	*70-130*			
LCS (W2A0464-BS1)					**Prepared: 01/07/22 Analyzed: 01/10/22**						
Aroclor 1016	0.418	0.016	0.10	ug/l	0.500		84	70-130			
Aroclor 1260	0.536	0.038	0.10	ug/l	0.500		107	70-130			
Surrogate(s)											
4,4-Dibromobiphenyl	*0.122*			*ug/l*	*0.100*		*122*	*70-130*			
LCS Dup (W2A0464-BSD1)					**Prepared: 01/07/22 Analyzed: 01/10/22**						
Aroclor 1016	0.486	0.016	0.10	ug/l	0.500		97	70-130	15	30	
Aroclor 1260	0.529	0.038	0.10	ug/l	0.500		106	70-130	1	30	
Surrogate(s)											
4,4-Dibromobiphenyl	*0.119*			*ug/l*	*0.100*		*119*	*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: W2A0445 - SM 5310B											
Blank (W2A0445-BLK1)					**Prepared & Analyzed: 01/07/22**						
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							U
LCS (W2A0445-BS1)					**Prepared & Analyzed: 01/07/22**						
Total Organic Carbon (TOC)	0.949	0.19	0.30	mg/l	1.00		95	85-115			
Matrix Spike (W2A0445-MS1)	**Source: 2A06017-02**				**Prepared & Analyzed: 01/07/22**						
Total Organic Carbon (TOC)	6.09	0.19	0.30	mg/l	5.00	0.512	111	76-115			
Matrix Spike Dup (W2A0445-MSD1)	**Source: 2A06017-02**				**Prepared & Analyzed: 01/07/22**						
Total Organic Carbon (TOC)	6.11	0.19	0.30	mg/l	5.00	0.512	112	76-115	0.3	20	

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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: W2A0426 - EPA 200.8											
Blank (W2A0426-BLK1)					**Prepared: 01/06/22 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 (W2A0426-BS1)					**Prepared: 01/06/22 Analyzed: 01/10/22**						
Antimony, Total	49.3	0.089	0.50	ug/l	50.0		99	85-115			
Arsenic, Total	46.7	0.074	0.40	ug/l	50.0		93	85-115			
Barium, Total	50.6	0.14	1.0	ug/l	50.0		101	85-115			
Beryllium, Total	47.1	0.062	0.10	ug/l	50.0		94	85-115			
Cadmium, Total	44.6	0.042	0.20	ug/l	50.0		89	85-115			
Chromium, Total	47.6	0.089	0.20	ug/l	50.0		95	85-115			
Copper, Total	51.4	0.23	0.50	ug/l	50.0		103	85-115			
Lead, Total	49.8	0.083	0.20	ug/l	50.0		100	85-115			
Selenium, Total	46.0	0.067	0.40	ug/l	50.0		92	85-115			
Thallium, Total	50.3	0.021	0.20	ug/l	50.0		101	85-115			
Matrix Spike (W2A0426-MS1)	**Source: 1L29021-01**				**Prepared: 01/06/22 Analyzed: 01/10/22**						
Antimony, Total	48.3	0.089	0.50	ug/l	50.0	0.782	95	70-130			
Arsenic, Total	47.7	0.074	0.40	ug/l	50.0	2.05	91	70-130			
Barium, Total	72.4	0.14	1.0	ug/l	50.0	26.9	91	70-130			
Beryllium, Total	44.8	0.062	0.10	ug/l	50.0	ND	90	70-130			
Cadmium, Total	44.9	0.042	0.20	ug/l	50.0	0.0467	90	70-130			
Chromium, Total	47.9	0.089	0.20	ug/l	50.0	0.236	95	70-130			
Copper, Total	46.8	0.23	0.50	ug/l	50.0	1.50	91	70-130			
Lead, Total	46.7	0.083	0.20	ug/l	50.0	ND	93	70-130			
Selenium, Total	56.6	0.067	0.40	ug/l	50.0	12.4	88	70-130			
Thallium, Total	47.3	0.021	0.20	ug/l	50.0	0.0389	95	70-130			
Matrix Spike Dup (W2A0426-MSD1)	**Source: 1L29021-01**				**Prepared: 01/06/22 Analyzed: 01/10/22**						
Antimony, Total	51.4	0.089	0.50	ug/l	50.0	0.782	101	70-130	6	30	
Arsenic, Total	49.4	0.074	0.40	ug/l	50.0	2.05	95	70-130	4	30	
Barium, Total	77.2	0.14	1.0	ug/l	50.0	26.9	101	70-130	7	30	
Beryllium, Total	47.4	0.062	0.10	ug/l	50.0	ND	95	70-130	6	30	
Cadmium, Total	45.9	0.042	0.20	ug/l	50.0	0.0467	92	70-130	2	30	
Chromium, Total	49.2	0.089	0.20	ug/l	50.0	0.236	98	70-130	3	30	

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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: W2A0426 - EPA 200.8 (Continued)											
Matrix Spike Dup (W2A0426-MSD1)	**Source: 1L29021-01**				**Prepared: 01/06/22**	**Analyzed: 01/10/22**					
Copper, Total	49.7	0.23	0.50	ug/l	50.0	1.50	96	70-130	6	30	
Lead, Total	49.8	0.083	0.20	ug/l	50.0	ND	100	70-130	6	30	
Selenium, Total	58.8	0.067	0.40	ug/l	50.0	12.4	93	70-130	4	30	
Thallium, Total	50.6	0.021	0.20	ug/l	50.0	0.0389	101	70-130	7	30	
Batch: W2A0447 - EPA 245.1											
Blank (W2A0447-BLK1)					**Prepared: 01/07/22**	**Analyzed: 01/10/22**					
Mercury, Total	ND	0.017	0.050	ug/l							U
LCS (W2A0447-BS1)					**Prepared: 01/07/22**	**Analyzed: 01/10/22**					
Mercury, Total	1.09	0.017	0.050	ug/l	1.00		109	85-115			
Matrix Spike (W2A0447-MS1)	**Source: 1L20007-03**				**Prepared: 01/07/22**	**Analyzed: 01/10/22**					
Mercury, Total	1.01	0.017	0.050	ug/l	1.00	ND	101	70-130			
Matrix Spike Dup (W2A0447-MSD1)	**Source: 1L20007-03**				**Prepared: 01/07/22**	**Analyzed: 01/10/22**					
Mercury, Total	1.02	0.017	0.050	ug/l	1.00	ND	102	70-130	0.9	20	

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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: W2A0460 - EPA 525.2											
Blank (W2A0460-BLK1)					**Prepared: 01/07/22 Analyzed: 01/10/22**						
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	ND	0.0096	5.0	ug/l							U
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	*0.521*			*ug/l*	*0.500*		*104*	*70-130*			
Perylene-d12	*0.561*			*ug/l*	*0.500*		*112*	*70-130*			
Triphenyl phosphate	*0.713*			*ug/l*	*0.500*		*143*	*70-130*			*S-11*
LCS (W2A0460-BS1)					**Prepared: 01/07/22 Analyzed: 01/10/22**						
1-Methylnaphthalene	0.217	0.0080	0.050	ug/l	0.250		87	70-130			
2-Methylnaphthalene	0.227	0.0090	0.050	ug/l	0.250		91	70-130			
Alachlor	0.499	0.011	0.10	ug/l	0.500		100	70-130			
Atrazine	0.262	0.0073	0.10	ug/l	0.250		105	70-130			
Benzo (a) pyrene	0.167	0.012	0.050	ug/l	0.250		67	60-130			
Bis(2-ethylhexyl)adipate	0.227	0.0096	5.0	ug/l	0.250		91	70-130			J
Bis(2-ethylhexyl)phthalate	0.272	0.0	3.0	ug/l	0.250		109	70-130			J
Endrin	0.291	0.0099	0.20	ug/l	0.250		116	70-130			
gamma-BHC (Lindane)	0.244	0.0063	0.10	ug/l	0.250		98	70-130			
Heptachlor	0.184	0.0096	0.10	ug/l	0.250		74	70-130			
Heptachlor epoxide	0.258	0.012	0.10	ug/l	0.250		103	70-130			
Hexachlorobenzene	0.0344	0.0	0.10	ug/l	0.0500		69	70-130			BS-04, J
Hexachlorocyclopentadiene	0.126	0.0059	1.0	ug/l	0.250		50	33-106			J
Methoxychlor	0.247	0.0086	0.20	ug/l	0.250		99	70-130			
Naphthalene	0.208	0.010	0.050	ug/l	0.250		83	70-130			
Pentachlorophenol	0.302	0.024	1.0	ug/l	0.250		121	50-120			Q-08, J
Simazine	0.265	0.0073	0.10	ug/l	0.250		106	60-130			

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Project Manager: Margie Pascua

Reported: 01/11/2022 17:38

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: W2A0460 - EPA 525.2 (Continued)											
LCS (W2A0460-BS1)					**Prepared: 01/07/22 Analyzed: 01/10/22**						
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*0.496*			*ug/l*	*0.500*		*99*	*70-130*			
Perylene-d12	*0.577*			*ug/l*	*0.500*		*115*	*70-130*			
Triphenyl phosphate	*0.698*			*ug/l*	*0.500*		*140*	*70-130*			*S-11*
LCS Dup (W2A0460-BSD1)					**Prepared: 01/07/22 Analyzed: 01/10/22**						
1-Methylnaphthalene	0.226	0.0080	0.050	ug/l	0.250		90	70-130	4	30	
2-Methylnaphthalene	0.230	0.0090	0.050	ug/l	0.250		92	70-130	1	30	
Alachlor	0.503	0.011	0.10	ug/l	0.500		101	70-130	0.8	30	
Atrazine	0.241	0.0073	0.10	ug/l	0.250		96	70-130	9	30	
Benzo (a) pyrene	0.208	0.012	0.050	ug/l	0.250		83	60-130	22	30	
Bis(2-ethylhexyl)adipate	0.288	0.0096	5.0	ug/l	0.250		115	70-130	23	30	J
Bis(2-ethylhexyl)phthalate	0.351	0.0	3.0	ug/l	0.250		140	70-130	25	30	Q-08, J
Endrin	0.288	0.0099	0.20	ug/l	0.250		115	70-130	1	30	
gamma-BHC (Lindane)	0.245	0.0063	0.10	ug/l	0.250		98	70-130	0.3	30	
Heptachlor	0.188	0.0096	0.10	ug/l	0.250		75	70-130	2	30	
Heptachlor epoxide	0.260	0.012	0.10	ug/l	0.250		104	70-130	0.5	30	
Hexachlorobenzene	0.0355	0.0	0.10	ug/l	0.0500		71	70-130	3	30	J
Hexachlorocyclopentadiene	0.139	0.0059	1.0	ug/l	0.250		56	33-106	10	30	J
Methoxychlor	0.272	0.0086	0.20	ug/l	0.250		109	70-130	9	30	
Naphthalene	0.213	0.010	0.050	ug/l	0.250		85	70-130	2	30	
Pentachlorophenol	0.309	0.024	1.0	ug/l	0.250		124	50-120	2	30	Q-08, J
Simazine	0.289	0.0073	0.10	ug/l	0.250		116	60-130	9	30	
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	*0.490*			*ug/l*	*0.500*		*98*	*70-130*			
Perylene-d12	*0.551*			*ug/l*	*0.500*		*110*	*70-130*			
Triphenyl phosphate	*0.743*			*ug/l*	*0.500*		*149*	*70-130*			*S-11*

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

Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported: 01/11/2022 17:38

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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Honolulu, HI 96813

Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported: 01/11/2022 17:38

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

Project Number: 60674414, COC # 01052022 DW-02

Project Manager: Margie Pascua

Reported:
01/11/2022 17:38

Notes and Definitions

Item	Definition
BS-04	The recovery of this analyte in LCS or LCSD was outside control limit. Sample was accepted based on the remaining LCS, LCSD or LCS-LL.
J	Estimated conc. detected <MRL and >MDL.
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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Standard CHAIN OF CUSTODY RECORD

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2A00017 COC# 0105 2022 DW-02

CLIENT NAME:	PROJECT:
AECOM	60674414
ADDRESS: 1001 Bishop St., Ste. 1600 Honolulu, HI 96813	PHONE: 808-364-8050 FAX: EMAIL: margie.pascua@aecom.com
PROJECT MANAGER: Margie Pascua	SAMPLER: AECOM

ID# (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	Cl_2 Y/N	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	SOCs by 525.2 (sodium sulfite + HCl)	Metals by 200.8/245.1 (nitric acid)	TOC by 5310B (HCl)	VOC	524.2 VOCs
	1/4/22	1410	DW		[redacted] - 2022 01 04 - A2 - ZT05	1					X
	1/4/22	1430	W		2022 01 04 - A2 - ZT07	3	X	X	X	X	X
	1/4/22	1535	W		2022 01 04 - D2 - ZT08	3	X	X	X	X	X

ANALYSES REQUESTED

SPECIAL HANDLING

- [ ] Same Day Rush 150%
- [ ] 24 Hour Rush 100%
- [x] 48-72 Hour Rush 75%
- [ ] 4 - 5 Day Rush 30%
- [ ] Rush Extractions 50%
- [ ] 10 - 15 Business Days
- [ ] QA/QC Data Package

Charges will apply for weekends/holidays

Method of Shipment: FedEx

COMMENTS

Jan 01/04/22

RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME
Aaron Oliver	01/04/22 1600	Thomas Aguilo	01/04/22 1600
Thomas Aguilo	01/05/22 1200		
FedEx	1/6/22		10:04

SAMPLE CONDITION:

Actual Temperature:	Thermometer #:
2.2°C	D230

Received On Ice: Y / N
Samples Preserved: Y / N
Evidence Seals Present: Y / N
Container Attacked: Y / N

SAMPLE TYPE CODE:

DW = Drinking Water
WW = Waste Water
GW = Ground Water
SF = Surface Water
SW = Sea Water
SO = Solid/Soil
SL = Sludge
OL = Oil
OT = Other Matrix

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

SPECIAL REQUIREMENTS / BILLING INFORMATION

COC version: 210609

WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO:	2A06017	Date/Time Received:	01/06/22 @ 10:04
WKO Logged by:	Lester Abad	# of Samples:	03
Samples Checked by:	LKA	Delivered by:	Fedex

	Task	Yes	No	N/A	Comments
COC	COC present at receipt?	☒	☐		
	COC properly completed?	☒	☐		
	COC matches sample labels?	☒	☐		
		☒	☐		
	Project Manager notified?	☐	☐	☒	
Receipt Information	Sample Temperature	2.2°C			
	Samples received on ice?	☒	☐		
	Ice Type (Blue/Wet)	WET			
	All samples intact?	☒	☐		
	Samples in proper containers?	☒	☐		
	Sufficient sample volume?	☒	☐		
	Samples intact?	☒	☐		
	Received within holding time?	☒	☐		
		☐	☐		
	Project Manager notified?	☐	☐	☒	
Sample Preservation Verification?	Sample labels checked for correct preservation?	☐	☐	☒	
	VOC Headspace: none, <6mm/<Pea size? 524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	☐	☒	☒ LKA 1/4	
	pH verified upon receipt? Metals <2; H2SO4 pres tests <2; 522<4; TOC <2; 608.3 5-9	☒	☐	☐	
	Free Chlorine Tested <0.1	☒	☐	☐	
	O&G pH <2 verified?	☐	☐	☐	pH paper Lot#
					pH Reading:
	pH adjusted for O&G	☐	☐	☐	Acid Lot#
					Amt added:
	Project Manager notified?	☐	☐	☒	

PM Comments

Sample Receipt Checklist Prepared by:

Signature: LKA Date: 01/06/22

1/3/2022: Per Terri Ann K., return 524.2 VOC vials to AECOM to be provided to US EPA lab. -kgt

1/3/2022: Per Traci Sylva, analyze samples for EPA 508.1 PCB's. -kgt

1/7/2021: Zone Compliance samples per Robin Mikeal. -kgt

2A020322(1-3)

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COC# ~~FSSS-46~~ 010120220W-27

CLIENT NAME:	PROJECT:
AECOM	60674414.00.46.01
ADDRESS:	PHONE: 808-364-8050
1001 Bishop St., Ste. 1600	FAX:
Honolulu, HI 96813	EMAIL: margie.pascua@aecom.com
PROJECT MANAGER: Margie Pascua	SAMPLER: AECOM

ID# (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	Cl_2 Y/N	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	VOCs (Full Suite) by 524.2	EDB/DBCP by 524.3	SOCs by 525.2	Metals by 200.8/245.1
	1/1/22	1158	G	N	D2-DWS-RBD2-429-010122-N	2	X		X	
		1203	G	N	D2-DWS-D2-429-010122-N	7	X		X	X
		1247	G	N	A2-DWS-A2-3-1-010122-N	7	X		X	X

ANALYSES REQUESTED

SPECIAL HANDLING

- ☐ Same Day Rush 150%
- ☐ 24 Hour Rush 100%
- ☑ 48-72 Hour Rush 75%
- ☐ 4 - 5 Day Rush 30%
- ☐ Rush Extractions 50%
- ☐ 10 - 15 Business Days
- ☐ QA/QC Data Package

Charges will apply for weekends/holidays

Method of Shipment: FedEx

COMMENTS

RELINQUISHED BY	DATE / TIME	RECEIVED BY	DATE / TIME
	1/1/22 1450	Brandon Ung	1/1/22 1455
Brandon Ung	1-1-22 1745		
Jota Macken	1-2-22/10:02		1/2/22 @ 10:02

SAMPLE CONDITION:

Actual Temperature:	Thermometer #:
5-9°C 7.0	T-0234
Received On Ice	Y / N
Samples Preserved	Y / N
Evidence Seals Present	Y / N
Container Attacked	Y / N

SAMPLE TYPE CODE:

DW = Drinking Water
WW = Waste Water
GW = Ground Water
SF = Surface Water
SW = Sea Water
SO = Soild/Soil
SL = Sludge
OL = Oil
OT = Other Matrix

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS

Client agrees to Terms & Conditions at: www.wecklabs.com

SPECIAL REQUIREMENTS / BILLING INFORMATION

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206 438 2700 tel
866 495 5288 fax

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	Lucy Panteleeff, Chemist		
Date	January 15, 2022		

The summary data quality review of 6 water samples and 4 rinsate or trip blanks collected on January 1 and January 4, 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 580-108869, 580-108952, and 580-109009-1:

Sample ID	Laboratory ID	Requested Analyses
D2-DWS-TBD2-429-010122-N (trip blank)	580-108869-1	TPH (gasoline-range)
D2-DWS-D2-429-010122-N	580-108869-2	TPHs
A2-DWS-A2-3-1-010122-N	580-108869-3	TPHs
20220104-F1-TY-01 (trip blank)	580-108952-1	VOCs, TPH
20220104-F1-TY-02	580-108952-2	VOCs, SVOCs, TPH
20220104-A1-ZT02 (trip blank)	580-108952-3	TPH (gasoline-range)
20220104-A1-ZT03	580-108952-4	TPHs
20220104-A2-ZT06 (rinsate blank)	580-109009-1	TPH (gasoline-range)
20220104-A2-ZT07	580-109009-2	TPHs
20220104-A2-ZT08	580-109009-3	TPHs

Upon receipt by Eurofins TestAmerica-Seattle, the sample jar information was compared to the associated chain-of-custody (COC) and the cooler temperature was recorded. No discrepancies relating to sample identification were noted by the laboratory. One cooler associated with laboratory group 580-109009-1 was received at a temperature below the EPA-recommended limits of greater than 0°C and less than or equal to 6°C, at 0.0°C. The laboratory did not note that any samples were received frozen; therefore, data were not qualified based on the low cooler temperature.

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 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%)
20220104-F1-TY-02	0.2%	0.1%	41%

All of the acid-fraction SVOC surrogate recoveries were below 10% in the sample noted above; therefore, the results for all acid-fraction SVOCs reported as not detected in 20220104-F1-TY-02 were rejected. The acid-fraction SVOCs are listed below:

2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2-Chlorophenol
2-Methylphenol
3 & 4 Methylphenol
4,6-Dinitro-2-methylphenol
4-Chloro-3-methylphenol
4-Nitrophenol
Pentachlorophenol
Phenol

- The laboratory noted that the percent difference (%D) for hexachlorocyclopentadiene in the continuing calibration verification (CCV) associated with batch 377587 was below the method control criteria. The result for hexachlorocyclopentadiene in 20220104-F1-TY-02 was qualified as estimated and flagged 'UJ.'

- The laboratory noted that the minimum response factors (RFs) for bis(2-chloroethyl)ether and n-nitrosodi-n-propylamine were outside the method control criteria in the CCV associated with analysis batch 377587. The results for bis(2-chloroethyl)ether and n-nitrosodi-n-propylamine in 20220104-F1-TY-02 were qualified as estimated and flagged 'UJ.'

- The following analyte exceeded the Incident Specific Screening Criteria:

Sample Name	Analyte	Result	MDL	Incident Specific Screening Criteria	Units
20220104-F1-TY-02	Hexachlorobenzene	ND	0.041	0.0003	µg/L

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Memorandum

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	Lucy Panteleeff, Chemist		
Date	January 16, 2022		

The summary data quality review of 2 water samples and one trip blank collected on December 31, 2021, 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 580-108868-1:

Sample ID	Laboratory ID	Requested Analyses
D2-DWS-TB02-429-123121-N (trip blank)	580-108868-1	VOCs, TPH (gasoline-range)
D2-DWS-D2-429-123121-N	580-108868-2	VOCs, SVOCs, TPHs
A2-DWS-A2-3-1-123121-N	580-108868-3	VOCs, SVOCs, TPHs

Upon receipt by Eurofins TestAmerica-Seattle, the sample jar information was compared to the chain-of-custody (COC) and the cooler temperature was recorded. No discrepancies relating to sample identification were noted by the laboratory and the cooler was received at a temperature between 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, 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 following acid-fraction SVOC surrogates were outside the laboratory control limits:

Sample ID	2-Fluorophenol (19-119%)	Phenol-d5 (10-120%)	2,4,6-Tribromophenol (43-140%)
D2-DWS-D2-429-123121-N	1%	0.06%	acceptable
A2-DWS-A2-3-1-123121-N	0.7%	0%	38%

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 D2-DWS-D2-429-123121-N and

A2-DWS-A2-3-1-123121-N were rejected. The result for 3&4-methylphenol in D2-DWS-D2-429-123121-N was qualified as estimated and flagged 'J." The acid-fraction SVOCs are listed below:

Acid-Fraction Analytes
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2-Chlorophenol
2-Methylphenol
3&4-Methylphenol
4,6-Dinitro-2-methylphenol
4-Chloro-3-methylphenol
4-Nitrophenol
Pentachlorophenol
Phenol

- The percent differences (%Ds) for 1,1-dichloroethene, 2-hexanone, 4-methyl-2-pentanone, acetone, carbon disulfide, and methyl ethyl ketone in the continuing calibration verification (CCV) were below the method control criteria. The results for 1,1-dichloroethene, 2-hexanone, 4-methyl-2-pentanone, acetone, carbon disulfide, and methyl ethyl ketone in D2-DWS-TB02-429-123121-N were qualified as estimated and flagged 'UJ.'

- The laboratory noted that the %D for hexachlorocyclopentadiene in the CCV associated with batch 377363 was below the method control criteria. The results for hexachlorocyclopentadiene in D2-DWS-D2-429-123121-N and A2-DWS-A2-3-1-123121-N were qualified as estimated and flagged 'UJ.'

- The laboratory noted that the minimum response factors (RFs) for bis(2-chloroethyl)ether and n-nitrosodi-n-propylamine were outside the method control criteria in the CCV associated with analysis batch 377363. The results for bis(2-chloroethyl)ether and n-nitrosodi-n-propylamine in D2-DWS-D2-429-123121-N and A2-DWS-A2-3-1-123121-N were qualified as estimated and flagged 'UJ.'

- The following analyte exceeded the Incident-Specific Screening Criteria:

Sample Name	Analyte	Result	MDL	Incident-Specific Screening Criteria	Units
D2-DWS-D2-429-123121-N	Hexachlorobenzene	ND	0.041	0.0003	µg/L
A2-DWS-A2-3-1-123121-N	Hexachlorobenzene	ND	0.041	0.0003	µg/L

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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	Lucy Panteleeff, Chemist		
Date	January 15, 2022		

The summary data quality review of 4 water samples and one rinsate blank collected on January 1 and January 4, 2022, has been completed. The samples were collected by AECOM personnel and were analyzed at Weck Laboratories, Inc. located in City of Industry, California, for volatile organic compounds (VOCs) by EPA Method 524.2, semivolatile organic compounds (SVOCs) by EPA Method 525.2, polychlorinated biphenyls (PCBs) by EPA Method 508.1, Total Metals (antimony, arsenic, barium, beryllium, cadmium, chromium, copper, lead, selenium, and thallium) by EPA Method 200.8, mercury by EPA Method 245.1, and/or total organic carbon (TOC) by Standard Method 5310B. The analyses were performed in general accordance with the methods specified in EPA's drinking water program. The laboratory provided summary reports containing sample results and associated quality assurance (QA) and quality control (QC) data. The following samples are associated with Weck laboratory groups 2A06017 and 2A02022:

Sample ID	Laboratory ID	Requested Analyses
20220104-A2-ZT05 (rinsate blank)	2A06017-01	VOCs
20220104-A2-ZT07	2A06017-02	VOCs, SVOCs, PCBs, Total Metals, TOC
20220104-D2-ZT08	2A06017-03	VOCs, SVOCs, PCBs, Total Metals, TOC
D2-DWS-D2-429-010122-N	2A02022-02	SVOCs, PCBs, Total Metals
A2-DWS-A2-3-1-010122-N	2A02022-03	SVOCs, PCBs, Total Metals

Upon receipt by Weck Laboratories, the sample jar information was compared to the associated chain-of-custody (COC) and the cooler temperature was recorded. No discrepancies relating to sample identification were noted by the laboratory and coolers were received at temperatures between the EPA-recommended limits of greater than 0°C and less than or equal to 6°C. At the direction of AECOM, one rinsate blank on the COC was cancelled and is not reported here.

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 documents *National Functional Guidelines for Organic Superfund Methods Data Review,* November 2020 and *National Functional Guidelines for Inorganic Superfund Methods Data Review,* November 2020. The following results required qualification:

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

Sample ID	4,4-Dibromobiphenyl (70-130%)	Perylene-d12 (70-130%)	Triphenyl phosphate (70-130%)
20220104-A2-ZT07	acceptable	142%	149%

The result for bis(2-ethylhexyl)adipate in 20220104-A2-ZT07 was qualified as estimated and flagged 'J."

- The percent recoveries for hexachlorobenzene in the LCS (62%) and the LCSD (58%) were below the laboratory control limits of 70-130% in the LCS/LCSD associated with batch W2A0029. The results for hexachlorobenzene in D2-DWS-D2-429-010122-N and A2-DWS-A2-3-1-010122-N were qualified as estimated and flagged 'UJ".

- The following analytes exceeded the Incident Specific Screening Criteria:

Sample Name	Analyte	Result	MDL	Incident Specific Screening Criteria	Units
A2-DWS-A2-3-1-010122-N	Endrin	ND	0.0099	0.0023	µg/L
A2-DWS-A2-3-1-010122-N	Heptachlor	ND	0.0096	0.0036	µg/L
A2-DWS-A2-3-1-010122-N	Heptachlor epoxide	ND	0.012	0.0036	µg/L
D2-DWS-D2-429-010122-N	Endrin	ND	0.0099	0.0023	µg/L
D2-DWS-D2-429-010122-N	Heptachlor	ND	0.0096	0.0036	µg/L
D2-DWS-D2-429-010122-N	Heptachlor epoxide	ND	0.012	0.0036	µg/L
D2-DWS-D2-429-010122-N	Hexachlorobenzene	ND	0.098	0.0003	µg/L
A2-DWS-A2-3-1-010122-N	Hexachlorobenzene	ND	0.098	0.0003	µg/L
20220104-A2-ZT07	Endrin	ND	0.0099	0.0023	µg/L
20220104-A2-ZT07	Heptachlor	ND	0.0096	0.0036	µg/L
20220104-A2-ZT07	Heptachlor epoxide	ND	0.012	0.0036	µg/L
20220104-A2-ZT07	Hexachlorobenzene	ND	0.098	0.0003	µg/L
20220104-D2-ZT08	Endrin	ND	0.0099	0.0023	µg/L
20220104-D2-ZT08	Heptachlor	ND	0.0096	0.0036	µg/L
20220104-D2-ZT08	Heptachlor epoxide	ND	0.012	0.0036	µg/L
20220104-D2-ZT08	Hexachlorobenzene	ND	0.098	0.0003	µg/L