

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

AECOM
1001 Bishop Street, Suite 1600
Honolulu, HI 96813-3908
Attention: Frank Cioffi
Fax: 808-524-0246

REPORT REVISED,
replaces the original report.

Date of Issue
01/17/2022

Rachelle Arada
EUROFINS EATON
ANALYTICAL, LLC

L6NW: Rachelle Arada
Project Manager

Report: 976956
Project: SPECIAL
Group: RUSH Testing



Utah ELCP CA00006

* Accredited in accordance with TNI 2016 and ISO/IEC 17025:2017.

* Laboratory certifies that the test results meet all **TNI 2016 and ISO/IEC 17025:2017** requirements unless noted under the individual analysis.

* As applicable, this report consists of the cover page, State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms.

* Test results relate only to the sample(s) tested.

* Test results apply to the sample(s) as received, unless otherwise noted in the comments report (ISO/IEC 17025:2017).

* This report shall not be reproduced except in full, without the written approval of the laboratory.

* This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.

STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	Montana	Cert 0035
Arizona	AZ0778	Nebraska	NE-OS-21-13
Arkansas	CA00006	Nevada	CA00006
California	2813	New Hampshire *	2959
Colorado	CA00006	New Jersey *	CA 008
Connecticut	PH-0107	New Mexico	CA00006
Delaware	CA 006	New York *	11320
Florida *	E871024	North Carolina	06701
Georgia	947	North Dakota	R-009
Guam	21-008R	Ohio - 537.1	87786
Hawaii	CA00006	Oregon *	4034
Idaho	CA00006	Pennsylvania *	68-00565
Illinois	200033	Puerto Rico	CA00006
Indiana	C-CA-01	Rhode Island	LA000326
Iowa – Asbestos	413	South Carolina	87016
Kansas *	E-10268	South Dakota	CA11320
Kentucky	90107	Tennessee	TN02839
Louisiana *	LA008	Texas *	T104704230-20-18
Maine	CA00006	Utah (Primary AB) *	CA00006
Maryland	224	Vermont	VT0114
Marianas Islands	MP0004	Virginia *	460260
Massachusetts	M-CA006	Washington	C838
Michigan	9906	EPA Region 5	CA00006
Mississippi	CA00006	Los Angeles County Sanitation Districts	10264

* NELAP/TNI Recognized Accreditation Bodies

ISO/IEC 17025:2917 Accredited Method List

The test listed below are accredited and met the requirements of ISO/IEC 17025 as verify by A2LA.

Refer to our certificates and scope of accreditations (no. 5890-1 and 5890-2) found at:

<https://www.eurofinsus.com/Eaton>

Test(s)	Method(s)	Potable Water *	Waste Water
Enterococci	Enterolert	x	x
Escherichia coli (Enumeration)	SM 9221 B.1 SM 9221 F	x	
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x
Heterotrophic Bacteria	SM 9215 B	x	
Legionella	Legiolert®	x	
Pseudomonas aeruginosa	Idexx Pseudalart	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x	
Total Microcystins and Nodularins	EPA 546	X	
Yeast and Mold	SM 9610	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x	
1,4-Dioxane	EPA 522	x	
2,3,7,8-TCDD	Modified EPA 1613 B	x	
Acrylamide	* LCMS 2440)	x	
Algal Toxins/Microcystin	* LCMS 3570	x	
Alkalinity	SM 2320B	x	x
Ammonia	EPA 350.1, SM 4500-NH3 H		x
Asbestos	EPA 100.2	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x
BOD/CBOD	SM 5210 B		x
Bromate	* LCMS- 2447	x	
Carbonate as CO3	SM 2330 B	x	x
Carbonyls	EPA 556	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x
Chlorinated Acids	EPA 515.4	x	
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x	
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-CI G	x	
Color	SM2120B	x	
Conductivity	EPA 120.1, SM 2510B	x	x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x	
Cyanide (Amenable)	SM 4500-CN G	x	x
Cyanide (Free)	SM 4500CN F	x	x
Cyanide (Total)	EPA 335.4	x	x
Cyanogen Chloride (Screen)	* 335 Mod (WC-24467)	x	
Diquat and Paraquat	EPA 549.2	x	
DBP and HAA	SM 6251 B	x	
Dissolved Organic Carbon	SM 5310 C	x	
Dissolved Oxygen	SM 4500-O G		x
EDB/DCBP/TCP	EPA 504.1	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x	
EDTA and NTA	* WC-2454	x	
Endothall	EPA 548.1, *(LCMS-2445)	x	
Fluoride	SM 4500F C	x	x
Glyphosate	EPA 547	x	
Glyphosate and AMPA	* LCMS-3618	x	
Gross Alpha and Gross Beta	EPA 900.0	x	x

Test(s)	Method(s)	Potable Water *	Waste Water
Gross Alpha coprecipitation	SM 7110 C	x	x
Hardness	SM 2340 B	x	x
Hexavalent Chromium	EPA 218.6,	x	x
Hexavalent Chromium	EPA 218.7,	x	
Hexavalent Chromium	SM 3500-Cr B		x
Inorganic Anions and DBPs	EPA 300.0	x	x
Norganic Anions and DBPs	EPA 300.1	x	
Kjeldahl Nitrogen	EPA 351.2		x
Metals	EPA 200.7, EPA200.8	x	x
Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Odor	SM2150B	x	
Organohalide Pesticides and PCB	EPA 505	x	
Ortho Phosphate	SM 4500P E	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	
Perchlorate	EPA 331.0	x	
Perchlorate (Low and High Levels)	EPA 314.0	x	
Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
PPCP and EDC	* LCMS-2443	x	
pH	EPA 150.1 SM 4500-H+ B	x	x
Phenolics – Low Level	*WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
Phenylurea Pesticides/Herbicides	* LCMS-2448	x	
Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Radon-222	SM 7500RN	x	
Residue (Filterable)	SM 2540C	x	x
Residue (Non-Filterable)	SM 2540D		x
Residue (Total)	SM 2540B		x
Residue (Volatile)	EPA 160.4		x
Semi-Volatile Compounds	EPA 525.2	x	
Silica	SM 4500-SiO2 C	x	x
Sulfide	SM 4500-S D		x
Sulfite	SM 4500-SO3 B	x	x
Surfactants	SM 5540C	x	x
Taste and Odor	SM 6040 E	x	
Total Organic Carbon	SM 5310 C	x	x
Total Phenols	EPA 420.1		x
Total Phenols	EPA 420.4	x	x
Triazine Pesticides and their Degradates	* LCMS-3617	x	
Turbidity	EPA 180.1	x	x
Uranium by ICP/MS	EPA 200.8	x	
UV 254 Organic Constituents	SM 5910B	x	
VOCs	EPA 524.2	x	
VOCs	*(GCMS 2412) by EPA 524.2 modified	x	

(*) includes: Bottled Water, Drinking Water and Water as Component of Food & Beverage.

(+) In-House Method

Acknowledgement of Samples Received

Addr: **AECOM**
1001 Bishop Street, Suite 1600
Honolulu, HI 96813-3908

Attn: Frank Cioffi
Phone: 808-529-7226

Client ID: AECOM-HI
Folder #: 976956
Project: SPECIAL (60674414)
Sample Group: RUSH Testing

Project Manager: Rachelle Arada
Phone: 626-386-1106

The following samples were received from you on **December 26, 2021 at 09:01**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical, LLC.

Sample #	Sample ID	Sample Date
<u>202112260028</u>	A1-DWS-A1-7-122521-N	12/25/2021 1505
@504LOW C @525_2-REG C @525PLUS C NAPHTHALENE_PLUS TIC		
@ML505 @ML515.4 @VOASDWA C		
Antimony Total ICAP/MS Arsenic Total ICAP/MS Barium Total ICAP/MS		
Beryllium Total ICAP/MS Cadmium Total ICAP/MS Chromium Total ICAP/MS		
Copper Total ICAP/MS Lead Total ICAP/MS Mercury ICPMS		
Selenium Total ICAP/MS Thallium Total ICAP/MS		
<u>202112260029</u>	A1-DWS-TBA1-7-122521-N	12/25/2021 1500
@504LOW TB C @VOASDWA TB C		

Test Description

@504LOW C -- EPA Method 504.1

@504LOW TB C -- EPA Method 504.1

@525_2-REG C -- Semivolatiles by GCMS

@525PLUS C NAPHTHALENE_PLUS TIC -- Semivolatiles by GCMS

@ML505 -- Organochlorine Pesticides/PCBs

@ML515.4 -- Chlorophenoxy Herbicides

@VOASDWA C -- Volatile Organics by GCMS

@VOASDWA TB C -- Volatile Organics by GCMS

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Laboratory Comments

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AECOM
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Folder Comments

202112260028 @525.2 - Investigated chromatogram for ions 142, 141, 115 for 1-Methylnaphthalene and 2-Methylnaphthalene - No peak identified. Investigated chromatogram for ions 94, 66, 65 for Phenol - No peak identified. NOTE: It is possible Phenol elutes during the solvent front and before the Mass Spec begins recording data. Retention time is not known for TIC compounds.

This report format displays both the MRL and MDL. Values between the MRL and MDL are "J" flagged. Estimated data is reported between MRL and unadjusted MDL. ND values are reported down to the unadjusted MDL.

Revised report to include EPA 504 results for sample A1-DWS-TBA1-7-122521-N
R. Arada 1/17/22

Flags Legend:

- M1 - Matrix spike recovery was high; the associated blank spike recovery was acceptable.
- M2 - Matrix spike recovery was low; the associated blank spike recovery was acceptable.

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Laboratory Hits

Report: 976956
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AECOM

Frank Cioffi
1001 Bishop Street, Suite 1600
Honolulu, HI 96813-3908

Samples Received on:
12/26/2021 09:01

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	202112260028	<u>A1-DWS-A1-7-122521-N</u>				
12/26/2021 19:27	Barium Total ICAP/MS		2.7	2000	ug/L	2.0
12/26/2021 19:27	Chromium Total ICAP/MS		1.4	100	ug/L	1.0
12/26/2021 19:27	Copper Total ICAP/MS		7.4	1300	ug/L	2.0

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Laboratory Data

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AECOM
Frank Cioffi
1001 Bishop Street, Suite 1600
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Samples Received on:
12/26/2021 09:01

Prepared	Analyzed	Prep Batch	Analyze Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
A1-DWS-A1-7-122521-N (202112260028)						Sampled on 12/25/2021 1505				
EPA 200.8 - ICPMS Metals										
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Antimony Total ICAP/MS	ND	ug/L	0.16	1.0	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Arsenic Total ICAP/MS	0.18J	ug/L	0.060	1.0	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Barium Total ICAP/MS	2.7	ug/L	0.17	2.0	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Beryllium Total ICAP/MS	ND	ug/L	0.054	1.0	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Cadmium Total ICAP/MS	0.014J	ug/L	0.012	0.50	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Chromium Total ICAP/MS	1.4	ug/L	0.088	1.0	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Copper Total ICAP/MS	7.4	ug/L	0.20	2.0	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Lead Total ICAP/MS	0.48J	ug/L	0.038	0.50	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Selenium Total ICAP/MS	0.43J	ug/L	0.15	5.0	1
12/26/21	12/26/21 19:27	1375849	1375850	(EPA 200.8)	Thallium Total ICAP/MS	0.040J	ug/L	0.020	1.0	1
EPA 200.8 - Mercury ICPMS										
12/26/21	12/26/21 19:27	1375849	1375851	(EPA 200.8)	Mercury ICPMS	ND	ug/L	0.035	0.20	1
EPA 505 - Organochlorine Pesticides/PCBs										
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Alachlor (Alanex)	ND	ug/L	0.041	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Aldrin	ND	ug/L	0.0020	0.010	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Chlordane	ND	ug/L	0.032	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Endrin	ND	ug/L	0.0050	0.010	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Heptachlor	ND	ug/L	0.0030	0.010	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Heptachlor Epoxide	ND	ug/L	0.0050	0.010	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Lindane (gamma-BHC)	ND	ug/L	0.0070	0.010	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Methoxychlor	ND	ug/L	0.022	0.050	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	PCB 1016 Aroclor	ND	ug/L	0.022	0.080	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	PCB 1221 Aroclor	ND	ug/L	0.079	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	PCB 1232 Aroclor	ND	ug/L	0.085	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	PCB 1242 Aroclor	ND	ug/L	0.072	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	PCB 1248 Aroclor	ND	ug/L	0.023	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	PCB 1254 Aroclor	ND	ug/L	0.035	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	PCB 1260 Aroclor	ND	ug/L	0.033	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Total PCBs	ND	ug/L	0.022	0.10	1
12/26/21	12/27/21 02:43	1375842	1375954	(EPA 505)	Tetrachlorometaxylene	99	%			1
EPA 515.4 - Chlorophenoxy Herbicides										
12/26/21	12/27/21 01:31	1375824	1375934	(EPA 515.4)	Pentachlorophenol	0.029J	ug/L	0.020	0.040	1

ND - Analyte was not detected at the calculated MDL.

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(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

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Laboratory Data

Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM
Frank Cioffi
1001 Bishop Street, Suite 1600
Honolulu, HI 96813-3908

Samples Received on:
12/26/2021 09:01

Prepared	Analyzed	Prep Batch	Analyze Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
12/26/21	12/27/21 01:31	1375824	1375934	(EPA 515.4)	2,4-Dichlorophenyl acetic acid	101	%			1
12/26/21	12/27/21 01:31	1375824	1375934	(EPA 515.4)	4,4-Dibromooctafluorobiphenyl	96	%			1
EPA 504.1 - EPA Method 504.1										
12/26/21	12/26/21 22:38	1375839	1375852	(EPA 504.1)	1,2,3-Trichloropropane	0.019J	ug/L	0.0090	0.020	1
12/26/21	12/26/21 22:38	1375839	1375852	(EPA 504.1)	1,2-Dibromo-3-chloropropane	ND	ug/L	0.0020	0.010	1
12/26/21	12/26/21 22:38	1375839	1375852	(EPA 504.1)	1,2-Dibromoethane	ND	ug/L	0.0050	0.010	1
12/26/21	12/26/21 22:38	1375839	1375852	(EPA 504.1)	1,2-Dibromopropane	102	%			1
EPA 525.2 - Semivolatiles by GCMS										
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Alachlor	ND	ug/L	0.026	0.050	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Atrazine	ND	ug/L	0.021	0.050	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.0070	0.020	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.14	0.60	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.18	0.60	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.014	0.050	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.021	0.050	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Naphthalene	ND	ug/L	0.011	0.30	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Simazine	ND	ug/L	0.015	0.050	1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	96	%			1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Acenaphthene-d10	90	%			1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Chrysene-d12	69	%			1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Perylene-d12	84	%			1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Phenanthrene-d10	90	%			1
12/26/21	12/26/21 20:54	1375821	1375882	(EPA 525.2)	Triphenylphosphate	99	%			1
EPA 524.2 - Volatile Organics by GCMS										
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.079	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.075	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.11	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.070	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.12	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.071	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Benzene	ND	ug/L	0.12	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.087	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.066	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.14	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Dichloromethane	ND	ug/L	0.074	0.50	1

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Samples Received on:
12/26/2021 09:01

Prepared	Analyzed	Prep Batch	Analyze Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.11	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.23	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.076	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	o-Xylene	ND	ug/L	0.072	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.092	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Styrene	ND	ug/L	0.11	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.28	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Toluene	ND	ug/L	0.057	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Total xylenes	ND	ug/L	0.30	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.10	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.097	0.50	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.077	0.30	1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	1,2-Dichloroethane-d4	103	%			1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	4-Bromofluorobenzene	103	%			1
12/27/21	12/27/21 07:09	1375888	1375889	(EPA 524.2)	Toluene-d8	93	%			1

A1-DWS-TBA1-7-122521-N (202112260029)

Sampled on 12/25/2021 1500

EPA 504.1 - EPA Method 504.1

12/26/21	12/26/21 23:43	1375839	1375852	(EPA 504.1)	1,2,3-Trichloropropane	ND	ug/L	0.0090	0.020	1
12/26/21	12/26/21 23:43	1375839	1375852	(EPA 504.1)	1,2-Dibromo-3-chloropropane	ND	ug/L	0.0020	0.010	1
12/26/21	12/26/21 23:43	1375839	1375852	(EPA 504.1)	1,2-Dibromoethane	ND	ug/L	0.0050	0.010	1
12/26/21	12/26/21 23:43	1375839	1375852	(EPA 504.1)	1,2-Dibromopropane	112	%			1

EPA 524.2 - Volatile Organics by GCMS

12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.079	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.075	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.11	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.070	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.12	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.071	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Benzene	ND	ug/L	0.12	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.087	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.066	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.14	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Dichloromethane	ND	ug/L	0.074	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.11	0.50	1

ND - Analyte was not detected at the calculated MDL.

J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

Tel: (626) 386-1100
 Fax: (866) 988-3757
 1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

Frank Cioffi
 1001 Bishop Street, Suite 1600
 Honolulu, HI 96813-3908

Samples Received on:
 12/26/2021 09:01

Prepared	Analyzed	Prep Batch	Analyze Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.23	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.076	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	o-Xylene	ND	ug/L	0.072	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.092	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Styrene	ND	ug/L	0.11	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.28	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Toluene	ND	ug/L	0.057	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Total xylenes	ND	ug/L	0.30	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.10	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.097	0.50	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.077	0.30	1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	1,2-Dichloroethane-d4	100	%			1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	4-Bromofluorobenzene	103	%			1
12/27/21	12/27/21 07:31	1375888	1375889	(EPA 524.2)	Toluene-d8	93	%			1

ND - Analyte was not detected at the calculated MDL.

J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

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Laboratory QC Summary

Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

ICPMS Metals

Prep Batch: 1375849 Analytical Batch: 1375850

202112260028 A1-DWS-A1-7-122521-N

Analysis Date: 12/26/2021

Analyzed by: DHX7

Mercury ICPMS

Prep Batch: 1375849 Analytical Batch: 1375851

202112260028 A1-DWS-A1-7-122521-N

Analysis Date: 12/26/2021

Analyzed by: DHX7

EPA Method 504.1

Prep Batch: 1375839 Analytical Batch: 1375852202112260028 A1-DWS-A1-7-122521-N
202112260029 A1-DWS-TBA1-7-122521-N**Analysis Date: 12/26/2021**

Analyzed by: DYM

Analyzed by: DYM

Semivolatiles by GCMS

Prep Batch: 1375821 Analytical Batch: 1375882

202112260028 A1-DWS-A1-7-122521-N

Analysis Date: 12/26/2021

Analyzed by: PAC

Volatile Organics by GCMS

Prep Batch: 1375888 Analytical Batch: 1375889202112260028 A1-DWS-A1-7-122521-N
202112260029 A1-DWS-TBA1-7-122521-N**Analysis Date: 12/27/2021**

Analyzed by: TG9W

Analyzed by: TG9W

Chlorophenoxy Herbicides

Prep Batch: 1375824 Analytical Batch: 1375934

202112260028 A1-DWS-A1-7-122521-N

Analysis Date: 12/27/2021

Analyzed by: UGB2

Organochlorine Pesticides/PCBs

Prep Batch: 1375842 Analytical Batch: 1375954

202112260028 A1-DWS-A1-7-122521-N

Analysis Date: 12/27/2021

Analyzed by: LRL

Tel: (626) 386-1100
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Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
ICPMS Metals by EPA 200.8									
Analytical Batch: 1375850					Analysis Date: 12/26/2021				
LCS1	Antimony Total ICAP/MS		50	49.7	ug/L	99	(85-115)		
LCS2	Antimony Total ICAP/MS		50	49.8	ug/L	100	(85-115)	20	0.20
MBLK	Antimony Total ICAP/MS			<0.2437	ug/L				
MRL_CHK	Antimony Total ICAP/MS		1	0.980	ug/L	98	(50-150)		
MS_202112260028	Antimony Total ICAP/MS	ND	50	49.0	ug/L	98	(70-130)		
MSD_202112260028	Antimony Total ICAP/MS	ND	50	51.0	ug/L	102	(70-130)	20	4.2
LCS1	Arsenic Total ICAP/MS		50	49.4	ug/L	99	(85-115)		
LCS2	Arsenic Total ICAP/MS		50	51.3	ug/L	103	(85-115)	20	3.8
MBLK	Arsenic Total ICAP/MS			<0.4134	ug/L				
MRL_CHK	Arsenic Total ICAP/MS		1	0.934	ug/L	93	(50-150)		
MS_202112260028	Arsenic Total ICAP/MS	ND	50	49.6	ug/L	99	(70-130)		
MSD_202112260028	Arsenic Total ICAP/MS	ND	50	52.0	ug/L	104	(70-130)	20	4.8
LCS1	Barium Total ICAP/MS		50	50.9	ug/L	102	(85-115)		
LCS2	Barium Total ICAP/MS		50	50.8	ug/L	102	(85-115)	20	0.20
MBLK	Barium Total ICAP/MS			<0.1886	ug/L				
MRL_CHK	Barium Total ICAP/MS		2	1.89	ug/L	95	(50-150)		
MS_202112260028	Barium Total ICAP/MS	2.7	50	50.4	ug/L	95	(70-130)		
MSD_202112260028	Barium Total ICAP/MS	2.7	50	52.3	ug/L	99	(70-130)	20	3.6
LCS1	Beryllium Total ICAP/MS		25	24.7	ug/L	99	(85-115)		
LCS2	Beryllium Total ICAP/MS		25	24.7	ug/L	99	(85-115)	20	0.0
MBLK	Beryllium Total ICAP/MS			<0.1106	ug/L				
MRL_CHK	Beryllium Total ICAP/MS		1	0.955	ug/L	96	(50-150)		
MS_202112260028	Beryllium Total ICAP/MS	ND	25	25.4	ug/L	102	(70-130)		
MSD_202112260028	Beryllium Total ICAP/MS	ND	25	26.0	ug/L	104	(70-130)	20	2.3
LCS1	Cadmium Total ICAP/MS		25	24.9	ug/L	100	(85-115)		
LCS2	Cadmium Total ICAP/MS		25	24.7	ug/L	99	(85-115)	20	0.81
MBLK	Cadmium Total ICAP/MS			<0.0546	ug/L				
MRL_CHK	Cadmium Total ICAP/MS		0.5	0.486	ug/L	97	(50-150)		
MS_202112260028	Cadmium Total ICAP/MS	ND	25	23.8	ug/L	95	(70-130)		
MSD_202112260028	Cadmium Total ICAP/MS	ND	25	25.0	ug/L	100	(70-130)	20	4.8
LCS1	Chromium Total ICAP/MS		50	49.5	ug/L	99	(85-115)		
LCS2	Chromium Total ICAP/MS		50	51.0	ug/L	102	(85-115)	20	3.0
MBLK	Chromium Total ICAP/MS			<0.580	ug/L				
MRL_CHK	Chromium Total ICAP/MS		1	0.848	ug/L	85	(50-150)		
MS_202112260028	Chromium Total ICAP/MS	1.4	50	49.5	ug/L	96	(70-130)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.

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Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MSD_202112260028	Chromium Total ICAP/MS	1.4	50	50.0	ug/L	97	(70-130)	20	1.1
LCS1	Copper Total ICAP/MS		50	49.6	ug/L	99	(85-115)		
LCS2	Copper Total ICAP/MS		50	51.5	ug/L	103	(85-115)	20	3.8
MBLK	Copper Total ICAP/MS			<1.343	ug/L				
MRL_CHK	Copper Total ICAP/MS		2	1.96	ug/L	98	(50-150)		
MS_202112260028	Copper Total ICAP/MS	7.4	50	53.8	ug/L	93	(70-130)		
MSD_202112260028	Copper Total ICAP/MS	7.4	50	55.8	ug/L	97	(70-130)	20	3.8
LCS1	Lead Total ICAP/MS		50	52.2	ug/L	104	(85-115)		
LCS2	Lead Total ICAP/MS		50	51.9	ug/L	104	(85-115)	20	0.58
MBLK	Lead Total ICAP/MS			<0.0608	ug/L				
MRL_CHK	Lead Total ICAP/MS		0.5	0.489	ug/L	98	(50-150)		
MS_202112260028	Lead Total ICAP/MS	ND	50	46.6	ug/L	92	(70-130)		
MSD_202112260028	Lead Total ICAP/MS	ND	50	49.4	ug/L	98	(70-130)	20	5.8
LCS1	Selenium Total ICAP/MS		50	49.7	ug/L	99	(85-115)		
LCS2	Selenium Total ICAP/MS		50	51.7	ug/L	103	(85-115)	20	3.9
MBLK	Selenium Total ICAP/MS			<0.6224	ug/L				
MRL_CHK	Selenium Total ICAP/MS		5	4.85	ug/L	97	(50-150)		
MS_202112260028	Selenium Total ICAP/MS	ND	50	54.4	ug/L	108	(70-130)		
MSD_202112260028	Selenium Total ICAP/MS	ND	50	57.2	ug/L	114	(70-130)	20	4.9
LCS1	Thallium Total ICAP/MS		50	50.9	ug/L	102	(85-115)		
LCS2	Thallium Total ICAP/MS		50	50.8	ug/L	102	(85-115)	20	0.20
MBLK	Thallium Total ICAP/MS			<0.1449	ug/L				
MRL_CHK	Thallium Total ICAP/MS		1	0.951	ug/L	95	(50-150)		
MS_202112260028	Thallium Total ICAP/MS	ND	50	43.6	ug/L	87	(70-130)		
MSD_202112260028	Thallium Total ICAP/MS	ND	50	46.7	ug/L	93	(70-130)	20	6.8

Mercury ICPMS by EPA 200.8

Analytical Batch: 1375851

Analysis Date: 12/26/2021

LCS1	Mercury ICPMS		0.75	0.776	ug/L	103	(85-115)		
LCS2	Mercury ICPMS		0.75	0.753	ug/L	100	(85-115)	20	3.0
MBLK	Mercury ICPMS			<0.1	ug/L				
MRL_CHK	Mercury ICPMS		0.2	0.148	ug/L	74	(50-150)		
MS_202112260028	Mercury ICPMS	ND	0.75	0.736	ug/L	96	(70-130)		
MSD_202112260028	Mercury ICPMS	ND	0.75	0.732	ug/L	96	(70-130)	20	0.55

EPA Method 504.1 by EPA 504.1

Analytical Batch: 1375852

Analysis Date: 12/26/2021

CCCM2	1,2,3-Trichloropropane		0.25	0.264	ug/L	105	(70-130)		
DUP_202112260028	1,2,3-Trichloropropane	ND		ND	ug/L		(0-20)		

Spike recovery is already corrected for native results.

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	1,2,3-Trichloropropane		0.2	0.202	ug/L	101	(70-130)		
MBLK	1,2,3-Trichloropropane			0	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.05	0.0532	ug/L	106	(60-140)		
MRLLW	1,2,3-Trichloropropane		0.02	0.0209	ug/L	105	(60-140)		
MS_202112170047	1,2,3-Trichloropropane	ND	1.3	1.22	ug/L	97	(65-135)		
CCCM2	1,2-Dibromo-3-chloropropane		0.05	0.0525	ug/L	105	(70-130)		
DUP_202112260028	1,2-Dibromo-3-chloropropane	ND		ND	ug/L		(0-20)		
LCS2	1,2-Dibromo-3-chloropropane		0.2	0.206	ug/L	103	(70-130)		
MBLK	1,2-Dibromo-3-chloropropane			0	ug/L				
MRL_CHK	1,2-Dibromo-3-chloropropane		0.01	0.0112	ug/L	112	(60-140)		
MS_202112170047	1,2-Dibromo-3-chloropropane	ND	0.25	0.243	ug/L	97	(65-135)		
CCCM2	1,2-Dibromoethane		0.05	0.0542	ug/L	108	(70-130)		
DUP_202112260028	1,2-Dibromoethane	ND		ND	ug/L		(0-20)		
LCS2	1,2-Dibromoethane		0.2	0.194	ug/L	97	(70-130)		
MBLK	1,2-Dibromoethane			0	ug/L				
MRL_CHK	1,2-Dibromoethane		0.01	0.0112	ug/L	112	(60-140)		
MS_202112170047	1,2-Dibromoethane	ND	0.25	0.242	ug/L	97	(65-135)		
CCCM2	1,2-Dibromopropane (S)		100	103	%	103	(60-140)		
DUP_202112260028	1,2-Dibromopropane (S)		100	102	%	102	(60-140)		
LCS2	1,2-Dibromopropane (S)		100	97.8	%	98	(60-140)		
MBLK	1,2-Dibromopropane (S)			103	%	103	(60-140)		
MRL_CHK	1,2-Dibromopropane (S)		100	103	%	103	(60-140)		
MRLLW	1,2-Dibromopropane (S)		100	106	%	106	(60-140)		
MS_202112170047	1,2-Dibromopropane (S)		100	97.9	%	98	(60-140)		

Semivolatiles by GCMS by EPA 525.2

Prep Batch: 1375821 Analytical Batch: 1375882

Analysis Date: 12/26/2021

LCS1	1,3-Dimethyl-2-nitrobenzene (S)	5	95.4	%	95	(70-130)
LCS2	1,3-Dimethyl-2-nitrobenzene (S)	5	93.0	%	93	(70-130)
MBLK	1,3-Dimethyl-2-nitrobenzene (S)		95.4	%	95	(70-130)
MRL_CHK	1,3-Dimethyl-2-nitrobenzene (S)	5	94.6	%	95	(70-130)
MS_202112160083	1,3-Dimethyl-2-nitrobenzene (S)	5	93.6	%	94	(70-130)
MSD_202112160083	1,3-Dimethyl-2-nitrobenzene (S)	5	94.8	%	95	(70-130)
LCS1	Acenaphthene-d10 (I)	5	92.4	%	92	(50-150)
LCS2	Acenaphthene-d10 (I)	5	93.3	%	93	(50-150)
MBLK	Acenaphthene-d10 (I)		89.9	%	90	(50-150)
MRL_CHK	Acenaphthene-d10 (I)	5	91.6	%	92	(50-150)
MS_202112160083	Acenaphthene-d10 (I)	5	91.6	%	92	(50-150)

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.

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1 800 566 LABS (1 800 566 5227)

Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MSD_202112160083	Acenaphthene-d10 (I)		5	93.8	%	94	(50-150)		
LCS1	Alachlor		2	2.22	ug/L	111	(70-130)		
LCS2	Alachlor		2	2.20	ug/L	110	(70-130)	20	0.91
MBLK	Alachlor			<0.05	ug/L				
MRL_CHK	Alachlor		0.05	0.0600	ug/L	120	(50-150)		
MS_202112160083	Alachlor		2	2.23	ug/L	112	(70-130)		
MSD_202112160083	Alachlor		2	2.23	ug/L	112	(70-130)	20	0.045
LCS1	Atrazine		2	2.06	ug/L	103	(70-130)		
LCS2	Atrazine		2	2.02	ug/L	101	(70-130)	20	2.0
MBLK	Atrazine			<0.05	ug/L				
MRL_CHK	Atrazine		0.05	0.0540	ug/L	108	(50-150)		
MS_202112160083	Atrazine	ND	2	2.12	ug/L	106	(70-130)		
MSD_202112160083	Atrazine	ND	2	2.09	ug/L	105	(70-130)	20	1.2
LCS1	Benzo(a)pyrene		2	2.01	ug/L	101	(70-130)		
LCS2	Benzo(a)pyrene		2	2.01	ug/L	101	(70-130)	20	0.0
MBLK	Benzo(a)pyrene			<0.02	ug/L				
MRL_CHK	Benzo(a)pyrene		0.02	0.0210	ug/L	105	(50-150)		
MS_202112160083	Benzo(a)pyrene	ND	2	1.97	ug/L	98	(70-130)		
MSD_202112160083	Benzo(a)pyrene	ND	2	2.04	ug/L	102	(70-130)	20	3.6
LCS1	Chrysene-d12 (I)		5	92.2	%	92	(50-150)		
LCS2	Chrysene-d12 (I)		5	91.2	%	91	(50-150)		
MBLK	Chrysene-d12 (I)			88.8	%	89	(50-150)		
MRL_CHK	Chrysene-d12 (I)		5	88.6	%	89	(50-150)		
MS_202112160083	Chrysene-d12 (I)		5	89.4	%	89	(50-150)		
MSD_202112160083	Chrysene-d12 (I)		5	92.6	%	93	(50-150)		
LCS1	Di-(2-Ethylhexyl)adipate		2	2.35	ug/L	118	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2	2.24	ug/L	112	(70-130)	20	4.8
MBLK	Di-(2-Ethylhexyl)adipate			<0.6	ug/L				
MRL_CHK	Di-(2-Ethylhexyl)adipate		0.3	0.395	ug/L	132	(50-150)		
MS_202112160083	Di-(2-Ethylhexyl)adipate	ND	2	2.30	ug/L	115	(70-130)		
MSD_202112160083	Di-(2-Ethylhexyl)adipate	ND	2	2.33	ug/L	116	(70-130)	20	1.1
LCS1	Di(2-Ethylhexyl)phthalate		2	2.24	ug/L	112	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2	2.04	ug/L	102	(70-130)	20	9.3
MBLK	Di(2-Ethylhexyl)phthalate			<0.6	ug/L				
MRL_CHK	Di(2-Ethylhexyl)phthalate		0.6	0.710	ug/L	118	(50-150)		
MS_202112160083	Di(2-Ethylhexyl)phthalate	ND	2	2.24	ug/L	112	(70-130)		
MSD_202112160083	Di(2-Ethylhexyl)phthalate	ND	2	2.12	ug/L	106	(70-130)	20	5.4
LCS1	Hexachlorobenzene		2	2.02	ug/L	101	(70-130)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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Report: 976956
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AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Hexachlorobenzene		2	2.01	ug/L	101	(70-130)	20	0.50
MBLK	Hexachlorobenzene			<0.05	ug/L				
MRL_CHK	Hexachlorobenzene		0.05	0.0680	ug/L	136	(50-150)		
MS_202112160083	Hexachlorobenzene	ND	2	2.00	ug/L	100	(70-130)		
MSD_202112160083	Hexachlorobenzene	ND	2	2.04	ug/L	102	(70-130)	20	2.0
LCS1	Hexachlorocyclopentadiene		2	1.89	ug/L	95	(70-130)		
LCS2	Hexachlorocyclopentadiene		2	1.91	ug/L	95	(70-130)	20	1.1
MBLK	Hexachlorocyclopentadiene			<0.05	ug/L				
MRL_CHK	Hexachlorocyclopentadiene		0.05	0.0390	ug/L	78	(50-150)		
MS_202112160083	Hexachlorocyclopentadiene	ND	2	1.88	ug/L	94	(70-130)		
MSD_202112160083	Hexachlorocyclopentadiene	ND	2	1.93	ug/L	96	(70-130)	20	2.5
LCS1	Naphthalene		2	2.03	ug/L	102	(70-130)		
LCS2	Naphthalene		2	2.00	ug/L	100	(70-130)	20	0.99
MBLK	Naphthalene			<0.3	ug/L				
MRL_CHK	Naphthalene		0.1	0.107	ug/L	107	(50-150)		
MS_202112160083	Naphthalene		2	2.00	ug/L	100	(70-130)		
MSD_202112160083	Naphthalene		2	2.04	ug/L	102	(70-130)	20	2.1
LCS1	Perylene-d12 (S)		5	92.6	%	93	(70-130)		
LCS2	Perylene-d12 (S)		5	94.0	%	94	(70-130)		
MBLK	Perylene-d12 (S)			89.0	%	89	(70-130)		
MRL_CHK	Perylene-d12 (S)		5	74.8	%	75	(70-130)		
MS_202112160083	Perylene-d12 (S)		5	92.6	%	93	(70-130)		
MSD_202112160083	Perylene-d12 (S)		5	96.0	%	96	(70-130)		
LCS1	Phenanthrene-d10 (I)		5	92.3	%	92	(50-150)		
LCS2	Phenanthrene-d10 (I)		5	92.5	%	93	(50-150)		
MBLK	Phenanthrene-d10 (I)			90.8	%	91	(50-150)		
MRL_CHK	Phenanthrene-d10 (I)		5	91.6	%	92	(50-150)		
MS_202112160083	Phenanthrene-d10 (I)		5	92.2	%	92	(50-150)		
MSD_202112160083	Phenanthrene-d10 (I)		5	92.7	%	93	(50-150)		
LCS1	Simazine		2	2.17	ug/L	108	(70-130)		
LCS2	Simazine		2	2.19	ug/L	110	(70-130)	20	0.92
MBLK	Simazine			<0.05	ug/L				
MRL_CHK	Simazine		0.05	0.0550	ug/L	110	(50-150)		
MS_202112160083	Simazine	ND	2	2.28	ug/L	114	(70-130)		
MSD_202112160083	Simazine	ND	2	2.29	ug/L	115	(70-130)	20	0.57
LCS1	Triphenylphosphate (S)		5	99.0	%	99	(70-130)		
LCS2	Triphenylphosphate (S)		5	101	%	101	(70-130)		
MBLK	Triphenylphosphate (S)			98.2	%	98	(70-130)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Triphenylphosphate (S)		5	96.2	%	96	(70-130)		
MS_202112160083	Triphenylphosphate (S)		5	100	%	100	(70-130)		
MSD_202112160083	Triphenylphosphate (S)		5	102	%	102	(70-130)		
Volatile Organics by GCMS by EPA 524.2									
Analytical Batch: 1375889					Analysis Date: 12/27/2021				
LCS1	1,1,1-Trichloroethane		5	4.66	ug/L	93	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.52	ug/L	90	(70-130)	20	3.0
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.440	ug/L	88	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.31	ug/L	86	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.20	ug/L	84	(70-130)	20	2.6
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,1-Dichloroethylene		5	4.59	ug/L	92	(70-130)		
LCS2	1,1-Dichloroethylene		5	4.54	ug/L	91	(70-130)	20	1.1
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.520	ug/L	104	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	5.03	ug/L	101	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	4.65	ug/L	93	(70-130)	20	7.8
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.540	ug/L	108	(50-150)		
LCS1	1,2-Dichloroethane		5	4.78	ug/L	96	(70-130)		
LCS2	1,2-Dichloroethane		5	4.86	ug/L	97	(70-130)	20	1.7
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)		5	99.0	%	99	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)		5	101	%	101	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			99.2	%	99	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)		5	102	%	102	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)		5	101	%	101	(70-130)		
LCS1	1,2-Dichloropropane		5	4.82	ug/L	96	(70-130)		
LCS2	1,2-Dichloropropane		5	4.90	ug/L	98	(70-130)	20	1.6
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.450	ug/L	90	(50-150)		
LCS1	4-Bromofluorobenzene (S)		5	100	%	100	(70-130)		
LCS2	4-Bromofluorobenzene (S)		5	101	%	101	(70-130)		
MBLK	4-Bromofluorobenzene (S)			103	%	103	(70-130)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	4-Bromofluorobenzene (S)		5	102	%	102	(70-130)		
MRLLW	4-Bromofluorobenzene (S)		5	99.8	%	100	(70-130)		
LCS1	Benzene		5	4.76	ug/L	95	(70-130)		
LCS2	Benzene		5	4.76	ug/L	95	(70-130)	20	0.0
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Carbon Tetrachloride		5	4.85	ug/L	97	(70-130)		
LCS2	Carbon Tetrachloride		5	4.89	ug/L	98	(70-130)	20	0.82
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.450	ug/L	90	(50-150)		
LCS1	Chlorobenzene		5	4.58	ug/L	92	(70-130)		
LCS2	Chlorobenzene		5	4.63	ug/L	93	(70-130)	20	1.1
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.440	ug/L	88	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.97	ug/L	99	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.88	ug/L	98	(70-130)	20	1.8
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.540	ug/L	108	(50-150)		
LCS1	Dichloromethane		5	4.91	ug/L	98	(70-130)		
LCS2	Dichloromethane		5	4.88	ug/L	98	(70-130)	20	0.61
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.540	ug/L	108	(50-150)		
LCS1	Ethyl benzene		5	4.45	ug/L	89	(70-130)		
LCS2	Ethyl benzene		5	4.44	ug/L	89	(70-130)	20	0.23
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.450	ug/L	90	(50-150)		
LCS1	m,p-Xylenes		10	8.65	ug/L	87	(70-130)		
LCS2	m,p-Xylenes		10	8.75	ug/L	88	(70-130)	20	1.1
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.840	ug/L	84	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.420	ug/L	84	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.96	ug/L	99	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	4.83	ug/L	97	(70-130)	20	2.7
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.520	ug/L	104	(50-150)		
LCS1	o-Xylene		5	4.58	ug/L	92	(70-130)		
LCS2	o-Xylene		5	4.52	ug/L	90	(70-130)	20	1.3
MBLK	o-Xylene			<0.5	ug/L				

Spike recovery is already corrected for native results.

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	o-Xylene		0.5	0.440	ug/L	88	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.76	ug/L	95	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.85	ug/L	97	(70-130)	20	1.9
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Styrene		5	4.25	ug/L	85	(70-130)		
LCS2	Styrene		5	4.23	ug/L	85	(70-130)	20	0.47
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.390	ug/L	78	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	4.29	ug/L	86	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.37	ug/L	87	(70-130)	20	1.9
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.440	ug/L	88	(50-150)		
LCS1	Toluene		5	4.59	ug/L	92	(70-130)		
LCS2	Toluene		5	4.45	ug/L	89	(70-130)	20	3.1
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.480	ug/L	96	(50-150)		
LCS1	Toluene-d8 (S)		5	99.4	%	99	(70-130)		
LCS2	Toluene-d8 (S)		5	99.8	%	100	(70-130)		
MBLK	Toluene-d8 (S)			94.6	%	95	(70-130)		
MRL_CHK	Toluene-d8 (S)		5	97.8	%	98	(70-130)		
MRLLW	Toluene-d8 (S)		5	95.4	%	95	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.80	ug/L	96	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	4.82	ug/L	96	(70-130)	20	0.42
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.520	ug/L	104	(50-150)		
LCS1	Trichloroethylene (TCE)		5	4.61	ug/L	92	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.54	ug/L	91	(70-130)	20	1.5
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.520	ug/L	104	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.87	ug/L	97	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.89	ug/L	98	(70-130)	20	0.41
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.480	ug/L	96	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.280	ug/L	112	(50-150)		

Chlorophenoxy Herbicides by EPA 515.4

Prep Batch: 1375824 Analytical Batch: 1375934

Analysis Date: 12/27/2021

Spike recovery is already corrected for native results.

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
CCCM	2,4-Dichlorophenyl acetic acid (S)		2.5	99.4	%	99	(70-130)		
CCCM2	2,4-Dichlorophenyl acetic acid (S)		100	97.2	%	97	(70-130)		
MBLK	2,4-Dichlorophenyl acetic acid (S)			101	%	101	(70-130)		
MRL_CHK	2,4-Dichlorophenyl acetic acid (S)			105	%	105	(70-130)		
MS1_202112260028	2,4-Dichlorophenyl acetic acid (S)			90.9	%	91	(70-130)		
MSD1_202112260028	2,4-Dichlorophenyl acetic acid (S)			97.9	%	98	(70-130)		
CCCM	4,4-Dibromooctafluorobiphenyl (I)			103	%	103	(50-150)		
CCCM2	4,4-Dibromooctafluorobiphenyl (I)		100	104	%	104	(50-150)		
MBLK	4,4-Dibromooctafluorobiphenyl (I)			102	%	102	(50-150)		
MRL_CHK	4,4-Dibromooctafluorobiphenyl (I)		100	100	%	100	(50-150)		
MS1_202112260028	4,4-Dibromooctafluorobiphenyl (I)		100	92.9	%	93	(50-150)		
MSD1_202112260028	4,4-Dibromooctafluorobiphenyl (I)			96.3	%	96	(50-150)		
CCCM	Pentachlorophenol		0.2	0.211	ug/L	105	(70-130)		
CCCM2	Pentachlorophenol		0.2	0.202	ug/L	101	(70-130)		
MBLK	Pentachlorophenol			<0.013	ug/L				
MRL_CHK	Pentachlorophenol		0.04	0.0534	ug/L	134	(50-150)		
MS1_202112260028	Pentachlorophenol	ND	0.6	0.743	ug/L	119	(70-130)		
MSD1_202112260028	Pentachlorophenol	ND	0.6	0.633	ug/L	101	(70-130)	30	16

Organochlorine Pesticides/PCBs by EPA 505

Prep Batch: 1375842 Analytical Batch: 1375954

Analysis Date: 12/27/2021

CCCH	Alachlor (Alanex)		1	1.03	ug/L	103	(70-130)		
CCCH	Alachlor (Alanex)		1	1.09	ug/L	109	(70-130)		
LCS1	Alachlor (Alanex)		1	1.01	ug/L	101	(70-130)		
MBLK	Alachlor (Alanex)			<0.1	ug/L				
MRL_CHK	Alachlor (Alanex)		0.1	0.122	ug/L	122	(50-150)		
MS1_202112170041	Alachlor (Alanex)	ND	0.2	0.242	ug/L	121	(65-135)		
CCCH	Aldrin		0.1	0.104	ug/L	105	(70-130)		
CCCH	Aldrin		0.1	0.105	ug/L	105	(70-130)		
LCS1	Aldrin		0.1	0.102	ug/L	102	(70-130)		
MBLK	Aldrin			<0.01	ug/L				
MRL_CHK	Aldrin		0.01	0.0124	ug/L	124	(50-150)		
MS1_202112170041	Aldrin	ND	0.02	0.0234	ug/L	117	(65-135)		
CCCH	Chlordane		0.5	0.493	ug/L	99	(70-130)		
LCS1	Chlordane		0.5	0.524	ug/L	105	(70-130)		
MBLK	Chlordane			<0.1	ug/L				
MRL_CHK	Chlordane		0.1	0.101	ug/L	101	(50-150)		
MS1_202112170041	Chlordane	ND	0.5	0.501	ug/L	100	(65-135)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.

Tel: (626) 386-1100
Fax: (626) 988-3757
1 800 566 LABS (1 800 566 5227)

Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
CCCH	Endrin		0.1	0.102	ug/L	102	(70-130)		
CCCH	Endrin		0.1	0.110	ug/L	110	(70-130)		
LCS1	Endrin		0.1	0.100	ug/L	100	(70-130)		
MBLK	Endrin			<0.01	ug/L				
MRL_CHK	Endrin		0.01	0.0134	ug/L	134	(50-150)		
MS1_202112170041	Endrin	ND	0.02	0.0252	ug/L	121	(65-135)		
CCCH	Heptachlor		0.1	0.106	ug/L	106	(70-130)		
CCCH	Heptachlor		0.1	0.112	ug/L	112	(70-130)		
LCS1	Heptachlor		0.1	0.104	ug/L	104	(70-130)		
MBLK	Heptachlor			<0.01	ug/L				
MRL_CHK	Heptachlor		0.01	0.0119	ug/L	119	(50-150)		
MS1_202112170041	Heptachlor	ND	0.02	0.0270	ug/L	135	(65-135)		
CCCH	Heptachlor Epoxide		0.1	0.0969	ug/L	97	(70-130)		
CCCH	Heptachlor Epoxide		0.1	0.0997	ug/L	100	(70-130)		
LCS1	Heptachlor Epoxide		0.1	0.0941	ug/L	94	(70-130)		
MBLK	Heptachlor Epoxide			<0.01	ug/L				
MRL_CHK	Heptachlor Epoxide		0.01	0.0113	ug/L	113	(50-150)		
MS1_202112170041	Heptachlor Epoxide	ND	0.02	0.0220	ug/L	110	(65-135)		
CCCH	Lindane (gamma-BHC)		0.1	0.0990	ug/L	99	(70-130)		
CCCH	Lindane (gamma-BHC)		0.1	0.105	ug/L	105	(70-130)		
LCS1	Lindane (gamma-BHC)		0.1	0.0961	ug/L	96	(70-130)		
MBLK	Lindane (gamma-BHC)			<0.01	ug/L				
MRL_CHK	Lindane (gamma-BHC)		0.01	0.0100	ug/L	100	(50-150)		
MS1_202112170041	Lindane (gamma-BHC)	ND	0.02	0.0204	ug/L	102	(65-135)		
CCCH	Methoxychlor		0.5	0.491	ug/L	98	(70-130)		
CCCH	Methoxychlor		0.5	0.587	ug/L	117	(70-130)		
LCS1	Methoxychlor		0.5	0.497	ug/L	99	(70-130)		
MBLK	Methoxychlor			<0.05	ug/L				
MRL_CHK	Methoxychlor		0.05	0.0652	ug/L	130	(50-150)		
MS1_202112170041	Methoxychlor	ND	0.1	0.145	ug/L	<u>145</u>	(65-135)		
MBLK	PCB 1016 Aroclor			<0.08	ug/L				
MBLK	PCB 1221 Aroclor			<0.1	ug/L				
MBLK	PCB 1232 Aroclor			<0.1	ug/L				
MBLK	PCB 1242 Aroclor			<0.1	ug/L				
MBLK	PCB 1248 Aroclor			<0.1	ug/L				
MBLK	PCB 1254 Aroclor			<0.1	ug/L				
MBLK	PCB 1260 Aroclor			<0.1	ug/L				
CCCH	Tetrachlorometaxylene (S)			103	%	103	(70-130)		

Spike recovery is already corrected for native results.

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RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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1 800 566 LABS (1 800 566 5227)

Report: 976956
Project: SPECIAL (60674414)
Group: RUSH Testing

AECOM

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
CCCH	Tetrachlorometaxylene (S)			102	%	102	(70-130)		
LCS1	Tetrachlorometaxylene (S)			101	%	101	(70-130)		
MBLK	Tetrachlorometaxylene (S)			94.3	%	94	(70-130)		
MRL_CHK	Tetrachlorometaxylene (S)			104	%	104	(70-130)		
MS1_202112170041	Tetrachlorometaxylene (S)			100	%	100	(70-130)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

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ANALYTICAL REPORT

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

Laboratory Job ID: 580-108747-1
Client Project/Site: CV22F0106
Revision: 1

For:
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

Attn: Margie F Pascua

Kristine D. Allen

Authorized for release by:
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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.

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions	4
Client Sample Results	5
QC Sample Results	7
Chronicle	9
Certification Summary	10
Sample Summary	11
Chain of Custody	12
Receipt Checklists	13



Case Narrative

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108747-1

Job ID: 580-108747-1

Laboratory: Eurofins Northwest, Seattle

Narrative

01/03/2022 - Report was revised to change the formatter per client request.

CASE NARRATIVE Client: AECOM Project: CV22F0106 Report Number: 580-108747-1

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

Two samples were received on 12/27/2021 1:35 PM. 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 -1.0° 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 A1-DWS-A1-7-122521-N (580-108747-1) and A1-DWS-TBA1-7-122521-N (580-108747-2) were analyzed for gasoline range organics (GRO) in accordance with 8260B CALUFT. The samples were analyzed on 12/28/2021.

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

DIESEL RANGE ORGANICS

Sample A1-DWS-A1-7-122521-N (580-108747-1) was analyzed for Diesel Range Organics in accordance with 8015D DRO. The samples were prepared and analyzed on 12/28/2021.

C9-C25 was detected in method blank MB 580-376870/1-A at a level that was above the method detection limit but below the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. The result concentration was less than one-half the reporting limit; therefore, neither re-extraction nor re-analysis were performed.

No additional 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: 580-108747-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

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)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108747-1

Client Sample ID: A1-DWS-A1-7-122521-N

Lab Sample ID: 580-108747-1

Date Collected: 12/25/21 15:05

Matrix: Water

Date Received: 12/27/21 13:35

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	-		12/28/21 13:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		69 - 133		12/28/21 13:26	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	0.52	0.093	mg/L	-	12/28/21 13:46	12/28/21 16:43	1
C24-C40	0.19	U	0.52	0.19	mg/L	-	12/28/21 13:46	12/28/21 16:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	80		56 - 125	12/28/21 13:46	12/28/21 16:43	1

Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108747-1

Client Sample ID: A1-DWS-TBA1-7-122521-N

Lab Sample ID: 580-108747-2

Date Collected: 12/25/21 15:00

Matrix: Water

Date Received: 12/27/21 13:35

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			12/28/21 12:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		69 - 133					12/28/21 12:14	1

QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108747-1

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

Lab Sample ID: MB 580-376918/4

Matrix: Water

Analysis Batch: 376918

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			12/28/21 09:49	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		69 - 133					12/28/21 09:49	1

Lab Sample ID: LCS 580-376918/5

Matrix: Water

Analysis Batch: 376918

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	0.954		mg/L		95	78 - 122		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	99		69 - 133						

Lab Sample ID: LCSD 580-376918/6

Matrix: Water

Analysis Batch: 376918

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	0.936		mg/L		94	78 - 122	2	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	96		69 - 133						

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

Lab Sample ID: MB 580-376870/1-A

Matrix: Water

Analysis Batch: 376808

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 376870

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.105	J	0.50	0.090	mg/L		12/28/21 10:59	12/28/21 15:46	1
C24-C40	0.18	U	0.50	0.18	mg/L		12/28/21 10:59	12/28/21 15:46	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	78		56 - 125				12/28/21 10:59	12/28/21 15:46	1

Lab Sample ID: LCS 580-376870/2-A

Matrix: Water

Analysis Batch: 376808

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 376870

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
C9-C25	4.00	3.11		mg/L		78	36 - 132		
C24-C40	4.00	3.59		mg/L		90	41 - 113		

Eurofins Northwest, Seattle

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- 2
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Job ID: 580-108747-1

Lab Sample ID: LCS 580-376870/2-A Client Sample ID: Lab Control Sample
Matrix: Water Prep Type: Total/NA
Analysis Batch: 376808 Prep Batch: 376870

Lab Sample ID: LCSD 580-376870/3-A
Matrix: Water
Analysis Batch: 376808

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 376870

	<i>LCSD</i>	<i>LCSD</i>	
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
<i>o-Terphenyl</i>	76		56 - 125

Lab Chronicle

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108747-1

Client Sample ID: A1-DWS-A1-7-122521-N

Lab Sample ID: 580-108747-1

Date Collected: 12/25/21 15:05

Matrix: Water

Date Received: 12/27/21 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	376918	12/28/21 13:26	JSM	FGS SEA
Total/NA	Prep	3510C			376870	12/28/21 13:46	JHR	FGS SEA
Total/NA	Analysis	8015D DRO		1	376808	12/28/21 16:43	JAE	FGS SEA

Client Sample ID: A1-DWS-TBA1-7-122521-N

Lab Sample ID: 580-108747-2

Date Collected: 12/25/21 15:00

Matrix: Water

Date Received: 12/27/21 13:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	376918	12/28/21 12:14	JSM	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
Project/Site: CV22F0106

Job ID: 580-108747-1

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

1
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Sample Summary

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108747-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-108747-1	A1-DWS-A1-7-122521-N	Water	12/25/21 15:05	12/27/21 13:35
580-108747-2	A1-DWS-TBA1-7-122521-N	Water	12/25/21 15:00	12/27/21 13:35

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5755 8th Street East
Tacoma, WA 98424

 eurofins Environment Testing
America

[illegible]

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-108747-1

Login Number: 108747

List Source: Eurofins Northwest, Seattle

List Number: 1

Creator: Grable, Heather D

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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	Refer to Job Narrative for details.
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

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

Laboratory Job ID: 580-108724-1
Client Project/Site: CV18F0126
Revision: 2

For:
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

Attn: Margie F Pascua

Kristine D. Allen

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Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions	5
Client Sample Results	7
QC Sample Results	16
Chronicle	30
Certification Summary	31
Sample Summary	32
Chain of Custody	33
Receipt Checklists	35



Case Narrative

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Job ID: 580-108724-1

Laboratory: Eurofins Northwest, Seattle

Narrative

01/03/2022 - Report was revised to change the formatter per client request.

CASE NARRATIVE Client: AECOM Project: CV18F0126 Report Number: 580-108724-1

REVISION 1: DECEMBER 30, 2021

The report has been revised to include the following:

The statement from sample control that the preservative was unacceptable for the 8015 DRO analysis has been removed and sample-receiving staff has been re-trained that it is acceptable for 8015 DRO to be HCl preserved.

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

Four samples were received on 12/24/2021 10:55 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 1.3° 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 H2-DWS-H2-377-122321-A (580-108724-1), H2-DWS-TBH2-377-122321-A (580-108724-2), A1-DWS-A1-7-122321-N (580-108724-3) and A1-DWS-TBA1-7-122321-N (580-108724-4) were analyzed for gasoline range organics (GRO) in accordance with 8260B CALUFT. The samples were analyzed on 12/25/2021 and 12/26/2021.

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

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples H2-DWS-H2-377-122321-A (580-108724-1) and H2-DWS-TBH2-377-122321-A (580-108724-2) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260D_DOD5. The samples were analyzed on 12/26/2021 and 12/27/2021.

Case Narrative

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Job ID: 580-108724-1 (Continued)

Laboratory: Eurofins Northwest, Seattle (Continued)

The continuing calibration verification (CCV) associated with batch 580-376788 recovered above the upper control limit for Vinyl acetate, Naphthalene, 1,2,4-Trichlorobenzene, Hexachlorobutadiene, 1,2,3-Trichlorobenzene, 2,2-Dichloropropane, Chloroethane, Dichlorodifluoromethane, 1,1-Dichloroethene, Bromomethane, Vinyl chloride, Carbon tetrachloride, Carbon Disulfide, and Tetrachloroethene. 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 580-376788/3).

Several analytes failed the recovery criteria high for LCS 580-376788/5. 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene failed the recovery criteria high for LCSD 580-376788/6. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. Several analytes exceeded the RPD limit for LCSD 580-376788/6.

2-Butanone (MEK) and Carbon disulfide failed the recovery criteria high for LCSD 580-376793/5. 2-Butanone (MEK), Acetone and Carbon disulfide exceeded the RPD limit. LCS recoveries were in control.

Sample H2-DWS-TBH2-377-122321-A (580-108724-2) was reanalyzed due to QC failures for Chloroform as the sample contained a detection.

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample H2-DWS-H2-377-122321-A (580-108724-1) was analyzed for semivolatile organic compounds (GC-MS) in accordance with 8270E. The samples were prepared on 12/27/2021 and analyzed on 12/28/2021.

2 Surrogate recovery for the following samples was outside control limits: H2-DWS-H2-377-122321-A (580-108724-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The following analytes have been identified in the reference method and/or via historical data to be poor and/or erratic performers: Benzoic acid, Hexachlorocyclopentadiene, 2,4-Dinitrophenol. Results for these compounds have been qualified and reported.

The continuing calibration verification (CCV) associated with batch 580-376866 recovered above the upper control limit for Benzyl Alcohol and 2,2'-oxybis[1-chloropropane]. 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 580-376866/3).

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-376866 was outside criteria for n-Nitrosodi-n-propylamine and bis(2-chloroethyl)ether. Per 8270E minimum RF criteria are not defined for these compounds; therefore, analysis proceeds.

Pentachlorophenol failed the recovery criteria low for LCS 580-376770/2-A. Benzyl alcohol and bis(chloroisopropyl) ether failed the recovery criteria high. Benzyl alcohol and bis(chloroisopropyl) ether failed the recovery criteria high for LCSD 580-376770/3-A. 4-Chloroaniline, 4-Nitroaniline and 4-Nitrophenol exceeded the RPD limit. These analytes were biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been reported.

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-376859 was outside criteria for n-Nitrosodi-n-propylamine. Per 8270E minimum RF criteria are not defined for this compound; therefore, analysis proceeds.

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

DIESEL RANGE ORGANICS

Samples H2-DWS-H2-377-122321-A (580-108724-1) and A1-DWS-A1-7-122321-N (580-108724-3) were analyzed for Diesel Range Organics in accordance with 8015D DRO. The samples were prepared and analyzed on 12/26/2021.

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

Definitions/Glossary

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Qualifiers

GC/MS VOA

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

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	This flag indicates the presumptive evidence of a compound.
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.
*+	LCS and/or LCSD is outside acceptance limits, high 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
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
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

Eurofins Northwest, Seattle

Definitions/Glossary

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: H2-DWS-H2-377-122321-A

Lab Sample ID: 580-108724-1

Date Collected: 12/23/21 08:55

Matrix: Water

Date Received: 12/24/21 10:55

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			12/26/21 00:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		69 - 133					12/26/21 00:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			12/26/21 00:58	1
Benzene	0.24	U *+	1.0	0.24	ug/L			12/26/21 00:58	1
Bromobenzene	0.43	U	1.0	0.43	ug/L			12/26/21 00:58	1
Bromodichloromethane	0.29	U *1	1.0	0.29	ug/L			12/26/21 00:58	1
Bromoform	3.7	*1	1.0	0.51	ug/L			12/26/21 00:58	1
Bromomethane	0.21	U Q *1	1.0	0.21	ug/L			12/26/21 00:58	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			12/26/21 00:58	1
Carbon disulfide	0.53	U Q *+	1.0	0.53	ug/L			12/26/21 00:58	1
Carbon tetrachloride	0.30	U Q *1	1.0	0.30	ug/L			12/26/21 00:58	1
Chlorobenzene	0.44	U *+ *1	1.0	0.44	ug/L			12/26/21 00:58	1
Chlorobromomethane	0.29	U *+ *1	1.0	0.29	ug/L			12/26/21 00:58	1
Chloroform	0.26	U *+	1.0	0.26	ug/L			12/26/21 00:58	1
Chloromethane	0.28	U	1.0	0.28	ug/L			12/26/21 00:58	1
2-Chlorotoluene	0.51	U	1.0	0.51	ug/L			12/26/21 00:58	1
4-Chlorotoluene	0.38	U	1.0	0.38	ug/L			12/26/21 00:58	1
cis-1,2-Dichloroethene	0.35	U *1	1.0	0.35	ug/L			12/26/21 00:58	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			12/26/21 00:58	1
Dibromochloromethane	0.68	J *1	1.0	0.43	ug/L			12/26/21 00:58	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			12/26/21 00:58	1
Dibromomethane	0.34	U *1	1.0	0.34	ug/L			12/26/21 00:58	1
1,2-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/26/21 00:58	1
1,3-Dichlorobenzene	0.48	U *+	1.0	0.48	ug/L			12/26/21 00:58	1
1,4-Dichlorobenzene	0.46	U *+	1.0	0.46	ug/L			12/26/21 00:58	1
Dichlorodifluoromethane	0.53	U Q	1.0	0.53	ug/L			12/26/21 00:58	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			12/26/21 00:58	1
1,2-Dichloroethane	0.42	U *1	1.0	0.42	ug/L			12/26/21 00:58	1
1,1-Dichloroethene	0.28	U Q *+	1.0	0.28	ug/L			12/26/21 00:58	1
1,2-Dichloroethene, Total	0.39	U *+	1.0	0.39	ug/L			12/26/21 00:58	1
Dichloromethane	1.4	U *+	3.0	1.4	ug/L			12/26/21 00:58	1
1,2-Dichloropropane	0.18	U *1	1.0	0.18	ug/L			12/26/21 00:58	1
1,3-Dichloropropane	0.35	U *1	1.0	0.35	ug/L			12/26/21 00:58	1
2,2-Dichloropropane	0.32	U Q	1.0	0.32	ug/L			12/26/21 00:58	1
1,1-Dichloropropene	0.29	U *1	1.0	0.29	ug/L			12/26/21 00:58	1
Ethylbenzene	0.50	U *1	1.0	0.50	ug/L			12/26/21 00:58	1
Ethyl Chloride	0.35	U Q *1	1.0	0.35	ug/L			12/26/21 00:58	1
Ethylene Dibromide	0.40	U *1	1.0	0.40	ug/L			12/26/21 00:58	1
Hexachlorobutadiene	0.79	U Q *+	3.0	0.79	ug/L			12/26/21 00:58	1
2-Hexanone	4.0	U	15	4.0	ug/L			12/26/21 00:58	1
Isopropylbenzene	0.44	U *1	1.0	0.44	ug/L			12/26/21 00:58	1
4-Isopropyltoluene	0.28	U	1.0	0.28	ug/L			12/26/21 00:58	1
Methyl tert-butyl ether	0.44	U	1.0	0.44	ug/L			12/26/21 00:58	1
m-Xylene & p-Xylene	0.53	U *+ *1	2.0	0.53	ug/L			12/26/21 00:58	1
Naphthalene	0.93	U Q *+	3.0	0.93	ug/L			12/26/21 00:58	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: H2-DWS-H2-377-122321-A

Lab Sample ID: 580-108724-1

Date Collected: 12/23/21 08:55

Matrix: Water

Date Received: 12/24/21 10:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	0.44	U	1.0	0.44	ug/L			12/26/21 00:58	1
N-Propylbenzene	0.50	U *1	1.0	0.50	ug/L			12/26/21 00:58	1
o-Xylene	0.39	U *+	1.0	0.39	ug/L			12/26/21 00:58	1
sec-Butylbenzene	0.49	U	1.0	0.49	ug/L			12/26/21 00:58	1
Styrene	0.53	U *1	1.0	0.53	ug/L			12/26/21 00:58	1
tert-Butylbenzene	0.58	U	2.0	0.58	ug/L			12/26/21 00:58	1
1,1,1,2-Tetrachloroethane	0.18	U *1	1.0	0.18	ug/L			12/26/21 00:58	1
1,1,2,2-Tetrachloroethane	0.52	U *1	1.0	0.52	ug/L			12/26/21 00:58	1
Tetrachloroethene	0.41	U Q *1	1.0	0.41	ug/L			12/26/21 00:58	1
Toluene	0.39	U *+	1.0	0.39	ug/L			12/26/21 00:58	1
trans-1,2-Dichloroethene	0.39	U *+	1.0	0.39	ug/L			12/26/21 00:58	1
trans-1,3-Dichloropropene	0.41	U *1	1.0	0.41	ug/L			12/26/21 00:58	1
1,2,3-Trichlorobenzene	0.43	U *+ Q	2.0	0.43	ug/L			12/26/21 00:58	1
1,2,4-Trichlorobenzene	0.33	U *+ Q	1.0	0.33	ug/L			12/26/21 00:58	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			12/26/21 00:58	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			12/26/21 00:58	1
Trichloroethene	0.26	U *+ *1	1.0	0.26	ug/L			12/26/21 00:58	1
Trichlorofluoromethane	0.36	U	1.0	0.36	ug/L			12/26/21 00:58	1
1,2,3-Trichloropropane	0.41	U *1	1.0	0.41	ug/L			12/26/21 00:58	1
1,2,4-Trimethylbenzene	0.61	U	3.0	0.61	ug/L			12/26/21 00:58	1
1,3,5-Trimethylbenzene	0.55	U	1.0	0.55	ug/L			12/26/21 00:58	1
Vinyl chloride	0.22	U Q *1	1.0	0.22	ug/L			12/26/21 00:58	1
Xylenes, Total	0.53	U *+ *1	2.0	0.53	ug/L			12/26/21 00:58	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	19	T J	ug/L		1.59			12/26/21 00:58	1
Unknown	4.4	T J	ug/L		4.79			12/26/21 00:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		85 - 114		12/26/21 00:58	1
Dibromofluoromethane (Surr)	105		80 - 119		12/26/21 00:58	1
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		12/26/21 00:58	1
Toluene-d8 (Surr)	101		89 - 112		12/26/21 00:58	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.091	U	0.41	0.091	ug/L		12/27/21 10:48	12/28/21 13:49	1
1,2-Dichlorobenzene	0.051	U	0.41	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
1,3-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1
1,4-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1
1-Methylnaphthalene	0.051	U	1.0	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
2,4,5-Trichlorophenol	0.10	U	0.41	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
2,4,6-Trichlorophenol	0.10	U	0.61	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		12/27/21 10:48	12/28/21 13:49	1
2,4-Dimethylphenol	0.16	U	4.1	0.16	ug/L		12/27/21 10:48	12/28/21 13:49	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
2,6-Dinitrotoluene	0.10	U	0.41	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
2-Chloronaphthalene	0.071	U	1.0	0.071	ug/L		12/27/21 10:48	12/28/21 13:49	1
2-Chlorophenol	0.051	U	1.0	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
2-Methylnaphthalene	0.061	U	0.41	0.061	ug/L		12/27/21 10:48	12/28/21 13:49	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: H2-DWS-H2-377-122321-A

Lab Sample ID: 580-108724-1

Date Collected: 12/23/21 08:55

Matrix: Water

Date Received: 12/24/21 10:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	0.051	U	0.61	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
2-Nitrophenol	0.071	U	1.0	0.071	ug/L		12/27/21 10:48	12/28/21 13:49	1
3 & 4 Methylphenol	0.10	U	0.61	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		12/27/21 10:48	12/28/21 13:49	1
3-Nitroaniline	0.16	U	3.0	0.16	ug/L		12/27/21 10:48	12/28/21 13:49	1
4,6-Dinitro-2-methylphenol	0.56	U	2.0	0.56	ug/L		12/27/21 10:48	12/28/21 13:49	1
4-Bromophenyl phenyl ether	0.061	U	0.61	0.061	ug/L		12/27/21 10:48	12/28/21 13:49	1
4-Chloro-3-methylphenol	0.13	U	0.61	0.13	ug/L		12/27/21 10:48	12/28/21 13:49	1
4-Chloroaniline	0.60	U Q	2.0	0.60	ug/L		12/27/21 10:48	12/28/21 13:49	1
4-Chlorophenyl phenyl ether	0.051	U	0.61	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
4-Nitroaniline	0.21	U Q	2.0	0.21	ug/L		12/27/21 10:48	12/28/21 13:49	1
4-Nitrophenol	1.7	U Q	10	1.7	ug/L		12/27/21 10:48	12/28/21 13:49	1
Acenaphthene	0.051	U	0.41	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
Acenaphthylene	0.061	U	1.0	0.061	ug/L		12/27/21 10:48	12/28/21 13:49	1
Anthracene	0.051	U	1.0	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
Benzo[a]anthracene	0.051	U	0.25	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
Benzo[a]pyrene	0.041	U	0.25	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1
Benzo[b]fluoranthene	0.041	U	0.25	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1
Benzo[g,h,i]perylene	0.041	U	0.25	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1
Benzo[k]fluoranthene	0.051	U	0.25	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
Benzyl alcohol	0.18	U Q	5.1	0.18	ug/L		12/27/21 10:48	12/28/21 13:49	1
Bis(2-chloroethoxy)methane	0.051	U	0.61	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
Bis(2-chloroethyl)ether	0.030	U	0.10	0.030	ug/L		12/27/21 10:48	12/28/21 13:49	1
Bis(2-ethylhexyl) phthalate	0.75	U	3.0	0.75	ug/L		12/27/21 10:48	12/28/21 13:49	1
bis(chloroisopropyl) ether	0.061	U Q	0.25	0.061	ug/L		12/27/21 10:48	12/28/21 13:49	1
Butyl benzyl phthalate	0.27	U	4.1	0.27	ug/L		12/27/21 10:48	12/28/21 13:49	1
Carbazole	0.10	U	0.61	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
Chrysene	0.041	U	0.25	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1
Dibenz(a,h)anthracene	0.071	U	0.25	0.071	ug/L		12/27/21 10:48	12/28/21 13:49	1
Dibenzofuran	0.10	U	0.41	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		12/27/21 10:48	12/28/21 13:49	1
Dimethyl phthalate	0.061	U	0.61	0.061	ug/L		12/27/21 10:48	12/28/21 13:49	1
Di-n-butyl phthalate	0.19	U	3.0	0.19	ug/L		12/27/21 10:48	12/28/21 13:49	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		12/27/21 10:48	12/28/21 13:49	1
Fluoranthene	0.061	U	0.25	0.061	ug/L		12/27/21 10:48	12/28/21 13:49	1
Fluorene	0.051	U	0.25	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
Hexachlorobenzene	0.041	U	0.61	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1
Hexachlorobutadiene	0.061	U	1.0	0.061	ug/L		12/27/21 10:48	12/28/21 13:49	1
Hexachloroethane	0.051	U	1.0	0.051	ug/L		12/27/21 10:48	12/28/21 13:49	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.41	0.13	ug/L		12/27/21 10:48	12/28/21 13:49	1
Isophorone	0.10	U	0.41	0.10	ug/L		12/27/21 10:48	12/28/21 13:49	1
Naphthalene	0.16	U	0.41	0.16	ug/L		12/27/21 10:48	12/28/21 13:49	1
Nitrobenzene	0.041	U	1.0	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1
N-Nitrosodimethylamine	0.26	U	2.0	0.26	ug/L		12/27/21 10:48	12/28/21 13:49	1
N-Nitrosodi-n-propylamine	0.061	U	0.41	0.061	ug/L		12/27/21 10:48	12/28/21 13:49	1
N-Nitrosodiphenylamine	0.071	U	1.0	0.071	ug/L		12/27/21 10:48	12/28/21 13:49	1
Pentachlorophenol	0.52	U Q	10	0.52	ug/L		12/27/21 10:48	12/28/21 13:49	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		12/27/21 10:48	12/28/21 13:49	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: H2-DWS-H2-377-122321-A

Lab Sample ID: 580-108724-1

Date Collected: 12/23/21 08:55

Matrix: Water

Date Received: 12/24/21 10:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	0.37	U	1.0	0.37	ug/L		12/27/21 10:48	12/28/21 13:49	1
Pyrene	0.041	U	1.0	0.041	ug/L		12/27/21 10:48	12/28/21 13:49	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.2	T J	ug/L		2.47		12/27/21 10:48	12/28/21 13:49	1
2-Butene, 1-bromo-3-methyl-	4.7	T J N	ug/L		2.54	870-63-3	12/27/21 10:48	12/28/21 13:49	1
3-Pentanol	45	T J N	ug/L		2.87	584-02-1	12/27/21 10:48	12/28/21 13:49	1
Butane, 2,3-dichloro-2-methyl-	7.0	T J N	ug/L		3.00	507-45-9	12/27/21 10:48	12/28/21 13:49	1
Unknown	2.1	T J	ug/L		3.17		12/27/21 10:48	12/28/21 13:49	1
Unknown	35	T J	ug/L		3.54		12/27/21 10:48	12/28/21 13:49	1
Methane, tribromo-	3.2	T J N	ug/L		3.60	75-25-2	12/27/21 10:48	12/28/21 13:49	1
Ethanone, 2-(acetyloxy)-1,2-diphenyl-	13	T J N	ug/L		3.68	574-06-1	12/27/21 10:48	12/28/21 13:49	1
Unknown	3.0	T J	ug/L		3.81		12/27/21 10:48	12/28/21 13:49	1
Unknown	1.6	T J	ug/L		4.80		12/27/21 10:48	12/28/21 13:49	1
Ethane, 1,1'-oxybis[2-bromo-	1.5	T J N	ug/L		4.91	5414-19-7	12/27/21 10:48	12/28/21 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	73		43 - 140	12/27/21 10:48	12/28/21 13:49	1
2-Fluorobiphenyl	85		44 - 119	12/27/21 10:48	12/28/21 13:49	1
2-Fluorophenol (Surr)	0	S1-	19 - 119	12/27/21 10:48	12/28/21 13:49	1
Nitrobenzene-d5 (Surr)	96		44 - 120	12/27/21 10:48	12/28/21 13:49	1
Phenol-d5 (Surr)	0	S1-	10 - 120	12/27/21 10:48	12/28/21 13:49	1
Terphenyl-d14	113		50 - 134	12/27/21 10:48	12/28/21 13:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	1.6	U	5.1	1.6	ug/L		12/27/21 10:48	12/28/21 22:40	1
Benzoic acid	1.4	U	10	1.4	ug/L		12/27/21 10:48	12/28/21 22:40	1
Hexachlorocyclopentadiene	0.14	U	1.0	0.14	ug/L		12/27/21 10:48	12/28/21 22:40	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Methane, dibromochloro-	0.50	T J N	ug/L		2.99	124-48-1	12/27/21 10:48	12/28/21 22:40	1
Octadecanoic acid	1.1	T J N	ug/L		9.28	57-11-4	12/27/21 10:48	12/28/21 22:40	1
Nonadecane	0.092	T J N	ug/L		11.31	629-92-5	12/27/21 10:48	12/28/21 22:40	1
Pentacosane	0.26	T J N	ug/L		12.12	629-99-2	12/27/21 10:48	12/28/21 22:40	1
Eicosane	0.26	T J N	ug/L		12.58	112-95-8	12/27/21 10:48	12/28/21 22:40	1
Octadecane, 2-methyl-	0.33	T J N	ug/L		13.05	1560-88-9	12/27/21 10:48	12/28/21 22:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	58		43 - 140	12/27/21 10:48	12/28/21 22:40	1
2-Fluorobiphenyl	99		44 - 119	12/27/21 10:48	12/28/21 22:40	1
2-Fluorophenol (Surr)	0	S1-	19 - 119	12/27/21 10:48	12/28/21 22:40	1
Nitrobenzene-d5 (Surr)	94		44 - 120	12/27/21 10:48	12/28/21 22:40	1
Phenol-d5 (Surr)	0	S1-	10 - 120	12/27/21 10:48	12/28/21 22:40	1
Terphenyl-d14	97		50 - 134	12/27/21 10:48	12/28/21 22:40	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	0.52	0.093	mg/L		12/26/21 11:20	12/26/21 17:31	1
C24-C40	0.19	U	0.52	0.19	mg/L		12/26/21 11:20	12/26/21 17:31	1

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Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: H2-DWS-H2-377-122321-A

Lab Sample ID: 580-108724-1

Date Collected: 12/23/21 08:55

Matrix: Water

Date Received: 12/24/21 10:55

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		56 - 125	12/26/21 11:20	12/26/21 17:31	1

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: H2-DWS-TBH2-377-122321-A

Lab Sample ID: 580-108724-2

Date Collected: 12/23/21 08:50

Matrix: Water

Date Received: 12/24/21 10:55

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			12/26/21 01:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		69 - 133					12/26/21 01:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			12/26/21 01:22	1
Benzene	0.24	U *+	1.0	0.24	ug/L			12/26/21 01:22	1
Bromobenzene	0.43	U	1.0	0.43	ug/L			12/26/21 01:22	1
Bromodichloromethane	0.29	U *1	1.0	0.29	ug/L			12/26/21 01:22	1
Bromoform	0.51	U *1	1.0	0.51	ug/L			12/26/21 01:22	1
Bromomethane	0.21	U Q *1	1.0	0.21	ug/L			12/26/21 01:22	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			12/26/21 01:22	1
Carbon disulfide	0.53	U Q *+	1.0	0.53	ug/L			12/26/21 01:22	1
Carbon tetrachloride	0.30	U Q *1	1.0	0.30	ug/L			12/26/21 01:22	1
Chlorobenzene	0.44	U *+ *1	1.0	0.44	ug/L			12/26/21 01:22	1
Chlorobromomethane	0.29	U *+ *1	1.0	0.29	ug/L			12/26/21 01:22	1
Chloromethane	0.28	U	1.0	0.28	ug/L			12/26/21 01:22	1
2-Chlorotoluene	0.51	U	1.0	0.51	ug/L			12/26/21 01:22	1
4-Chlorotoluene	0.38	U	1.0	0.38	ug/L			12/26/21 01:22	1
cis-1,2-Dichloroethene	0.35	U *1	1.0	0.35	ug/L			12/26/21 01:22	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			12/26/21 01:22	1
Dibromochloromethane	0.43	U *1	1.0	0.43	ug/L			12/26/21 01:22	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			12/26/21 01:22	1
Dibromomethane	0.34	U *1	1.0	0.34	ug/L			12/26/21 01:22	1
1,2-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/26/21 01:22	1
1,3-Dichlorobenzene	0.48	U *+	1.0	0.48	ug/L			12/26/21 01:22	1
1,4-Dichlorobenzene	0.46	U *+	1.0	0.46	ug/L			12/26/21 01:22	1
Dichlorodifluoromethane	0.53	U Q	1.0	0.53	ug/L			12/26/21 01:22	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			12/26/21 01:22	1
1,2-Dichloroethane	0.42	U *1	1.0	0.42	ug/L			12/26/21 01:22	1
1,1-Dichloroethene	0.28	U Q *+	1.0	0.28	ug/L			12/26/21 01:22	1
1,2-Dichloroethene, Total	0.39	U *+	1.0	0.39	ug/L			12/26/21 01:22	1
Dichloromethane	1.4	U *+	3.0	1.4	ug/L			12/26/21 01:22	1
1,2-Dichloropropane	0.18	U *1	1.0	0.18	ug/L			12/26/21 01:22	1
1,3-Dichloropropane	0.35	U *1	1.0	0.35	ug/L			12/26/21 01:22	1
2,2-Dichloropropane	0.32	U Q	1.0	0.32	ug/L			12/26/21 01:22	1
1,1-Dichloropropene	0.29	U *1	1.0	0.29	ug/L			12/26/21 01:22	1
Ethylbenzene	0.50	U *1	1.0	0.50	ug/L			12/26/21 01:22	1
Ethyl Chloride	0.35	U Q *1	1.0	0.35	ug/L			12/26/21 01:22	1
Ethylene Dibromide	0.40	U *1	1.0	0.40	ug/L			12/26/21 01:22	1
Hexachlorobutadiene	0.79	U Q *+	3.0	0.79	ug/L			12/26/21 01:22	1
2-Hexanone	4.0	U	15	4.0	ug/L			12/26/21 01:22	1
Isopropylbenzene	0.44	U *1	1.0	0.44	ug/L			12/26/21 01:22	1
4-Isopropyltoluene	0.28	U	1.0	0.28	ug/L			12/26/21 01:22	1
4-Methyl-2-pentanone (MIBK)	2.5	U *1	5.0	2.5	ug/L			12/26/21 01:22	1
Methyl tert-butyl ether	0.44	U	1.0	0.44	ug/L			12/26/21 01:22	1
m-Xylene & p-Xylene	0.53	U *+ *1	2.0	0.53	ug/L			12/26/21 01:22	1
Naphthalene	0.93	U Q *+	3.0	0.93	ug/L			12/26/21 01:22	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: H2-DWS-TBH2-377-122321-A

Lab Sample ID: 580-108724-2

Date Collected: 12/23/21 08:50

Matrix: Water

Date Received: 12/24/21 10:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	0.44	U	1.0	0.44	ug/L			12/26/21 01:22	1
N-Propylbenzene	0.50	U *1	1.0	0.50	ug/L			12/26/21 01:22	1
o-Xylene	0.39	U *+	1.0	0.39	ug/L			12/26/21 01:22	1
sec-Butylbenzene	0.49	U	1.0	0.49	ug/L			12/26/21 01:22	1
Styrene	0.53	U *1	1.0	0.53	ug/L			12/26/21 01:22	1
tert-Butylbenzene	0.58	U	2.0	0.58	ug/L			12/26/21 01:22	1
1,1,1,2-Tetrachloroethane	0.18	U *1	1.0	0.18	ug/L			12/26/21 01:22	1
1,1,2,2-Tetrachloroethane	0.52	U *1	1.0	0.52	ug/L			12/26/21 01:22	1
Tetrachloroethene	0.41	U Q *1	1.0	0.41	ug/L			12/26/21 01:22	1
Toluene	0.39	U *+	1.0	0.39	ug/L			12/26/21 01:22	1
trans-1,2-Dichloroethene	0.39	U *+	1.0	0.39	ug/L			12/26/21 01:22	1
trans-1,3-Dichloropropene	0.41	U *1	1.0	0.41	ug/L			12/26/21 01:22	1
1,2,3-Trichlorobenzene	0.43	U Q *+	2.0	0.43	ug/L			12/26/21 01:22	1
1,2,4-Trichlorobenzene	0.33	U Q *+	1.0	0.33	ug/L			12/26/21 01:22	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			12/26/21 01:22	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			12/26/21 01:22	1
Trichloroethene	0.26	U *+ *1	1.0	0.26	ug/L			12/26/21 01:22	1
Trichlorofluoromethane	0.36	U	1.0	0.36	ug/L			12/26/21 01:22	1
1,2,3-Trichloropropane	0.41	U *1	1.0	0.41	ug/L			12/26/21 01:22	1
1,2,4-Trimethylbenzene	0.61	U	3.0	0.61	ug/L			12/26/21 01:22	1
1,3,5-Trimethylbenzene	0.55	U	1.0	0.55	ug/L			12/26/21 01:22	1
Vinyl chloride	0.22	U Q *1	1.0	0.22	ug/L			12/26/21 01:22	1
Xylenes, Total	0.53	U *+ *1	2.0	0.53	ug/L			12/26/21 01:22	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	2.7	T J	ug/L		1.58			12/26/21 01:22	1
Unknown	4.4	T J	ug/L		4.79			12/26/21 01:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		12/26/21 01:22	1
4-Bromofluorobenzene (Surr)	97		85 - 114		12/26/21 01:22	1
Dibromofluoromethane (Surr)	108		80 - 119		12/26/21 01:22	1
Toluene-d8 (Surr)	100		89 - 112		12/26/21 01:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	3.9		1.0	0.26	ug/L			12/27/21 19:37	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	4.3	T J	ug/L		1.56			12/27/21 19:37	1
Carbon disulfide	5.5	T J N	ug/L		4.06	75-15-0		12/27/21 19:37	1
Unknown	3.5	T J	ug/L		4.79			12/27/21 19:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		81 - 118		12/27/21 19:37	1
4-Bromofluorobenzene (Surr)	101		85 - 114		12/27/21 19:37	1
Dibromofluoromethane (Surr)	107		80 - 119		12/27/21 19:37	1
Toluene-d8 (Surr)	102		89 - 112		12/27/21 19:37	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: A1-DWS-A1-7-122321-N

Lab Sample ID: 580-108724-3

Date Collected: 12/23/21 10:15

Matrix: Water

Date Received: 12/24/21 10:55

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	-		12/26/21 01:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	83		69 - 133					12/26/21 01:47	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.091	U	0.51	0.091	mg/L	-	12/26/21 11:20	12/26/21 17:51	1
C24-C40	0.18	U	0.51	0.18	mg/L	-	12/26/21 11:20	12/26/21 17:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	83		56 - 125				12/26/21 11:20	12/26/21 17:51	1

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: A1-DWS-TBA1-7-122321-N

Lab Sample ID: 580-108724-4

Date Collected: 12/23/21 10:10

Matrix: Water

Date Received: 12/24/21 10:55

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			12/25/21 22:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		69 - 133					12/25/21 22:29	1

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: MB 580-376759/4

Matrix: Water

Analysis Batch: 376759

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			12/25/21 20:02	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		69 - 133					12/25/21 20:02	1

Lab Sample ID: LCS 580-376759/5

Matrix: Water

Analysis Batch: 376759

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	1.10		mg/L		110	78 - 122
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	86		69 - 133				

Lab Sample ID: LCSD 580-376759/6

Matrix: Water

Analysis Batch: 376759

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	0.946		mg/L		95	78 - 122	15	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	88		69 - 133						

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

Lab Sample ID: MB 580-376788/4

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			12/25/21 20:02	1
Benzene	0.24	U	1.0	0.24	ug/L			12/25/21 20:02	1
Bromobenzene	0.43	U	1.0	0.43	ug/L			12/25/21 20:02	1
Bromodichloromethane	0.29	U	1.0	0.29	ug/L			12/25/21 20:02	1
Bromoform	0.51	U	1.0	0.51	ug/L			12/25/21 20:02	1
Bromomethane	0.21	U	1.0	0.21	ug/L			12/25/21 20:02	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			12/25/21 20:02	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			12/25/21 20:02	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			12/25/21 20:02	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			12/25/21 20:02	1
Chlorobromomethane	0.29	U	1.0	0.29	ug/L			12/25/21 20:02	1
Chloroform	0.26	U	1.0	0.26	ug/L			12/25/21 20:02	1
Chloromethane	0.28	U	1.0	0.28	ug/L			12/25/21 20:02	1
2-Chlorotoluene	0.51	U	1.0	0.51	ug/L			12/25/21 20:02	1

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: MB 580-376788/4

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	0.38	U	1.0	0.38	ug/L			12/25/21 20:02	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			12/25/21 20:02	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			12/25/21 20:02	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			12/25/21 20:02	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			12/25/21 20:02	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			12/25/21 20:02	1
1,2-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/25/21 20:02	1
1,3-Dichlorobenzene	0.48	U	1.0	0.48	ug/L			12/25/21 20:02	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/25/21 20:02	1
Dichlorodifluoromethane	0.53	U	1.0	0.53	ug/L			12/25/21 20:02	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			12/25/21 20:02	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			12/25/21 20:02	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			12/25/21 20:02	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			12/25/21 20:02	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			12/25/21 20:02	1
1,3-Dichloropropane	0.35	U	1.0	0.35	ug/L			12/25/21 20:02	1
2,2-Dichloropropane	0.32	U	1.0	0.32	ug/L			12/25/21 20:02	1
1,1-Dichloropropene	0.29	U	1.0	0.29	ug/L			12/25/21 20:02	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			12/25/21 20:02	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			12/25/21 20:02	1
Ethylene Dibromide	0.40	U	1.0	0.40	ug/L			12/25/21 20:02	1
Hexachlorobutadiene	0.79	U	3.0	0.79	ug/L			12/25/21 20:02	1
2-Hexanone	4.0	U	15	4.0	ug/L			12/25/21 20:02	1
Isopropylbenzene	0.44	U	1.0	0.44	ug/L			12/25/21 20:02	1
4-Isopropyltoluene	0.28	U	1.0	0.28	ug/L			12/25/21 20:02	1
4-Methyl-2-pentanone (MIBK)	2.5	U	5.0	2.5	ug/L			12/25/21 20:02	1
Methyl tert-butyl ether	0.44	U	1.0	0.44	ug/L			12/25/21 20:02	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			12/25/21 20:02	1
Naphthalene	0.93	U	3.0	0.93	ug/L			12/25/21 20:02	1
n-Butylbenzene	0.44	U	1.0	0.44	ug/L			12/25/21 20:02	1
N-Propylbenzene	0.50	U	1.0	0.50	ug/L			12/25/21 20:02	1
o-Xylene	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
sec-Butylbenzene	0.49	U	1.0	0.49	ug/L			12/25/21 20:02	1
Styrene	0.53	U	1.0	0.53	ug/L			12/25/21 20:02	1
tert-Butylbenzene	0.58	U	2.0	0.58	ug/L			12/25/21 20:02	1
1,1,1,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			12/25/21 20:02	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			12/25/21 20:02	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			12/25/21 20:02	1
Toluene	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			12/25/21 20:02	1
1,2,3-Trichlorobenzene	0.43	U	2.0	0.43	ug/L			12/25/21 20:02	1
1,2,4-Trichlorobenzene	0.33	U	1.0	0.33	ug/L			12/25/21 20:02	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			12/25/21 20:02	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			12/25/21 20:02	1
Trichlorofluoromethane	0.36	U	1.0	0.36	ug/L			12/25/21 20:02	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			12/25/21 20:02	1

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: MB 580-376788/4

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.61	U	3.0	0.61	ug/L			12/25/21 20:02	1
1,3,5-Trimethylbenzene	0.55	U	1.0	0.55	ug/L			12/25/21 20:02	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			12/25/21 20:02	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			12/25/21 20:02	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/25/21 20:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		85 - 114		12/25/21 20:02	1
Dibromofluoromethane (Surr)	105		80 - 119		12/25/21 20:02	1
1,2-Dichloroethane-d4 (Surr)	97		81 - 118		12/25/21 20:02	1
Toluene-d8 (Surr)	102		89 - 112		12/25/21 20:02	1

Lab Sample ID: LCS 580-376788/5

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	56.4		ug/L		113	39 - 160
Benzene	10.0	12.5	*+	ug/L		125	79 - 120
Bromobenzene	10.0	11.3		ug/L		113	80 - 120
Bromodichloromethane	10.0	12.0		ug/L		120	79 - 125
Bromoform	10.0	12.0		ug/L		120	66 - 130
Bromomethane	10.0	13.2		ug/L		132	53 - 141
2-Butanone (MEK)	50.0	50.3		ug/L		101	56 - 143
Carbon disulfide	10.0	13.4	*+	ug/L		134	64 - 133
Carbon tetrachloride	10.0	12.9		ug/L		129	72 - 136
Chlorobenzene	10.0	12.3	*+	ug/L		123	82 - 118
Chlorobromomethane	10.0	12.8	*+	ug/L		128	78 - 123
Chloroform	10.0	12.6	*+	ug/L		126	79 - 124
Chloromethane	10.0	11.5		ug/L		115	50 - 139
2-Chlorotoluene	10.0	11.2		ug/L		112	79 - 122
4-Chlorotoluene	10.0	10.9		ug/L		109	78 - 122
cis-1,2-Dichloroethene	10.0	12.3		ug/L		123	78 - 123
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	75 - 124
Dibromochloromethane	10.0	11.9		ug/L		119	74 - 126
1,2-Dibromo-3-Chloropropane	10.0	9.45		ug/L		94	62 - 128
Dibromomethane	10.0	12.1		ug/L		121	79 - 123
1,2-Dichlorobenzene	10.0	11.8		ug/L		118	80 - 119
1,3-Dichlorobenzene	10.0	12.1	*+	ug/L		121	80 - 119
1,4-Dichlorobenzene	10.0	11.9	*+	ug/L		119	79 - 118
Dichlorodifluoromethane	10.0	12.4		ug/L		124	32 - 152
1,1-Dichloroethane	10.0	12.4		ug/L		124	77 - 125
1,2-Dichloroethane	10.0	11.6		ug/L		116	73 - 128
1,1-Dichloroethene	10.0	13.5	*+	ug/L		135	71 - 131
1,2-Dichloroethene, Total	20.0	24.9	*+	ug/L		125	78 - 123
Dichloromethane	10.0	13.0	*+	ug/L		130	74 - 124

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCS 580-376788/5

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	11.9		ug/L		119	78 - 122
1,3-Dichloropropane	10.0	11.7		ug/L		117	80 - 119
2,2-Dichloropropane	10.0	13.6		ug/L		136	60 - 139
1,1-Dichloropropene	10.0	12.4		ug/L		124	79 - 125
Ethylbenzene	10.0	12.0		ug/L		120	79 - 121
Ethyl Chloride	10.0	13.3		ug/L		133	60 - 138
Ethylene Dibromide	10.0	11.8		ug/L		118	77 - 121
Hexachlorobutadiene	10.0	13.9	*+	ug/L		139	66 - 134
2-Hexanone	50.0	46.9		ug/L		94	57 - 139
Isopropylbenzene	10.0	12.5		ug/L		125	72 - 131
4-Isopropyltoluene	10.0	11.5		ug/L		115	77 - 127
4-Methyl-2-pentanone (MIBK)	50.0	50.5		ug/L		101	67 - 130
Methyl tert-butyl ether	10.0	11.6		ug/L		116	71 - 124
m-Xylene & p-Xylene	10.0	12.4	*+	ug/L		124	80 - 121
Naphthalene	10.0	13.6	*+	ug/L		136	61 - 128
n-Butylbenzene	10.0	12.0		ug/L		120	75 - 128
N-Propylbenzene	10.0	11.2		ug/L		112	76 - 126
o-Xylene	10.0	12.4	*+	ug/L		124	78 - 122
sec-Butylbenzene	10.0	11.2		ug/L		112	77 - 126
Styrene	10.0	12.1		ug/L		121	78 - 123
tert-Butylbenzene	10.0	11.4		ug/L		114	78 - 124
1,1,1,2-Tetrachloroethane	10.0	12.2		ug/L		122	78 - 124
1,1,2,2-Tetrachloroethane	10.0	10.5		ug/L		105	71 - 121
Tetrachloroethene	10.0	12.7		ug/L		127	74 - 129
Toluene	10.0	12.7	*+	ug/L		127	80 - 121
trans-1,2-Dichloroethene	10.0	12.6	*+	ug/L		126	75 - 124
trans-1,3-Dichloropropene	10.0	12.3		ug/L		123	73 - 127
1,2,3-Trichlorobenzene	10.0	14.5	*+	ug/L		145	69 - 129
1,2,4-Trichlorobenzene	10.0	15.5	*+	ug/L		155	69 - 130
1,1,1-Trichloroethane	10.0	12.8		ug/L		128	74 - 131
1,1,2-Trichloroethane	10.0	11.9		ug/L		119	80 - 119
Trichloroethene	10.0	12.6	*+	ug/L		126	79 - 123
Trichlorofluoromethane	10.0	11.5		ug/L		115	65 - 141
1,2,3-Trichloropropane	10.0	10.4		ug/L		104	73 - 122
1,2,4-Trimethylbenzene	10.0	11.3		ug/L		113	76 - 124
1,3,5-Trimethylbenzene	10.0	11.9		ug/L		119	75 - 124
Vinyl chloride	10.0	12.6		ug/L		126	58 - 137
Xylenes, Total	20.0	24.8	*+	ug/L		124	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		85 - 114
Dibromofluoromethane (Surr)	102		80 - 119
1,2-Dichloroethane-d4 (Surr)	94		81 - 118
Toluene-d8 (Surr)	102		89 - 112

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCSD 580-376788/6

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	47.2		ug/L		94	39 - 160	18	20
Benzene	10.0	10.3		ug/L		103	79 - 120	20	20
Bromobenzene	10.0	9.51		ug/L		95	80 - 120	17	20
Bromodichloromethane	10.0	9.69	*1	ug/L		97	79 - 125	21	20
Bromoform	10.0	9.64	*1	ug/L		96	66 - 130	22	20
Bromomethane	10.0	10.5	*1	ug/L		105	53 - 141	22	20
2-Butanone (MEK)	50.0	43.8		ug/L		88	56 - 143	14	20
Carbon disulfide	10.0	11.2		ug/L		112	64 - 133	18	20
Carbon tetrachloride	10.0	10.5	*1	ug/L		105	72 - 136	21	20
Chlorobenzene	10.0	9.79	*1	ug/L		98	82 - 118	23	20
Chlorobromomethane	10.0	10.4	*1	ug/L		104	78 - 123	21	20
Chloroform	10.0	10.5		ug/L		105	79 - 124	18	20
Chloromethane	10.0	9.73		ug/L		97	50 - 139	17	20
2-Chlorotoluene	10.0	9.44		ug/L		94	79 - 122	17	20
4-Chlorotoluene	10.0	9.10		ug/L		91	78 - 122	18	20
cis-1,2-Dichloroethene	10.0	9.96	*1	ug/L		100	78 - 123	21	20
cis-1,3-Dichloropropene	10.0	8.34		ug/L		83	75 - 124	19	20
Dibromochloromethane	10.0	9.62	*1	ug/L		96	74 - 126	21	20
1,2-Dibromo-3-Chloropropane	10.0	7.85		ug/L		78	62 - 128	19	20
Dibromomethane	10.0	9.46	*1	ug/L		95	79 - 123	24	20
1,2-Dichlorobenzene	10.0	9.81		ug/L		98	80 - 119	18	20
1,3-Dichlorobenzene	10.0	9.92		ug/L		99	80 - 119	20	20
1,4-Dichlorobenzene	10.0	9.89		ug/L		99	79 - 118	19	20
Dichlorodifluoromethane	10.0	10.4		ug/L		104	32 - 152	17	20
1,1-Dichloroethane	10.0	10.2		ug/L		102	77 - 125	19	20
1,2-Dichloroethane	10.0	9.42	*1	ug/L		94	73 - 128	21	20
1,1-Dichloroethene	10.0	11.2		ug/L		112	71 - 131	18	20
1,2-Dichloroethene, Total	20.0	20.6		ug/L		103	78 - 123	19	20
Dichloromethane	10.0	10.6		ug/L		106	74 - 124	20	20
1,2-Dichloropropane	10.0	9.67	*1	ug/L		97	78 - 122	21	20
1,3-Dichloropropane	10.0	9.38	*1	ug/L		94	80 - 119	22	20
2,2-Dichloropropane	10.0	11.2		ug/L		112	60 - 139	20	20
1,1-Dichloropropene	10.0	9.97	*1	ug/L		100	79 - 125	22	20
Ethylbenzene	10.0	9.70	*1	ug/L		97	79 - 121	21	20
Ethyl Chloride	10.0	10.6	*1	ug/L		106	60 - 138	22	20
Ethylene Dibromide	10.0	9.50	*1	ug/L		95	77 - 121	21	20
Hexachlorobutadiene	10.0	12.6		ug/L		126	66 - 134	9	20
2-Hexanone	50.0	43.0		ug/L		86	57 - 139	9	20
Isopropylbenzene	10.0	10.2	*1	ug/L		102	72 - 131	21	20
4-Isopropyltoluene	10.0	9.71		ug/L		97	77 - 127	17	20
4-Methyl-2-pentanone (MIBK)	50.0	40.1	*1	ug/L		80	67 - 130	23	20
Methyl tert-butyl ether	10.0	9.48		ug/L		95	71 - 124	20	20
m-Xylene & p-Xylene	10.0	9.85	*1	ug/L		98	80 - 121	23	20
Naphthalene	10.0	12.2		ug/L		122	61 - 128	11	20
n-Butylbenzene	10.0	9.96		ug/L		100	75 - 128	19	20
N-Propylbenzene	10.0	9.06	*1	ug/L		91	76 - 126	21	20
o-Xylene	10.0	10.2		ug/L		102	78 - 122	20	20
sec-Butylbenzene	10.0	9.28		ug/L		93	77 - 126	19	20

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCSD 580-376788/6

Matrix: Water

Analysis Batch: 376788

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
Styrene	10.0	9.71	*1	ug/L		97	78 - 123	22	20
tert-Butylbenzene	10.0	9.46		ug/L		95	78 - 124	18	20
1,1,1,2-Tetrachloroethane	10.0	9.92	*1	ug/L		99	78 - 124	21	20
1,1,2,2-Tetrachloroethane	10.0	8.32	*1	ug/L		83	71 - 121	23	20
Tetrachloroethene	10.0	10.2	*1	ug/L		102	74 - 129	22	20
Toluene	10.0	10.5		ug/L		105	80 - 121	19	20
trans-1,2-Dichloroethene	10.0	10.6		ug/L		106	75 - 124	17	20
trans-1,3-Dichloropropene	10.0	9.91	*1	ug/L		99	73 - 127	21	20
1,2,3-Trichlorobenzene	10.0	13.5	*+	ug/L		135	69 - 129	7	20
1,2,4-Trichlorobenzene	10.0	13.4	*+	ug/L		134	69 - 130	14	20
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	74 - 131	20	20
1,1,2-Trichloroethane	10.0	9.71		ug/L		97	80 - 119	20	20
Trichloroethene	10.0	10.0	*1	ug/L		100	79 - 123	22	20
Trichlorofluoromethane	10.0	9.72		ug/L		97	65 - 141	17	20
1,2,3-Trichloropropane	10.0	8.30	*1	ug/L		83	73 - 122	23	20
1,2,4-Trimethylbenzene	10.0	9.42		ug/L		94	76 - 124	18	20
1,3,5-Trimethylbenzene	10.0	9.93		ug/L		99	75 - 124	18	20
Vinyl chloride	10.0	10.1	*1	ug/L		101	58 - 137	22	20
Xylenes, Total	20.0	20.1	*1	ug/L		100	79 - 121	21	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	102		80 - 119
1,2-Dichloroethane-d4 (Surr)	93		81 - 118
Toluene-d8 (Surr)	103		89 - 112

Lab Sample ID: MB 580-376793/7

Matrix: Water

Analysis Batch: 376793

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			12/27/21 10:17	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			12/27/21 10:17	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			12/27/21 10:17	1
Chloroform	0.26	U	1.0	0.26	ug/L			12/27/21 10:17	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			12/27/21 10:17	1
2-Hexanone	4.0	U	15	4.0	ug/L			12/27/21 10:17	1
4-Methyl-2-pentanone (MIBK)	2.5	U	5.0	2.5	ug/L			12/27/21 10:17	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			12/27/21 10:17	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/27/21 10:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		85 - 114		12/27/21 10:17	1
Dibromofluoromethane (Surr)	105		80 - 119		12/27/21 10:17	1
1,2-Dichloroethane-d4 (Surr)	99		81 - 118		12/27/21 10:17	1

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: MB 580-376793/7

Matrix: Water

Analysis Batch: 376793

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		89 - 112		12/27/21 10:17	1

Lab Sample ID: LCS 580-376793/4

Matrix: Water

Analysis Batch: 376793

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	44.3		ug/L		89	39 - 160
Benzene	10.0	11.9		ug/L		119	79 - 120
Bromobenzene	10.0	10.3		ug/L		103	80 - 120
Bromodichloromethane	10.0	11.3		ug/L		113	79 - 125
Bromoform	10.0	10.1		ug/L		101	66 - 130
Bromomethane	10.0	13.3		ug/L		133	53 - 141
2-Butanone (MEK)	50.0	39.9		ug/L		80	56 - 143
Carbon disulfide	10.0	12.5		ug/L		125	64 - 133
Carbon tetrachloride	10.0	11.8		ug/L		118	72 - 136
Chlorobenzene	10.0	11.2		ug/L		112	82 - 118
Chlorobromomethane	10.0	11.7		ug/L		117	78 - 123
Chloroform	10.0	12.2		ug/L		122	79 - 124
Chloromethane	10.0	11.7		ug/L		117	50 - 139
2-Chlorotoluene	10.0	10.5		ug/L		105	79 - 122
4-Chlorotoluene	10.0	10.5		ug/L		105	78 - 122
cis-1,2-Dichloroethene	10.0	11.5		ug/L		115	78 - 123
cis-1,3-Dichloropropene	10.0	9.46		ug/L		95	75 - 124
Dibromochloromethane	10.0	10.4		ug/L		104	74 - 126
1,2-Dibromo-3-Chloropropane	10.0	6.62		ug/L		66	62 - 128
Dibromomethane	10.0	10.6		ug/L		106	79 - 123
1,2-Dichlorobenzene	10.0	10.7		ug/L		107	80 - 119
1,3-Dichlorobenzene	10.0	11.0		ug/L		110	80 - 119
1,4-Dichlorobenzene	10.0	10.9		ug/L		109	79 - 118
Dichlorodifluoromethane	10.0	12.8		ug/L		128	32 - 152
1,1-Dichloroethane	10.0	11.7		ug/L		117	77 - 125
1,2-Dichloroethane	10.0	10.9		ug/L		109	73 - 128
1,1-Dichloroethene	10.0	12.5		ug/L		125	71 - 131
1,2-Dichloroethene, Total	20.0	23.4		ug/L		117	78 - 123
Dichloromethane	10.0	12.0		ug/L		120	74 - 124
1,2-Dichloropropane	10.0	11.4		ug/L		114	78 - 122
1,3-Dichloropropane	10.0	10.3		ug/L		103	80 - 119
2,2-Dichloropropane	10.0	12.7		ug/L		127	60 - 139
1,1-Dichloropropene	10.0	11.9		ug/L		119	79 - 125
Ethylbenzene	10.0	11.2		ug/L		112	79 - 121
Ethyl Chloride	10.0	13.5		ug/L		135	60 - 138
Ethylene Dibromide	10.0	10.1		ug/L		101	77 - 121
Hexachlorobutadiene	10.0	13.9	*+	ug/L		139	66 - 134
2-Hexanone	50.0	38.4		ug/L		77	57 - 139
Isopropylbenzene	10.0	11.7		ug/L		117	72 - 131
4-Isopropyltoluene	10.0	11.0		ug/L		110	77 - 127
4-Methyl-2-pentanone (MIBK)	50.0	38.0		ug/L		76	67 - 130

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCS 580-376793/4

Matrix: Water

Analysis Batch: 376793

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	10.0	10.1		ug/L		101	71 - 124
m-Xylene & p-Xylene	10.0	11.5		ug/L		115	80 - 121
Naphthalene	10.0	9.37		ug/L		94	61 - 128
n-Butylbenzene	10.0	11.1		ug/L		111	75 - 128
N-Propylbenzene	10.0	10.7		ug/L		107	76 - 126
o-Xylene	10.0	11.6		ug/L		116	78 - 122
sec-Butylbenzene	10.0	11.0		ug/L		110	77 - 126
Styrene	10.0	11.0		ug/L		110	78 - 123
tert-Butylbenzene	10.0	10.7		ug/L		107	78 - 124
1,1,1,2-Tetrachloroethane	10.0	11.5		ug/L		115	78 - 124
1,1,2,2-Tetrachloroethane	10.0	8.69		ug/L		87	71 - 121
Tetrachloroethene	10.0	11.9		ug/L		119	74 - 129
Toluene	10.0	12.0		ug/L		120	80 - 121
trans-1,2-Dichloroethene	10.0	11.9		ug/L		119	75 - 124
trans-1,3-Dichloropropene	10.0	11.0		ug/L		110	73 - 127
1,2,3-Trichlorobenzene	10.0	11.2		ug/L		112	69 - 129
1,2,4-Trichlorobenzene	10.0	12.9		ug/L		129	69 - 130
1,1,1-Trichloroethane	10.0	11.8		ug/L		118	74 - 131
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	80 - 119
Trichloroethene	10.0	11.8		ug/L		118	79 - 123
Trichlorofluoromethane	10.0	12.4		ug/L		124	65 - 141
1,2,3-Trichloropropane	10.0	8.14		ug/L		81	73 - 122
1,2,4-Trimethylbenzene	10.0	10.6		ug/L		106	76 - 124
1,3,5-Trimethylbenzene	10.0	11.4		ug/L		114	75 - 124
Vinyl chloride	10.0	12.6		ug/L		126	58 - 137
Xylenes, Total	20.0	23.1		ug/L		116	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		85 - 114
Dibromofluoromethane (Surr)	102		80 - 119
1,2-Dichloroethane-d4 (Surr)	94		81 - 118
Toluene-d8 (Surr)	102		89 - 112

Lab Sample ID: LCSD 580-376793/5

Matrix: Water

Analysis Batch: 376793

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	57.4	*1	ug/L		115	39 - 160	26	20
2-Butanone (MEK)	50.0	212	*+ *1	ug/L		424	56 - 143	137	20
Carbon disulfide	10.0	72.4	*+ *1	ug/L		724	64 - 133	141	20
Chloroform	10.0	11.4		ug/L		114	79 - 124	7	20
1,2-Dichloroethene, Total	20.0	22.1		ug/L		111	78 - 123	6	20
2-Hexanone	50.0	38.2		ug/L		76	57 - 139	1	20
4-Methyl-2-pentanone (MIBK)	50.0	41.7		ug/L		83	67 - 130	9	20
Xylenes, Total	20.0	21.1		ug/L		106	79 - 121	9	20

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCSD 580-376793/5

Matrix: Water

Analysis Batch: 376793

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	104		80 - 119
1,2-Dichloroethane-d4 (Surr)	96		81 - 118
Toluene-d8 (Surr)	103		89 - 112

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

Lab Sample ID: MB 580-376770/1-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 376770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.090	U	0.40	0.090	ug/L		12/27/21 10:48	12/28/21 12:40	1
1,2-Dichlorobenzene	0.050	U	0.40	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
1,3-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
1,4-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
1-Methylnaphthalene	0.050	U	1.0	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4,5-Trichlorophenol	0.10	U	0.40	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4,6-Trichlorophenol	0.10	U	0.60	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4-Dimethylphenol	0.16	U	4.0	0.16	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4-Dinitrophenol	1.6	U	5.0	1.6	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,6-Dinitrotoluene	0.10	U	0.40	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Chloronaphthalene	0.070	U	1.0	0.070	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Chlorophenol	0.050	U	1.0	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Methylnaphthalene	0.060	U	0.40	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Methylphenol	0.050	U	0.60	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Nitrophenol	0.070	U	1.0	0.070	ug/L		12/27/21 10:48	12/28/21 12:40	1
3 & 4 Methylphenol	0.10	U	0.60	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		12/27/21 10:48	12/28/21 12:40	1
3-Nitroaniline	0.16	U	3.0	0.16	ug/L		12/27/21 10:48	12/28/21 12:40	1
4,6-Dinitro-2-methylphenol	0.55	U	2.0	0.55	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Bromophenyl phenyl ether	0.060	U	0.60	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Chloro-3-methylphenol	0.13	U	0.60	0.13	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Chloroaniline	0.59	U	2.0	0.59	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Chlorophenyl phenyl ether	0.050	U	0.60	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Nitroaniline	0.21	U	2.0	0.21	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Nitrophenol	1.7	U	10	1.7	ug/L		12/27/21 10:48	12/28/21 12:40	1
Acenaphthene	0.050	U	0.40	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Acenaphthylene	0.060	U	1.0	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Anthracene	0.050	U	1.0	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[a]anthracene	0.050	U	0.25	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[a]pyrene	0.040	U	0.25	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[b]fluoranthene	0.040	U	0.25	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[g,h,i]perylene	0.040	U	0.25	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[k]fluoranthene	0.050	U	0.25	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzoic acid	1.3	U	10	1.3	ug/L		12/27/21 10:48	12/28/21 12:40	1

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: MB 580-376770/1-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 376770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	0.18	U	5.0	0.18	ug/L		12/27/21 10:48	12/28/21 12:40	1
Bis(2-chloroethoxy)methane	0.050	U	0.60	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Bis(2-chloroethyl)ether	0.030	U	0.10	0.030	ug/L		12/27/21 10:48	12/28/21 12:40	1
Bis(2-ethylhexyl) phthalate	0.74	U	3.0	0.74	ug/L		12/27/21 10:48	12/28/21 12:40	1
bis(chloroisopropyl) ether	0.060	U	0.25	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Butyl benzyl phthalate	0.27	U	4.0	0.27	ug/L		12/27/21 10:48	12/28/21 12:40	1
Carbazole	0.10	U	0.60	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
Chrysene	0.040	U	0.25	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Dibenz(a,h)anthracene	0.070	U	0.25	0.070	ug/L		12/27/21 10:48	12/28/21 12:40	1
Dibenzofuran	0.10	U	0.40	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		12/27/21 10:48	12/28/21 12:40	1
Dimethyl phthalate	0.060	U	0.60	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Di-n-butyl phthalate	0.19	U	3.0	0.19	ug/L		12/27/21 10:48	12/28/21 12:40	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		12/27/21 10:48	12/28/21 12:40	1
Fluoranthene	0.060	U	0.25	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Fluorene	0.050	U	0.25	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Hexachlorobenzene	0.040	U	0.60	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Hexachlorobutadiene	0.060	U	1.0	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Hexachlorocyclopentadiene	0.14	U	1.0	0.14	ug/L		12/27/21 10:48	12/28/21 12:40	1
Hexachloroethane	0.050	U	1.0	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.40	0.13	ug/L		12/27/21 10:48	12/28/21 12:40	1
Isophorone	0.10	U	0.40	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
Naphthalene	0.16	U	0.40	0.16	ug/L		12/27/21 10:48	12/28/21 12:40	1
Nitrobenzene	0.040	U	1.0	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
N-Nitrosodimethylamine	0.26	U	2.0	0.26	ug/L		12/27/21 10:48	12/28/21 12:40	1
N-Nitrosodi-n-propylamine	0.060	U	0.40	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
N-Nitrosodiphenylamine	0.070	U	1.0	0.070	ug/L		12/27/21 10:48	12/28/21 12:40	1
Pentachlorophenol	0.51	U	10	0.51	ug/L		12/27/21 10:48	12/28/21 12:40	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		12/27/21 10:48	12/28/21 12:40	1
Phenol	0.36	U	1.0	0.36	ug/L		12/27/21 10:48	12/28/21 12:40	1
Pyrene	0.040	U	1.0	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				12/27/21 10:48	12/28/21 12:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		43 - 140	12/27/21 10:48	12/28/21 12:40	1
2-Fluorobiphenyl	98		44 - 119	12/27/21 10:48	12/28/21 12:40	1
2-Fluorophenol (Surr)	57		19 - 119	12/27/21 10:48	12/28/21 12:40	1
Nitrobenzene-d5 (Surr)	87		44 - 120	12/27/21 10:48	12/28/21 12:40	1
Phenol-d5 (Surr)	31		10 - 120	12/27/21 10:48	12/28/21 12:40	1
Terphenyl-d14	128		50 - 134	12/27/21 10:48	12/28/21 12:40	1

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCS 580-376770/2-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.55		ug/L		77	29 - 116
1,2-Dichlorobenzene	2.00	1.46		ug/L		73	32 - 111
1,3-Dichlorobenzene	2.00	1.42		ug/L		71	28 - 110
1,4-Dichlorobenzene	2.00	1.41		ug/L		71	29 - 112
1-Methylnaphthalene	2.00	1.73		ug/L		86	41 - 119
2,4,5-Trichlorophenol	2.00	1.83		ug/L		92	53 - 123
2,4,6-Trichlorophenol	2.00	1.70		ug/L		85	50 - 125
2,4-Dichlorophenol	2.00	1.70		ug/L		85	47 - 121
2,4-Dimethylphenol	2.00	1.82	J	ug/L		91	31 - 124
2,4-Dinitrophenol	4.00	2.56	J	ug/L		64	23 - 143
2,4-Dinitrotoluene	2.00	1.79		ug/L		90	57 - 128
2,6-Dinitrotoluene	2.00	1.81		ug/L		90	57 - 124
2-Chloronaphthalene	2.00	1.76		ug/L		88	40 - 116
2-Chlorophenol	2.00	1.72		ug/L		86	38 - 117
2-Methylnaphthalene	2.00	1.82		ug/L		91	40 - 121
2-Methylphenol	2.00	1.56		ug/L		78	30 - 117
2-Nitroaniline	2.00	1.83		ug/L		91	55 - 127
2-Nitrophenol	2.00	1.71		ug/L		86	47 - 123
3 & 4 Methylphenol	2.00	1.43		ug/L		72	29 - 110
3,3'-Dichlorobenzidine	4.00	3.00		ug/L		75	27 - 129
3-Nitroaniline	2.00	1.53	J	ug/L		77	41 - 128
4,6-Dinitro-2-methylphenol	4.00	2.99		ug/L		75	44 - 137
4-Bromophenyl phenyl ether	2.00	1.83		ug/L		92	55 - 124
4-Chloro-3-methylphenol	2.00	1.69		ug/L		84	52 - 119
4-Chloroaniline	2.00	1.08	J	ug/L		54	33 - 117
4-Chlorophenyl phenyl ether	2.00	1.84		ug/L		92	53 - 121
4-Nitroaniline	2.00	1.49	J	ug/L		75	70 - 125
4-Nitrophenol	4.00	1.77	J	ug/L		44	35 - 145
Acenaphthene	2.00	1.76		ug/L		88	47 - 122
Acenaphthylene	2.00	1.84		ug/L		92	41 - 130
Anthracene	2.00	1.75		ug/L		87	57 - 123
Benzo[a]anthracene	2.00	1.67		ug/L		83	58 - 125
Benzo[a]pyrene	2.00	1.69		ug/L		85	54 - 128
Benzo[b]fluoranthene	2.00	1.65		ug/L		82	53 - 131
Benzo[g,h,i]perylene	2.00	1.67		ug/L		83	50 - 134
Benzo[k]fluoranthene	2.00	1.79		ug/L		89	57 - 129
Benzoic acid	4.00	1.51	J	ug/L		38	20 - 140
Benzyl alcohol	2.00	2.39	J *+	ug/L		119	31 - 112
Bis(2-chloroethoxy)methane	2.00	1.93		ug/L		97	48 - 120
Bis(2-chloroethyl)ether	2.00	1.96		ug/L		98	43 - 118
Bis(2-ethylhexyl) phthalate	2.00	1.92	J	ug/L		96	55 - 135
bis(chloroisopropyl) ether	2.00	2.81	*+	ug/L		140	37 - 130
Butyl benzyl phthalate	2.00	1.97	J	ug/L		98	53 - 134
Carbazole	2.00	2.02		ug/L		101	60 - 122
Chrysene	2.00	1.91		ug/L		95	59 - 123
Dibenz(a,h)anthracene	2.00	1.54		ug/L		77	51 - 134
Dibenzofuran	2.00	1.89		ug/L		95	53 - 118
Diethyl phthalate	2.00	2.22		ug/L		111	56 - 125

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCS 580-376770/2-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dimethyl phthalate	2.00	2.01		ug/L		101	45 - 127
Di-n-butyl phthalate	2.00	1.94	J	ug/L		97	59 - 127
Di-n-octyl phthalate	2.00	1.82		ug/L		91	51 - 140
Fluoranthene	2.00	1.94		ug/L		97	57 - 128
Fluorene	2.00	1.92		ug/L		96	52 - 124
Hexachlorobenzene	2.00	1.77		ug/L		88	53 - 125
Hexachlorobutadiene	2.00	1.42		ug/L		71	22 - 124
Hexachlorocyclopentadiene	2.00	0.996	J	ug/L		50	20 - 125
Hexachloroethane	2.00	1.48		ug/L		74	21 - 115
Indeno[1,2,3-cd]pyrene	2.00	1.51		ug/L		75	52 - 134
Isophorone	2.00	1.97		ug/L		98	42 - 124
Naphthalene	2.00	1.64		ug/L		82	40 - 121
Nitrobenzene	2.00	1.94		ug/L		97	45 - 121
N-Nitrosodimethylamine	2.00	1.31	J	ug/L		65	45 - 125
N-Nitrosodi-n-propylamine	2.00	2.13		ug/L		106	49 - 119
N-Nitrosodiphenylamine	2.00	1.78		ug/L		89	51 - 123
Pentachlorophenol	4.00	1.31	J *	ug/L		33	35 - 138
Phenanthrene	2.00	1.81		ug/L		90	59 - 120
Phenol	2.00	0.857	J	ug/L		43	13 - 120
Pyrene	2.00	1.93		ug/L		97	57 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	99		43 - 140
2-Fluorobiphenyl	92		44 - 119
2-Fluorophenol (Surr)	65		19 - 119
Nitrobenzene-d5 (Surr)	104		44 - 120
Phenol-d5 (Surr)	38		10 - 120
Terphenyl-d14	107		50 - 134

Lab Sample ID: LCSD 580-376770/3-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.55		ug/L		77	29 - 116	0	20
1,2-Dichlorobenzene	2.00	1.47		ug/L		74	32 - 111	1	20
1,3-Dichlorobenzene	2.00	1.42		ug/L		71	28 - 110	0	20
1,4-Dichlorobenzene	2.00	1.39		ug/L		70	29 - 112	2	20
1-Methylnaphthalene	2.00	1.69		ug/L		84	41 - 119	2	20
2,4,5-Trichlorophenol	2.00	1.94		ug/L		97	53 - 123	6	20
2,4,6-Trichlorophenol	2.00	1.75		ug/L		88	50 - 125	3	20
2,4-Dichlorophenol	2.00	1.73		ug/L		87	47 - 121	2	20
2,4-Dimethylphenol	2.00	1.93	J	ug/L		97	31 - 124	6	20
2,4-Dinitrophenol	4.00	2.46	J	ug/L		61	23 - 143	4	20
2,4-Dinitrotoluene	2.00	1.81		ug/L		91	57 - 128	1	20
2,6-Dinitrotoluene	2.00	1.88		ug/L		94	57 - 124	4	20
2-Chloronaphthalene	2.00	1.83		ug/L		91	40 - 116	4	20
2-Chlorophenol	2.00	1.69		ug/L		84	38 - 117	2	20

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCSD 580-376770/3-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Methylnaphthalene	2.00	1.82		ug/L		91	40 - 121	0	20
2-Methylphenol	2.00	1.68		ug/L		84	30 - 117	7	20
2-Nitroaniline	2.00	1.81		ug/L		91	55 - 127	1	20
2-Nitrophenol	2.00	1.64		ug/L		82	47 - 123	4	20
3 & 4 Methylphenol	2.00	1.42		ug/L		71	29 - 110	1	20
3,3'-Dichlorobenzidine	4.00	3.53		ug/L		88	27 - 129	16	20
3-Nitroaniline	2.00	1.77	J	ug/L		88	41 - 128	15	20
4,6-Dinitro-2-methylphenol	4.00	3.10		ug/L		78	44 - 137	4	20
4-Bromophenyl phenyl ether	2.00	1.80		ug/L		90	55 - 124	2	20
4-Chloro-3-methylphenol	2.00	1.85		ug/L		93	52 - 119	9	20
4-Chloroaniline	2.00	1.45	J *1	ug/L		73	33 - 117	29	20
4-Chlorophenyl phenyl ether	2.00	1.89		ug/L		95	53 - 121	3	20
4-Nitroaniline	2.00	1.85	J *1	ug/L		93	70 - 125	21	20
4-Nitrophenol	4.00	2.27	J *1	ug/L		57	35 - 145	25	20
Acenaphthene	2.00	1.90		ug/L		95	47 - 122	8	20
Acenaphthylene	2.00	1.93		ug/L		97	41 - 130	5	20
Anthracene	2.00	1.80		ug/L		90	57 - 123	3	20
Benzo[a]anthracene	2.00	1.75		ug/L		87	58 - 125	5	20
Benzo[a]pyrene	2.00	1.89		ug/L		95	54 - 128	11	20
Benzo[b]fluoranthene	2.00	1.76		ug/L		88	53 - 131	7	20
Benzo[g,h,i]perylene	2.00	1.87		ug/L		94	50 - 134	12	20
Benzo[k]fluoranthene	2.00	2.02		ug/L		101	57 - 129	12	20
Benzoic acid	4.00	1.50	J	ug/L		38	20 - 140	1	20
Benzyl alcohol	2.00	2.36	J *+	ug/L		118	31 - 112	1	20
Bis(2-chloroethoxy)methane	2.00	2.00		ug/L		100	48 - 120	4	20
Bis(2-chloroethyl)ether	2.00	1.93		ug/L		97	43 - 118	1	20
Bis(2-ethylhexyl) phthalate	2.00	1.94	J	ug/L		97	55 - 135	1	20
bis(chloroisopropyl) ether	2.00	2.86	*+	ug/L		143	37 - 130	2	20
Butyl benzyl phthalate	2.00	2.08	J	ug/L		104	53 - 134	5	20
Carbazole	2.00	2.17		ug/L		108	60 - 122	7	20
Chrysene	2.00	2.02		ug/L		101	59 - 123	6	20
Dibenz(a,h)anthracene	2.00	1.69		ug/L		85	51 - 134	9	20
Dibenzofuran	2.00	1.95		ug/L		97	53 - 118	3	20
Diethyl phthalate	2.00	2.26		ug/L		113	56 - 125	2	20
Dimethyl phthalate	2.00	2.15		ug/L		108	45 - 127	7	20
Di-n-butyl phthalate	2.00	2.09	J	ug/L		105	59 - 127	7	20
Di-n-octyl phthalate	2.00	2.02		ug/L		101	51 - 140	10	20
Fluoranthene	2.00	2.02		ug/L		101	57 - 128	4	20
Fluorene	2.00	1.95		ug/L		98	52 - 124	2	20
Hexachlorobenzene	2.00	1.75		ug/L		88	53 - 125	1	20
Hexachlorobutadiene	2.00	1.32		ug/L		66	22 - 124	7	20
Hexachlorocyclopentadiene	2.00	1.02		ug/L		51	20 - 125	2	20
Hexachloroethane	2.00	1.36		ug/L		68	21 - 115	8	20
Indeno[1,2,3-cd]pyrene	2.00	1.49		ug/L		74	52 - 134	1	20
Isophorone	2.00	2.03		ug/L		102	42 - 124	3	20
Naphthalene	2.00	1.63		ug/L		82	40 - 121	1	20
Nitrobenzene	2.00	1.94		ug/L		97	45 - 121	0	20
N-Nitrosodimethylamine	2.00	1.14	J	ug/L		57	45 - 125	14	20
N-Nitrosodi-n-propylamine	2.00	2.03		ug/L		102	49 - 119	5	20

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

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

Lab Sample ID: LCSD 580-376770/3-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodiphenylamine	2.00	1.86		ug/L		93	51 - 123	4	20
Pentachlorophenol	4.00	1.51	J	ug/L		38	35 - 138	14	20
Phenanthrene	2.00	1.88		ug/L		94	59 - 120	4	20
Phenol	2.00	0.803	J	ug/L		40	13 - 120	7	20
Pyrene	2.00	2.03		ug/L		101	57 - 126	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	94		43 - 140
2-Fluorobiphenyl	88		44 - 119
2-Fluorophenol (Surr)	59		19 - 119
Nitrobenzene-d5 (Surr)	98		44 - 120
Phenol-d5 (Surr)	36		10 - 120
Terphenyl-d14	108		50 - 134

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

Lab Sample ID: MB 580-376752/1-A

Matrix: Water

Analysis Batch: 376763

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 376752

Analyte	MB	MB	RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier									
C9-C25	0.090	U	0.50	0.090	mg/L		12/26/21 11:20	12/26/21 15:10		1	
C24-C40	0.18	U	0.50	0.18	mg/L		12/26/21 11:20	12/26/21 15:10		1	
Surrogate	MB	MB	Limits	Prepared		Analyzed		Dil Fac			
	%Recovery	Qualifier									
o-Terphenyl	100		56 - 125	12/26/21 11:20	12/26/21 15:10		1				

Lab Sample ID: LCS 580-376752/2-A

Matrix: Water

Analysis Batch: 376763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 376752

			Spike	LCS	LCS				%Rec.		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
C9-C25			4.00	3.77		mg/L		94	36 - 132		
C24-C40			4.00	4.09		mg/L		102	41 - 113		

Lab Sample ID: LCSD 580-376752/3-A

Matrix: Water

Analysis Batch: 376763

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 376752

			Spike	LCSD	LCSD				%Rec.	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
C9-C25			4.00	3.85		mg/L		96	36 - 132	2	20
C24-C40			4.00	4.16		mg/L		104	41 - 113	2	20
Surrogate	LCSD	LCSD									
	%Recovery	Qualifier	Limits								
o-Terphenyl	89		56 - 125								

Eurofins Northwest, Seattle

Lab Chronicle

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Client Sample ID: H2-DWS-H2-377-122321-A

Lab Sample ID: 580-108724-1

Date Collected: 12/23/21 08:55

Matrix: Water

Date Received: 12/24/21 10:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	376759	12/26/21 00:58	JSM	FGS SEA
Total/NA	Analysis	8260D		1	376788	12/26/21 00:58	JSM	FGS SEA
Total/NA	Prep	3510C			376770	12/27/21 10:48	JHR	FGS SEA
Total/NA	Analysis	8270E		1	376866	12/28/21 13:49	ADB	FGS SEA
Total/NA	Prep	3510C	RA		376770	12/27/21 10:48	JHR	FGS SEA
Total/NA	Analysis	8270E	RA	1	376859	12/28/21 22:40	CJ	FGS SEA
Total/NA	Prep	3510C			376752	12/26/21 11:20	JCM	FGS SEA
Total/NA	Analysis	8015D DRO		1	376763	12/26/21 17:31	ADB	FGS SEA

Client Sample ID: H2-DWS-TBH2-377-122321-A

Lab Sample ID: 580-108724-2

Date Collected: 12/23/21 08:50

Matrix: Water

Date Received: 12/24/21 10:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	376759	12/26/21 01:22	JSM	FGS SEA
Total/NA	Analysis	8260D		1	376788	12/26/21 01:22	JSM	FGS SEA
Total/NA	Analysis	8260D	RA	1	376793	12/27/21 19:37	JSM	FGS SEA

Client Sample ID: A1-DWS-A1-7-122321-N

Lab Sample ID: 580-108724-3

Date Collected: 12/23/21 10:15

Matrix: Water

Date Received: 12/24/21 10:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	376759	12/26/21 01:47	JSM	FGS SEA
Total/NA	Prep	3510C			376752	12/26/21 11:20	JCM	FGS SEA
Total/NA	Analysis	8015D DRO		1	376763	12/26/21 17:51	ADB	FGS SEA

Client Sample ID: A1-DWS-TBA1-7-122321-N

Lab Sample ID: 580-108724-4

Date Collected: 12/23/21 10:10

Matrix: Water

Date Received: 12/24/21 10:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	376759	12/25/21 22:29	JSM	FGS SEA

Laboratory References:

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

Eurofins Northwest, Seattle

Accreditation/Certification Summary

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108724-1

Laboratory: Eurofins Northwest, 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: CV18F0126

Job ID: 580-108724-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-108724-1	H2-DWS-H2-377-122321-A	Water	12/23/21 08:55	12/24/21 10:55
580-108724-2	H2-DWS-TBH2-377-122321-A	Water	12/23/21 08:50	12/24/21 10:55
580-108724-3	A1-DWS-A1-7-122321-N	Water	12/23/21 10:15	12/24/21 10:55
580-108724-4	A1-DWS-TBA1-7-122321-N	Water	12/23/21 10:10	12/24/21 10:55

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1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Client Information				Sampler: AECOM		Lab PM: Elaine Walker		COC No: 12232021 DW-1							
Client Contact: Alethea Ramos (alternate: Margie Pascua)				Phone:		E-Mail: M.Elaine.Walker@EurofinsET.com		State of Origin: Hawaii							
Company: AECOM				PWSID:		Analysis Requested									
Address: 1001 Bishop St. Suite 1600				Due Date Requested: see subcontract		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)									
City: Honolulu				TAT Requested (days): <i>Standard Rush</i>											
State, Zip: Hawaii 96813				Compliance Project: ☐ Yes ☒ 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)	TPH-g (C6-C10) by 8260	TPH-d, TPH-o (C10-C24, C24-C40) by 8015	VOC's (full suite + TIC) by 8260	SVOC's (full suite + TIC) by 8270	Total Number of containers	Special Instructions/Note:
								X	X	A	I	A	I	X	
H2-DWS-H2-377-122321-A				12/23/21	08:55	G	W	N	N	X	X	X	X	10	
H2-DWS-TBH2-377-122321-A				12/23/21	08:50	G	W	N	N	X		X			<i>for #24</i>
<i>Nothing Follows</i>															

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.					
Empty Kit Relinquished by:						Date:					
Relinquished by: <i>Thomas Aguilo Pazib</i>						Date/Time: <i>12/23/21 13:00</i>					
Relinquished by:						Date/Time:					
Relinquished by:						Date/Time:					
Custody Seals Intact:						Custody Seal No.:					
Cooler Temperature(s) °C and Other Remarks: <i>At 1.3/1.8</i>											

 eurofins Environment Testing
America

Ver: 01/3/2022 (Rev. 2)

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-108724-1

Login Number: 108724

List Source: Eurofins Northwest, Seattle

List Number: 1

Creator: Presley, Kim A

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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.	False	Refer to Job Narrative for details.
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

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

Laboratory Job ID: 580-108711-1
Client Project/Site: CV18F0126
Revision: 1

For:
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

Attn: Margie F Pascua

Kristine D. Allen

Authorized for release by:
1/3/2022 3:24:03 PM
Kristine Allen, Client Service Manager
(253)248-4970
Kristine.Allen@Eurofinset.com
Designee for
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m.elaine.walker@eurofinset.com

LINKS

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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.

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions	5
Client Sample Results	7
QC Sample Results	14
Chronicle	26
Certification Summary	27
Sample Summary	28
Chain of Custody	29
Receipt Checklists	30



Case Narrative

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Job ID: 580-108711-1

Laboratory: Eurofins Northwest, Seattle

Narrative

1/03/2022: Report was revised to change the formatter per client request.

CASE NARRATIVE **Client: AECOM** **Project: CV18F0126** **Report Number: 580-108711-1**

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

Two samples were received on 12/23/2021 11:00 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 0.0° 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 ERH 5000 (580-108711-1) and ERH 5002 (580-108711-2) were analyzed for gasoline range organics (GRO) in accordance with 8260B CALUFT. The samples were analyzed on 12/25/2021.

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

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples ERH 5000 (580-108711-1) and ERH 5002 (580-108711-2) were analyzed for volatile organic compounds (GC-MS) in accordance with 8260D_DOD5. The samples were analyzed on 12/25/2021.

The continuing calibration verification (CCV) associated with batch 580-376788 recovered above the upper control limit for Vinyl acetate, Naphthalene, 1,2,4-Trichlorobenzene, Hexachlorobutadiene, 1,2,3-Trichlorobenzene, 2,2-Dichloropropane, Chloroethane, Dichlorodifluoromethane, 1,1-Dichloroethene, Bromomethane, Vinyl chloride, Carbon tetrachloride, 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: ERH 5000 (580-108711-1), ERH 5002 (580-108711-2) and (CCVIS 580-376788/3).

Case Narrative

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Job ID: 580-108711-1 (Continued)

Laboratory: Eurofins Northwest, Seattle (Continued)

Several analytes failed the recovery criteria high for LCS 580-376788/5. 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene failed the recovery criteria high for LCSD 580-376788/6. Several analytes exceeded the RPD limit. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample ERH 5000 (580-108711-1) was analyzed for semivolatile organic compounds (GC-MS) in accordance with 8270E. The samples were prepared on 12/27/2021 and analyzed on 12/28/2021.

Surrogate recovery for the following samples was outside control limits: ERH 5000 (580-108711-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-376866 was outside criteria for the following analyte: N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

The continuing calibration verification (CCV) associated with batch 580-376866 recovered above the upper control limit for Benzyl Alcohol and 2,2'-oxybis[1-chloropropane]. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-376770 and analytical batch 580-376866 recovered outside control limits for Benzyl Alcohol and 2,2'-oxybis[1-chloropropane]. These analytes were biased high in the LCS/LCSD and were not detected in the associated samples; therefore, the data have been reported.

The laboratory control sample for preparation batch 580-376770 and analytical batch 580-376866 recovered outside control limits for Pentachlorophenol. This analyte has been identified as a poor performer when analyzed using this method; re-extraction was not performed. Results for this analyte have been qualified and reported.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-376770 and analytical batch 580-376866 recovered outside control limits for the following analytes: 4-Chloroaniline, 4-Nitrophenol, 4-Nitroaniline. These analytes were not detected in associated client samples; therefore, the data has been reported.

The following analytes have been identified in the reference method and/or via historical data to be poor and/or erratic performers: Benzoic acid, Hexachlorocyclopentadiene, 2,4-Dinitrophenol. Results for these compounds have been qualified and reported.

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

DIESEL RANGE ORGANICS

Sample ERH 5000 (580-108711-1) was analyzed for Diesel Range Organics in accordance with 8015D DRO. The samples were prepared and analyzed on 12/26/2021.

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

Definitions/Glossary

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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.
*+	LCS and/or LCSD is outside acceptance limits, high 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
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
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.
α	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

Eurofins Northwest, Seattle

Definitions/Glossary

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Client Sample ID: ERH 5000

Lab Sample ID: 580-108711-1

Date Collected: 12/22/21 10:25

Matrix: Water

Date Received: 12/23/21 11:00

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			12/25/21 23:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		69 - 133					12/25/21 23:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			12/25/21 23:19	1
Benzene	0.24	U Q	1.0	0.24	ug/L			12/25/21 23:19	1
Bromobenzene	0.43	U	1.0	0.43	ug/L			12/25/21 23:19	1
Bromochloromethane	0.29	U Q	1.0	0.29	ug/L			12/25/21 23:19	1
Bromoform	0.51	U Q	1.0	0.51	ug/L			12/25/21 23:19	1
Bromomethane	0.21	U Q	1.0	0.21	ug/L			12/25/21 23:19	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			12/25/21 23:19	1
Carbon disulfide	0.53	U Q	1.0	0.53	ug/L			12/25/21 23:19	1
Carbon tetrachloride	0.30	U Q	1.0	0.30	ug/L			12/25/21 23:19	1
Chlorobenzene	0.44	U Q	1.0	0.44	ug/L			12/25/21 23:19	1
Chloroform	0.26	U Q	1.0	0.26	ug/L			12/25/21 23:19	1
Chloromethane	0.28	U	1.0	0.28	ug/L			12/25/21 23:19	1
2-Chlorotoluene	0.51	U	1.0	0.51	ug/L			12/25/21 23:19	1
4-Chlorotoluene	0.38	U	1.0	0.38	ug/L			12/25/21 23:19	1
cis-1,2-Dichloroethene	0.35	U Q	1.0	0.35	ug/L			12/25/21 23:19	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			12/25/21 23:19	1
Dibromochloromethane	0.43	U Q	1.0	0.43	ug/L			12/25/21 23:19	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			12/25/21 23:19	1
Dibromomethane	0.34	U Q	1.0	0.34	ug/L			12/25/21 23:19	1
1,2-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/25/21 23:19	1
1,3-Dichlorobenzene	0.48	U Q	1.0	0.48	ug/L			12/25/21 23:19	1
1,4-Dichlorobenzene	0.46	U Q	1.0	0.46	ug/L			12/25/21 23:19	1
Dichlorobromomethane	0.29	U Q	1.0	0.29	ug/L			12/25/21 23:19	1
Dichlorodifluoromethane	0.53	U Q	1.0	0.53	ug/L			12/25/21 23:19	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			12/25/21 23:19	1
1,2-Dichloroethane	0.42	U Q	1.0	0.42	ug/L			12/25/21 23:19	1
1,1-Dichloroethene	0.28	U Q	1.0	0.28	ug/L			12/25/21 23:19	1
1,2-Dichloroethene, Total	0.39	U Q	1.0	0.39	ug/L			12/25/21 23:19	1
Dichloromethane	1.4	U Q	3.0	1.4	ug/L			12/25/21 23:19	1
1,2-Dichloropropane	0.18	U Q	1.0	0.18	ug/L			12/25/21 23:19	1
1,3-Dichloropropane	0.35	U Q	1.0	0.35	ug/L			12/25/21 23:19	1
2,2-Dichloropropane	0.32	U Q	1.0	0.32	ug/L			12/25/21 23:19	1
1,1-Dichloropropene	0.29	U Q	1.0	0.29	ug/L			12/25/21 23:19	1
Ethylbenzene	0.50	U Q	1.0	0.50	ug/L			12/25/21 23:19	1
Ethyl Chloride	0.35	U Q	1.0	0.35	ug/L			12/25/21 23:19	1
Ethylene Dibromide	0.40	U Q	1.0	0.40	ug/L			12/25/21 23:19	1
Hexachlorobutadiene	0.79	U Q	3.0	0.79	ug/L			12/25/21 23:19	1
2-Hexanone	4.0	U	15	4.0	ug/L			12/25/21 23:19	1
Isopropylbenzene	0.44	U Q	1.0	0.44	ug/L			12/25/21 23:19	1
4-Isopropyltoluene	0.28	U	1.0	0.28	ug/L			12/25/21 23:19	1
4-Methyl-2-pentanone (MIBK)	2.5	U Q	5.0	2.5	ug/L			12/25/21 23:19	1
Methyl tert-butyl ether	0.44	U	1.0	0.44	ug/L			12/25/21 23:19	1
m-Xylene & p-Xylene	0.53	U Q	2.0	0.53	ug/L			12/25/21 23:19	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Client Sample ID: ERH 5000

Lab Sample ID: 580-108711-1

Date Collected: 12/22/21 10:25

Matrix: Water

Date Received: 12/23/21 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.93	U Q	3.0	0.93	ug/L			12/25/21 23:19	1
n-Butylbenzene	0.44	U	1.0	0.44	ug/L			12/25/21 23:19	1
N-Propylbenzene	0.50	U Q	1.0	0.50	ug/L			12/25/21 23:19	1
o-Xylene	0.39	U Q	1.0	0.39	ug/L			12/25/21 23:19	1
sec-Butylbenzene	0.49	U	1.0	0.49	ug/L			12/25/21 23:19	1
Styrene	0.53	U Q	1.0	0.53	ug/L			12/25/21 23:19	1
tert-Butylbenzene	0.58	U	2.0	0.58	ug/L			12/25/21 23:19	1
1,1,1,2-Tetrachloroethane	0.18	U Q	1.0	0.18	ug/L			12/25/21 23:19	1
1,1,2,2-Tetrachloroethane	0.52	U Q	1.0	0.52	ug/L			12/25/21 23:19	1
Tetrachloroethene	0.41	U Q	1.0	0.41	ug/L			12/25/21 23:19	1
Toluene	0.39	U Q	1.0	0.39	ug/L			12/25/21 23:19	1
trans-1,2-Dichloroethene	0.39	U Q	1.0	0.39	ug/L			12/25/21 23:19	1
trans-1,3-Dichloropropene	0.41	U Q	1.0	0.41	ug/L			12/25/21 23:19	1
1,2,3-Trichlorobenzene	0.43	U Q	2.0	0.43	ug/L			12/25/21 23:19	1
1,2,4-Trichlorobenzene	0.33	U Q	1.0	0.33	ug/L			12/25/21 23:19	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			12/25/21 23:19	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			12/25/21 23:19	1
Trichloroethene	0.26	U Q	1.0	0.26	ug/L			12/25/21 23:19	1
Trichlorofluoromethane	0.36	U	1.0	0.36	ug/L			12/25/21 23:19	1
1,2,3-Trichloropropane	0.41	U Q	1.0	0.41	ug/L			12/25/21 23:19	1
1,2,4-Trimethylbenzene	0.61	U	3.0	0.61	ug/L			12/25/21 23:19	1
1,3,5-Trimethylbenzene	0.55	U	1.0	0.55	ug/L			12/25/21 23:19	1
Vinyl chloride	0.22	U Q	1.0	0.22	ug/L			12/25/21 23:19	1
Xylenes, Total	0.53	U Q	2.0	0.53	ug/L			12/25/21 23:19	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	18	T J	ug/L		1.59			12/25/21 23:19	1
Unknown	4.3	T J	ug/L		4.79			12/25/21 23:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		85 - 114		12/25/21 23:19	1
Dibromofluoromethane (Surr)	102		80 - 119		12/25/21 23:19	1
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		12/25/21 23:19	1
Toluene-d8 (Surr)	105		89 - 112		12/25/21 23:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.091	U	0.41	0.091	ug/L		12/27/21 10:48	12/28/21 14:11	1
1,2-Dichlorobenzene	0.051	U	0.41	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
1,3-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1
1,4-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1
1-Methylnaphthalene	0.051	U	1.0	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
2,4,5-Trichlorophenol	0.10	U	0.41	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
2,4,6-Trichlorophenol	0.10	U	0.61	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		12/27/21 10:48	12/28/21 14:11	1
2,4-Dimethylphenol	0.16	U	4.1	0.16	ug/L		12/27/21 10:48	12/28/21 14:11	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
2,6-Dinitrotoluene	0.10	U	0.41	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
2-Chloronaphthalene	0.071	U	1.0	0.071	ug/L		12/27/21 10:48	12/28/21 14:11	1
2-Chlorophenol	0.051	U	1.0	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Client Sample ID: ERH 5000

Lab Sample ID: 580-108711-1

Date Collected: 12/22/21 10:25

Matrix: Water

Date Received: 12/23/21 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.061	U	0.41	0.061	ug/L		12/27/21 10:48	12/28/21 14:11	1
2-Methylphenol	0.051	U	0.61	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
2-Nitrophenol	0.071	U	1.0	0.071	ug/L		12/27/21 10:48	12/28/21 14:11	1
3 & 4 Methylphenol	0.10	U	0.61	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		12/27/21 10:48	12/28/21 14:11	1
3-Nitroaniline	0.16	U	3.0	0.16	ug/L		12/27/21 10:48	12/28/21 14:11	1
4,6-Dinitro-2-methylphenol	0.56	U	2.0	0.56	ug/L		12/27/21 10:48	12/28/21 14:11	1
4-Bromophenyl phenyl ether	0.061	U	0.61	0.061	ug/L		12/27/21 10:48	12/28/21 14:11	1
4-Chloro-3-methylphenol	0.13	U	0.61	0.13	ug/L		12/27/21 10:48	12/28/21 14:11	1
4-Chloroaniline	0.60	U Q	2.0	0.60	ug/L		12/27/21 10:48	12/28/21 14:11	1
4-Chlorophenyl phenyl ether	0.051	U	0.61	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
4-Nitroaniline	0.21	U Q	2.0	0.21	ug/L		12/27/21 10:48	12/28/21 14:11	1
4-Nitrophenol	1.7	U Q	10	1.7	ug/L		12/27/21 10:48	12/28/21 14:11	1
Acenaphthene	0.051	U	0.41	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
Acenaphthylene	0.061	U	1.0	0.061	ug/L		12/27/21 10:48	12/28/21 14:11	1
Anthracene	0.051	U	1.0	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
Benzo[a]anthracene	0.051	U	0.25	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
Benzo[a]pyrene	0.041	U	0.25	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1
Benzo[b]fluoranthene	0.041	U	0.25	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1
Benzo[g,h,i]perylene	0.041	U	0.25	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1
Benzo[k]fluoranthene	0.051	U	0.25	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
Benzyl alcohol	0.18	U Q	5.1	0.18	ug/L		12/27/21 10:48	12/28/21 14:11	1
Bis(2-chloroethoxy)methane	0.051	U	0.61	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
Bis(2-chloroethyl)ether	0.030	U	0.10	0.030	ug/L		12/27/21 10:48	12/28/21 14:11	1
Bis(2-ethylhexyl) phthalate	0.75	U	3.0	0.75	ug/L		12/27/21 10:48	12/28/21 14:11	1
bis(chloroisopropyl) ether	0.061	U Q	0.25	0.061	ug/L		12/27/21 10:48	12/28/21 14:11	1
Butyl benzyl phthalate	0.27	U	4.1	0.27	ug/L		12/27/21 10:48	12/28/21 14:11	1
Carbazole	0.10	U	0.61	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
Chrysene	0.041	U	0.25	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1
Dibenz(a,h)anthracene	0.071	U	0.25	0.071	ug/L		12/27/21 10:48	12/28/21 14:11	1
Dibenzofuran	0.10	U	0.41	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		12/27/21 10:48	12/28/21 14:11	1
Dimethyl phthalate	0.061	U	0.61	0.061	ug/L		12/27/21 10:48	12/28/21 14:11	1
Di-n-butyl phthalate	0.19	U	3.0	0.19	ug/L		12/27/21 10:48	12/28/21 14:11	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		12/27/21 10:48	12/28/21 14:11	1
Fluoranthene	0.061	U	0.25	0.061	ug/L		12/27/21 10:48	12/28/21 14:11	1
Fluorene	0.051	U	0.25	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
Hexachlorobenzene	0.041	U	0.61	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1
Hexachlorobutadiene	0.061	U	1.0	0.061	ug/L		12/27/21 10:48	12/28/21 14:11	1
Hexachloroethane	0.051	U	1.0	0.051	ug/L		12/27/21 10:48	12/28/21 14:11	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.41	0.13	ug/L		12/27/21 10:48	12/28/21 14:11	1
Isophorone	0.10	U	0.41	0.10	ug/L		12/27/21 10:48	12/28/21 14:11	1
Naphthalene	0.16	U	0.41	0.16	ug/L		12/27/21 10:48	12/28/21 14:11	1
Nitrobenzene	0.041	U	1.0	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1
N-Nitrosodimethylamine	0.26	U	2.0	0.26	ug/L		12/27/21 10:48	12/28/21 14:11	1
N-Nitrosodi-n-propylamine	0.061	U	0.41	0.061	ug/L		12/27/21 10:48	12/28/21 14:11	1
N-Nitrosodiphenylamine	0.071	U	1.0	0.071	ug/L		12/27/21 10:48	12/28/21 14:11	1
Pentachlorophenol	0.52	U Q	10	0.52	ug/L		12/27/21 10:48	12/28/21 14:11	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Client Sample ID: ERH 5000

Lab Sample ID: 580-108711-1

Date Collected: 12/22/21 10:25

Matrix: Water

Date Received: 12/23/21 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	0.12	U	1.0	0.12	ug/L		12/27/21 10:48	12/28/21 14:11	1
Phenol	0.37	U	1.0	0.37	ug/L		12/27/21 10:48	12/28/21 14:11	1
Pyrene	0.041	U	1.0	0.041	ug/L		12/27/21 10:48	12/28/21 14:11	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	2.2	T J	ug/L		2.46		12/27/21 10:48	12/28/21 14:11	1
2-Butene, 1-bromo-3-methyl-	3.8	T J N	ug/L		2.54	870-63-3	12/27/21 10:48	12/28/21 14:11	1
Unknown	52	T J	ug/L		2.87		12/27/21 10:48	12/28/21 14:11	1
Butane, 2,3-dichloro-2-methyl-	9.2	T J N	ug/L		3.00	507-45-9	12/27/21 10:48	12/28/21 14:11	1
Unknown	2.6	T J	ug/L		3.17		12/27/21 10:48	12/28/21 14:11	1
Unknown	26	T J	ug/L		3.54		12/27/21 10:48	12/28/21 14:11	1
Unknown	10	T J	ug/L		3.68		12/27/21 10:48	12/28/21 14:11	1
Unknown	2.2	T J	ug/L		3.81		12/27/21 10:48	12/28/21 14:11	1
Unknown	1.8	T J	ug/L		4.80		12/27/21 10:48	12/28/21 14:11	1
Ethane, 1,1'-oxybis[2-bromo-	1.6	T J N	ug/L		4.91	5414-19-7	12/27/21 10:48	12/28/21 14:11	1
Isoquinoline	3.6	T J N	ug/L		5.83	119-65-3	12/27/21 10:48	12/28/21 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		43 - 140	12/27/21 10:48	12/28/21 14:11	1
2-Fluorobiphenyl	86		44 - 119	12/27/21 10:48	12/28/21 14:11	1
2-Fluorophenol (Surr)	0	S1-	19 - 119	12/27/21 10:48	12/28/21 14:11	1
Nitrobenzene-d5 (Surr)	87		44 - 120	12/27/21 10:48	12/28/21 14:11	1
Phenol-d5 (Surr)	0.4	S1-	10 - 120	12/27/21 10:48	12/28/21 14:11	1
Terphenyl-d14	104		50 - 134	12/27/21 10:48	12/28/21 14:11	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	1.6	U	5.1	1.6	ug/L		12/27/21 10:48	12/28/21 23:03	1
Benzoic acid	1.4	U	10	1.4	ug/L		12/27/21 10:48	12/28/21 23:03	1
Hexachlorocyclopentadiene	0.14	U	1.0	0.14	ug/L		12/27/21 10:48	12/28/21 23:03	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Methane, tribromo-	0.37	T J N	ug/L		3.68	75-25-2	12/27/21 10:48	12/28/21 23:03	1
Pyridine, 2,4-dimethyl-	0.68	T J N	ug/L		3.92	108-47-4	12/27/21 10:48	12/28/21 23:03	1
Quinoline	3.1	T J N	ug/L		5.79	91-22-5	12/27/21 10:48	12/28/21 23:03	1
Isoquinoline	1.1	T J N	ug/L		5.92	119-65-3	12/27/21 10:48	12/28/21 23:03	1
Quinoline, 2-methyl-	0.76	T J N	ug/L		6.14	91-63-4	12/27/21 10:48	12/28/21 23:03	1
Quinoline, 8-methyl-	0.22	T J N	ug/L		6.36	611-32-5	12/27/21 10:48	12/28/21 23:03	1
2,8-Dimethylquinoline	0.21	T J N	ug/L		6.66	1463-17-8	12/27/21 10:48	12/28/21 23:03	1
Quinoline, 2,4-dimethyl-	0.26	T J N	ug/L		6.75	1198-37-4	12/27/21 10:48	12/28/21 23:03	1
Octadecanoic acid	0.23	T J N	ug/L		9.28	57-11-4	12/27/21 10:48	12/28/21 23:03	1
1,3-Dioxolane, 2-(methoxymethyl)-2-phenyl-	0.47	T J N	ug/L		10.27	1000156-71-2	12/27/21 10:48	12/28/21 23:03	1
Octadecane, 2-methyl-	0.27	T J N	ug/L		13.04	1560-88-9	12/27/21 10:48	12/28/21 23:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	58		43 - 140	12/27/21 10:48	12/28/21 23:03	1
2-Fluorobiphenyl	71		44 - 119	12/27/21 10:48	12/28/21 23:03	1
2-Fluorophenol (Surr)	0	S1-	19 - 119	12/27/21 10:48	12/28/21 23:03	1
Nitrobenzene-d5 (Surr)	81		44 - 120	12/27/21 10:48	12/28/21 23:03	1
Phenol-d5 (Surr)	0	S1-	10 - 120	12/27/21 10:48	12/28/21 23:03	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Client Sample ID: ERH 5000

Date Collected: 12/22/21 10:25

Date Received: 12/23/21 11:00

Lab Sample ID: 580-108711-1

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	97		50 - 134	12/27/21 10:48	12/28/21 23:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C24-C40	180	U	510	180	ug/L		12/26/21 11:17	12/26/21 16:31	1
C9-C25	92	U	510	92	ug/L		12/26/21 11:17	12/26/21 16:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	98		56 - 125	12/26/21 11:17	12/26/21 16:31	1

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Client Sample ID: ERH 5002

Lab Sample ID: 580-108711-2

Date Collected: 12/22/21 10:20

Matrix: Water

Date Received: 12/23/21 11:00

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			12/25/21 23:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		69 - 133					12/25/21 23:44	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			12/25/21 23:44	1
Benzene	0.24	U Q	1.0	0.24	ug/L			12/25/21 23:44	1
Bromobenzene	0.43	U	1.0	0.43	ug/L			12/25/21 23:44	1
Bromochloromethane	0.29	U Q	1.0	0.29	ug/L			12/25/21 23:44	1
Bromoform	0.51	U Q	1.0	0.51	ug/L			12/25/21 23:44	1
Bromomethane	0.21	U Q	1.0	0.21	ug/L			12/25/21 23:44	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			12/25/21 23:44	1
Carbon disulfide	0.53	U Q	1.0	0.53	ug/L			12/25/21 23:44	1
Carbon tetrachloride	0.30	U Q	1.0	0.30	ug/L			12/25/21 23:44	1
Chlorobenzene	0.44	U Q	1.0	0.44	ug/L			12/25/21 23:44	1
Chloroform	0.26	U Q	1.0	0.26	ug/L			12/25/21 23:44	1
Chloromethane	0.28	U	1.0	0.28	ug/L			12/25/21 23:44	1
2-Chlorotoluene	0.51	U	1.0	0.51	ug/L			12/25/21 23:44	1
4-Chlorotoluene	0.38	U	1.0	0.38	ug/L			12/25/21 23:44	1
cis-1,2-Dichloroethene	0.35	U Q	1.0	0.35	ug/L			12/25/21 23:44	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			12/25/21 23:44	1
Dibromochloromethane	0.43	U Q	1.0	0.43	ug/L			12/25/21 23:44	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			12/25/21 23:44	1
Dibromomethane	0.34	U Q	1.0	0.34	ug/L			12/25/21 23:44	1
1,2-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/25/21 23:44	1
1,3-Dichlorobenzene	0.48	U Q	1.0	0.48	ug/L			12/25/21 23:44	1
1,4-Dichlorobenzene	0.46	U Q	1.0	0.46	ug/L			12/25/21 23:44	1
Dichlorobromomethane	0.29	U Q	1.0	0.29	ug/L			12/25/21 23:44	1
Dichlorodifluoromethane	0.53	U Q	1.0	0.53	ug/L			12/25/21 23:44	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			12/25/21 23:44	1
1,2-Dichloroethane	0.42	U Q	1.0	0.42	ug/L			12/25/21 23:44	1
1,1-Dichloroethene	0.28	U Q	1.0	0.28	ug/L			12/25/21 23:44	1
1,2-Dichloroethene, Total	0.39	U Q	1.0	0.39	ug/L			12/25/21 23:44	1
Dichloromethane	1.4	U Q	3.0	1.4	ug/L			12/25/21 23:44	1
1,2-Dichloropropane	0.18	U Q	1.0	0.18	ug/L			12/25/21 23:44	1
1,3-Dichloropropane	0.35	U Q	1.0	0.35	ug/L			12/25/21 23:44	1
2,2-Dichloropropane	0.32	U Q	1.0	0.32	ug/L			12/25/21 23:44	1
1,1-Dichloropropene	0.29	U Q	1.0	0.29	ug/L			12/25/21 23:44	1
Ethylbenzene	0.50	U Q	1.0	0.50	ug/L			12/25/21 23:44	1
Ethyl Chloride	0.35	U Q	1.0	0.35	ug/L			12/25/21 23:44	1
Ethylene Dibromide	0.40	U Q	1.0	0.40	ug/L			12/25/21 23:44	1
Hexachlorobutadiene	0.79	U Q	3.0	0.79	ug/L			12/25/21 23:44	1
2-Hexanone	4.0	U	15	4.0	ug/L			12/25/21 23:44	1
Isopropylbenzene	0.44	U Q	1.0	0.44	ug/L			12/25/21 23:44	1
4-Isopropyltoluene	0.28	U	1.0	0.28	ug/L			12/25/21 23:44	1
4-Methyl-2-pentanone (MIBK)	2.5	U Q	5.0	2.5	ug/L			12/25/21 23:44	1
Methyl tert-butyl ether	0.44	U	1.0	0.44	ug/L			12/25/21 23:44	1
m-Xylene & p-Xylene	0.53	U Q	2.0	0.53	ug/L			12/25/21 23:44	1

Eurofins Northwest, Seattle

Client Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Client Sample ID: ERH 5002

Lab Sample ID: 580-108711-2

Date Collected: 12/22/21 10:20

Matrix: Water

Date Received: 12/23/21 11:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.93	U Q	3.0	0.93	ug/L			12/25/21 23:44	1
n-Butylbenzene	0.44	U	1.0	0.44	ug/L			12/25/21 23:44	1
N-Propylbenzene	0.50	U Q	1.0	0.50	ug/L			12/25/21 23:44	1
o-Xylene	0.39	U Q	1.0	0.39	ug/L			12/25/21 23:44	1
sec-Butylbenzene	0.49	U	1.0	0.49	ug/L			12/25/21 23:44	1
Styrene	0.53	U Q	1.0	0.53	ug/L			12/25/21 23:44	1
tert-Butylbenzene	0.58	U	2.0	0.58	ug/L			12/25/21 23:44	1
1,1,1,2-Tetrachloroethane	0.18	U Q	1.0	0.18	ug/L			12/25/21 23:44	1
1,1,2,2-Tetrachloroethane	0.52	U Q	1.0	0.52	ug/L			12/25/21 23:44	1
Tetrachloroethene	0.41	U Q	1.0	0.41	ug/L			12/25/21 23:44	1
Toluene	0.39	U Q	1.0	0.39	ug/L			12/25/21 23:44	1
trans-1,2-Dichloroethene	0.39	U Q	1.0	0.39	ug/L			12/25/21 23:44	1
trans-1,3-Dichloropropene	0.41	U Q	1.0	0.41	ug/L			12/25/21 23:44	1
1,2,3-Trichlorobenzene	0.43	U Q	2.0	0.43	ug/L			12/25/21 23:44	1
1,2,4-Trichlorobenzene	0.33	U Q	1.0	0.33	ug/L			12/25/21 23:44	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			12/25/21 23:44	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			12/25/21 23:44	1
Trichloroethene	0.26	U Q	1.0	0.26	ug/L			12/25/21 23:44	1
Trichlorofluoromethane	0.36	U	1.0	0.36	ug/L			12/25/21 23:44	1
1,2,3-Trichloropropane	0.41	U Q	1.0	0.41	ug/L			12/25/21 23:44	1
1,2,4-Trimethylbenzene	0.61	U	3.0	0.61	ug/L			12/25/21 23:44	1
1,3,5-Trimethylbenzene	0.55	U	1.0	0.55	ug/L			12/25/21 23:44	1
Vinyl chloride	0.22	U Q	1.0	0.22	ug/L			12/25/21 23:44	1
Xylenes, Total	0.53	U Q	2.0	0.53	ug/L			12/25/21 23:44	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	2.0	T J	ug/L		1.62			12/25/21 23:44	1
Unknown	4.4	T J	ug/L		4.79			12/25/21 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		85 - 114		12/25/21 23:44	1
Dibromofluoromethane (Surr)	110		80 - 119		12/25/21 23:44	1
1,2-Dichloroethane-d4 (Surr)	101		81 - 118		12/25/21 23:44	1
Toluene-d8 (Surr)	101		89 - 112		12/25/21 23:44	1

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: MB 580-376759/4

Matrix: Water

Analysis Batch: 376759

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			12/25/21 20:02	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		69 - 133					12/25/21 20:02	1

Lab Sample ID: LCS 580-376759/5

Matrix: Water

Analysis Batch: 376759

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	1.10		mg/L		110	78 - 122
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	86		69 - 133				

Lab Sample ID: LCSD 580-376759/6

Matrix: Water

Analysis Batch: 376759

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	0.946		mg/L		95	78 - 122	15	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	88		69 - 133						

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

Lab Sample ID: MB 580-376788/4

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.2	U	15	3.2	ug/L			12/25/21 20:02	1
Benzene	0.24	U	1.0	0.24	ug/L			12/25/21 20:02	1
Bromobenzene	0.43	U	1.0	0.43	ug/L			12/25/21 20:02	1
Bromochloromethane	0.29	U	1.0	0.29	ug/L			12/25/21 20:02	1
Bromoform	0.51	U	1.0	0.51	ug/L			12/25/21 20:02	1
Bromomethane	0.21	U	1.0	0.21	ug/L			12/25/21 20:02	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			12/25/21 20:02	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			12/25/21 20:02	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			12/25/21 20:02	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			12/25/21 20:02	1
Chloroform	0.26	U	1.0	0.26	ug/L			12/25/21 20:02	1
Chloromethane	0.28	U	1.0	0.28	ug/L			12/25/21 20:02	1
2-Chlorotoluene	0.51	U	1.0	0.51	ug/L			12/25/21 20:02	1
4-Chlorotoluene	0.38	U	1.0	0.38	ug/L			12/25/21 20:02	1

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: MB 580-376788/4

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			12/25/21 20:02	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			12/25/21 20:02	1
Dibromochloromethane	0.43	U	1.0	0.43	ug/L			12/25/21 20:02	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			12/25/21 20:02	1
Dibromomethane	0.34	U	1.0	0.34	ug/L			12/25/21 20:02	1
1,2-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/25/21 20:02	1
1,3-Dichlorobenzene	0.48	U	1.0	0.48	ug/L			12/25/21 20:02	1
1,4-Dichlorobenzene	0.46	U	1.0	0.46	ug/L			12/25/21 20:02	1
Dichlorobromomethane	0.29	U	1.0	0.29	ug/L			12/25/21 20:02	1
Dichlorodifluoromethane	0.53	U	1.0	0.53	ug/L			12/25/21 20:02	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			12/25/21 20:02	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			12/25/21 20:02	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			12/25/21 20:02	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
Dichloromethane	1.4	U	3.0	1.4	ug/L			12/25/21 20:02	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			12/25/21 20:02	1
1,3-Dichloropropane	0.35	U	1.0	0.35	ug/L			12/25/21 20:02	1
2,2-Dichloropropane	0.32	U	1.0	0.32	ug/L			12/25/21 20:02	1
1,1-Dichloropropene	0.29	U	1.0	0.29	ug/L			12/25/21 20:02	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			12/25/21 20:02	1
Ethyl Chloride	0.35	U	1.0	0.35	ug/L			12/25/21 20:02	1
Ethylene Dibromide	0.40	U	1.0	0.40	ug/L			12/25/21 20:02	1
Hexachlorobutadiene	0.79	U	3.0	0.79	ug/L			12/25/21 20:02	1
2-Hexanone	4.0	U	15	4.0	ug/L			12/25/21 20:02	1
Isopropylbenzene	0.44	U	1.0	0.44	ug/L			12/25/21 20:02	1
4-Isopropyltoluene	0.28	U	1.0	0.28	ug/L			12/25/21 20:02	1
4-Methyl-2-pentanone (MIBK)	2.5	U	5.0	2.5	ug/L			12/25/21 20:02	1
Methyl tert-butyl ether	0.44	U	1.0	0.44	ug/L			12/25/21 20:02	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			12/25/21 20:02	1
Naphthalene	0.93	U	3.0	0.93	ug/L			12/25/21 20:02	1
n-Butylbenzene	0.44	U	1.0	0.44	ug/L			12/25/21 20:02	1
N-Propylbenzene	0.50	U	1.0	0.50	ug/L			12/25/21 20:02	1
o-Xylene	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
sec-Butylbenzene	0.49	U	1.0	0.49	ug/L			12/25/21 20:02	1
Styrene	0.53	U	1.0	0.53	ug/L			12/25/21 20:02	1
tert-Butylbenzene	0.58	U	2.0	0.58	ug/L			12/25/21 20:02	1
1,1,1,2-Tetrachloroethane	0.18	U	1.0	0.18	ug/L			12/25/21 20:02	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			12/25/21 20:02	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			12/25/21 20:02	1
Toluene	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			12/25/21 20:02	1
1,2,3-Trichlorobenzene	0.43	U	2.0	0.43	ug/L			12/25/21 20:02	1
1,2,4-Trichlorobenzene	0.33	U	1.0	0.33	ug/L			12/25/21 20:02	1
1,1,1-Trichloroethane	0.39	U	1.0	0.39	ug/L			12/25/21 20:02	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			12/25/21 20:02	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			12/25/21 20:02	1
Trichlorofluoromethane	0.36	U	1.0	0.36	ug/L			12/25/21 20:02	1
1,2,3-Trichloropropane	0.41	U	1.0	0.41	ug/L			12/25/21 20:02	1

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: MB 580-376788/4

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	0.61	U	3.0	0.61	ug/L			12/25/21 20:02	1
1,3,5-Trimethylbenzene	0.55	U	1.0	0.55	ug/L			12/25/21 20:02	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			12/25/21 20:02	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			12/25/21 20:02	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/25/21 20:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		85 - 114		12/25/21 20:02	1
Dibromofluoromethane (Surr)	105		80 - 119		12/25/21 20:02	1
1,2-Dichloroethane-d4 (Surr)	97		81 - 118		12/25/21 20:02	1
Toluene-d8 (Surr)	102		89 - 112		12/25/21 20:02	1

Lab Sample ID: LCS 580-376788/5

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	50.0	56.4		ug/L		113	39 - 160
Benzene	10.0	12.5	*+	ug/L		125	79 - 120
Bromobenzene	10.0	11.3		ug/L		113	80 - 120
Bromochloromethane	10.0	12.8	*+	ug/L		128	78 - 123
Bromoform	10.0	12.0		ug/L		120	66 - 130
Bromomethane	10.0	13.2		ug/L		132	53 - 141
2-Butanone (MEK)	50.0	50.3		ug/L		101	56 - 143
Carbon disulfide	10.0	13.4	*+	ug/L		134	64 - 133
Carbon tetrachloride	10.0	12.9		ug/L		129	72 - 136
Chlorobenzene	10.0	12.3	*+	ug/L		123	82 - 118
Chloroform	10.0	12.6	*+	ug/L		126	79 - 124
Chloromethane	10.0	11.5		ug/L		115	50 - 139
2-Chlorotoluene	10.0	11.2		ug/L		112	79 - 122
4-Chlorotoluene	10.0	10.9		ug/L		109	78 - 122
cis-1,2-Dichloroethene	10.0	12.3		ug/L		123	78 - 123
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	75 - 124
Dibromochloromethane	10.0	11.9		ug/L		119	74 - 126
1,2-Dibromo-3-Chloropropane	10.0	9.45		ug/L		94	62 - 128
Dibromomethane	10.0	12.1		ug/L		121	79 - 123
1,2-Dichlorobenzene	10.0	11.8		ug/L		118	80 - 119
1,3-Dichlorobenzene	10.0	12.1	*+	ug/L		121	80 - 119
1,4-Dichlorobenzene	10.0	11.9	*+	ug/L		119	79 - 118
Dichlorobromomethane	10.0	12.0		ug/L		120	79 - 125
Dichlorodifluoromethane	10.0	12.4		ug/L		124	32 - 152
1,1-Dichloroethane	10.0	12.4		ug/L		124	77 - 125
1,2-Dichloroethane	10.0	11.6		ug/L		116	73 - 128
1,1-Dichloroethene	10.0	13.5	*+	ug/L		135	71 - 131
1,2-Dichloroethene, Total	20.0	24.9	*+	ug/L		125	78 - 123
Dichloromethane	10.0	13.0	*+	ug/L		130	74 - 124

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: LCS 580-376788/5

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	10.0	11.9		ug/L		119	78 - 122
1,3-Dichloropropane	10.0	11.7		ug/L		117	80 - 119
2,2-Dichloropropane	10.0	13.6		ug/L		136	60 - 139
1,1-Dichloropropene	10.0	12.4		ug/L		124	79 - 125
Ethylbenzene	10.0	12.0		ug/L		120	79 - 121
Ethyl Chloride	10.0	13.3		ug/L		133	60 - 138
Ethylene Dibromide	10.0	11.8		ug/L		118	77 - 121
Hexachlorobutadiene	10.0	13.9	*+	ug/L		139	66 - 134
2-Hexanone	50.0	46.9		ug/L		94	57 - 139
Isopropylbenzene	10.0	12.5		ug/L		125	72 - 131
4-Isopropyltoluene	10.0	11.5		ug/L		115	77 - 127
4-Methyl-2-pentanone (MIBK)	50.0	50.5		ug/L		101	67 - 130
Methyl tert-butyl ether	10.0	11.6		ug/L		116	71 - 124
m-Xylene & p-Xylene	10.0	12.4	*+	ug/L		124	80 - 121
Naphthalene	10.0	13.6	*+	ug/L		136	61 - 128
n-Butylbenzene	10.0	12.0		ug/L		120	75 - 128
N-Propylbenzene	10.0	11.2		ug/L		112	76 - 126
o-Xylene	10.0	12.4	*+	ug/L		124	78 - 122
sec-Butylbenzene	10.0	11.2		ug/L		112	77 - 126
Styrene	10.0	12.1		ug/L		121	78 - 123
tert-Butylbenzene	10.0	11.4		ug/L		114	78 - 124
1,1,1,2-Tetrachloroethane	10.0	12.2		ug/L		122	78 - 124
1,1,2,2-Tetrachloroethane	10.0	10.5		ug/L		105	71 - 121
Tetrachloroethene	10.0	12.7		ug/L		127	74 - 129
Toluene	10.0	12.7	*+	ug/L		127	80 - 121
trans-1,2-Dichloroethene	10.0	12.6	*+	ug/L		126	75 - 124
trans-1,3-Dichloropropene	10.0	12.3		ug/L		123	73 - 127
1,2,3-Trichlorobenzene	10.0	14.5	*+	ug/L		145	69 - 129
1,2,4-Trichlorobenzene	10.0	15.5	*+	ug/L		155	69 - 130
1,1,1-Trichloroethane	10.0	12.8		ug/L		128	74 - 131
1,1,2-Trichloroethane	10.0	11.9		ug/L		119	80 - 119
Trichloroethene	10.0	12.6	*+	ug/L		126	79 - 123
Trichlorofluoromethane	10.0	11.5		ug/L		115	65 - 141
1,2,3-Trichloropropane	10.0	10.4		ug/L		104	73 - 122
1,2,4-Trimethylbenzene	10.0	11.3		ug/L		113	76 - 124
1,3,5-Trimethylbenzene	10.0	11.9		ug/L		119	75 - 124
Vinyl chloride	10.0	12.6		ug/L		126	58 - 137
Xylenes, Total	20.0	24.8	*+	ug/L		124	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		85 - 114
Dibromofluoromethane (Surr)	102		80 - 119
1,2-Dichloroethane-d4 (Surr)	94		81 - 118
Toluene-d8 (Surr)	102		89 - 112

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: LCSD 580-376788/6

Matrix: Water

Analysis Batch: 376788

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	47.2		ug/L		94	39 - 160	18	20
Benzene	10.0	10.3		ug/L		103	79 - 120	20	20
Bromobenzene	10.0	9.51		ug/L		95	80 - 120	17	20
Bromochloromethane	10.0	10.4	*1	ug/L		104	78 - 123	21	20
Bromoform	10.0	9.64	*1	ug/L		96	66 - 130	22	20
Bromomethane	10.0	10.5	*1	ug/L		105	53 - 141	22	20
2-Butanone (MEK)	50.0	43.8		ug/L		88	56 - 143	14	20
Carbon disulfide	10.0	11.2		ug/L		112	64 - 133	18	20
Carbon tetrachloride	10.0	10.5	*1	ug/L		105	72 - 136	21	20
Chlorobenzene	10.0	9.79	*1	ug/L		98	82 - 118	23	20
Chloroform	10.0	10.5		ug/L		105	79 - 124	18	20
Chloromethane	10.0	9.73		ug/L		97	50 - 139	17	20
2-Chlorotoluene	10.0	9.44		ug/L		94	79 - 122	17	20
4-Chlorotoluene	10.0	9.10		ug/L		91	78 - 122	18	20
cis-1,2-Dichloroethene	10.0	9.96	*1	ug/L		100	78 - 123	21	20
cis-1,3-Dichloropropene	10.0	8.34		ug/L		83	75 - 124	19	20
Dibromochloromethane	10.0	9.62	*1	ug/L		96	74 - 126	21	20
1,2-Dibromo-3-Chloropropane	10.0	7.85		ug/L		78	62 - 128	19	20
Dibromomethane	10.0	9.46	*1	ug/L		95	79 - 123	24	20
1,2-Dichlorobenzene	10.0	9.81		ug/L		98	80 - 119	18	20
1,3-Dichlorobenzene	10.0	9.92		ug/L		99	80 - 119	20	20
1,4-Dichlorobenzene	10.0	9.89		ug/L		99	79 - 118	19	20
Dichlorobromomethane	10.0	9.69	*1	ug/L		97	79 - 125	21	20
Dichlorodifluoromethane	10.0	10.4		ug/L		104	32 - 152	17	20
1,1-Dichloroethane	10.0	10.2		ug/L		102	77 - 125	19	20
1,2-Dichloroethane	10.0	9.42	*1	ug/L		94	73 - 128	21	20
1,1-Dichloroethene	10.0	11.2		ug/L		112	71 - 131	18	20
1,2-Dichloroethene, Total	20.0	20.6		ug/L		103	78 - 123	19	20
Dichloromethane	10.0	10.6		ug/L		106	74 - 124	20	20
1,2-Dichloropropane	10.0	9.67	*1	ug/L		97	78 - 122	21	20
1,3-Dichloropropane	10.0	9.38	*1	ug/L		94	80 - 119	22	20
2,2-Dichloropropane	10.0	11.2		ug/L		112	60 - 139	20	20
1,1-Dichloropropene	10.0	9.97	*1	ug/L		100	79 - 125	22	20
Ethylbenzene	10.0	9.70	*1	ug/L		97	79 - 121	21	20
Ethyl Chloride	10.0	10.6	*1	ug/L		106	60 - 138	22	20
Ethylene Dibromide	10.0	9.50	*1	ug/L		95	77 - 121	21	20
Hexachlorobutadiene	10.0	12.6		ug/L		126	66 - 134	9	20
2-Hexanone	50.0	43.0		ug/L		86	57 - 139	9	20
Isopropylbenzene	10.0	10.2	*1	ug/L		102	72 - 131	21	20
4-Isopropyltoluene	10.0	9.71		ug/L		97	77 - 127	17	20
4-Methyl-2-pentanone (MIBK)	50.0	40.1	*1	ug/L		80	67 - 130	23	20
Methyl tert-butyl ether	10.0	9.48		ug/L		95	71 - 124	20	20
m-Xylene & p-Xylene	10.0	9.85	*1	ug/L		98	80 - 121	23	20
Naphthalene	10.0	12.2		ug/L		122	61 - 128	11	20
n-Butylbenzene	10.0	9.96		ug/L		100	75 - 128	19	20
N-Propylbenzene	10.0	9.06	*1	ug/L		91	76 - 126	21	20
o-Xylene	10.0	10.2		ug/L		102	78 - 122	20	20
sec-Butylbenzene	10.0	9.28		ug/L		93	77 - 126	19	20

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: LCSD 580-376788/6

Matrix: Water

Analysis Batch: 376788

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
Styrene	10.0	9.71	*1	ug/L		97	78 - 123	22	20
tert-Butylbenzene	10.0	9.46		ug/L		95	78 - 124	18	20
1,1,1,2-Tetrachloroethane	10.0	9.92	*1	ug/L		99	78 - 124	21	20
1,1,2,2-Tetrachloroethane	10.0	8.32	*1	ug/L		83	71 - 121	23	20
Tetrachloroethene	10.0	10.2	*1	ug/L		102	74 - 129	22	20
Toluene	10.0	10.5		ug/L		105	80 - 121	19	20
trans-1,2-Dichloroethene	10.0	10.6		ug/L		106	75 - 124	17	20
trans-1,3-Dichloropropene	10.0	9.91	*1	ug/L		99	73 - 127	21	20
1,2,3-Trichlorobenzene	10.0	13.5	*+	ug/L		135	69 - 129	7	20
1,2,4-Trichlorobenzene	10.0	13.4	*+	ug/L		134	69 - 130	14	20
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	74 - 131	20	20
1,1,2-Trichloroethane	10.0	9.71		ug/L		97	80 - 119	20	20
Trichloroethene	10.0	10.0	*1	ug/L		100	79 - 123	22	20
Trichlorofluoromethane	10.0	9.72		ug/L		97	65 - 141	17	20
1,2,3-Trichloropropane	10.0	8.30	*1	ug/L		83	73 - 122	23	20
1,2,4-Trimethylbenzene	10.0	9.42		ug/L		94	76 - 124	18	20
1,3,5-Trimethylbenzene	10.0	9.93		ug/L		99	75 - 124	18	20
Vinyl chloride	10.0	10.1	*1	ug/L		101	58 - 137	22	20
Xylenes, Total	20.0	20.1	*1	ug/L		100	79 - 121	21	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		85 - 114
Dibromofluoromethane (Surr)	102		80 - 119
1,2-Dichloroethane-d4 (Surr)	93		81 - 118
Toluene-d8 (Surr)	103		89 - 112

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

Lab Sample ID: MB 580-376770/1-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 376770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.090	U	0.40	0.090	ug/L		12/27/21 10:48	12/28/21 12:40	1
1,2-Dichlorobenzene	0.050	U	0.40	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
1,3-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
1,4-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
1-Methylnaphthalene	0.050	U	1.0	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4,5-Trichlorophenol	0.10	U	0.40	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4,6-Trichlorophenol	0.10	U	0.60	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4-Dimethylphenol	0.16	U	4.0	0.16	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4-Dinitrophenol	1.6	U	5.0	1.6	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2,6-Dinitrotoluene	0.10	U	0.40	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Chloronaphthalene	0.070	U	1.0	0.070	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Chlorophenol	0.050	U	1.0	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Methylnaphthalene	0.060	U	0.40	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Methylphenol	0.050	U	0.60	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: MB 580-376770/1-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 376770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
2-Nitrophenol	0.070	U	1.0	0.070	ug/L		12/27/21 10:48	12/28/21 12:40	1
3 & 4 Methylphenol	0.10	U	0.60	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		12/27/21 10:48	12/28/21 12:40	1
3-Nitroaniline	0.16	U	3.0	0.16	ug/L		12/27/21 10:48	12/28/21 12:40	1
4,6-Dinitro-2-methylphenol	0.55	U	2.0	0.55	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Bromophenyl phenyl ether	0.060	U	0.60	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Chloro-3-methylphenol	0.13	U	0.60	0.13	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Chloroaniline	0.59	U	2.0	0.59	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Chlorophenyl phenyl ether	0.050	U	0.60	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Nitroaniline	0.21	U	2.0	0.21	ug/L		12/27/21 10:48	12/28/21 12:40	1
4-Nitrophenol	1.7	U	10	1.7	ug/L		12/27/21 10:48	12/28/21 12:40	1
Acenaphthene	0.050	U	0.40	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Acenaphthylene	0.060	U	1.0	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Anthracene	0.050	U	1.0	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[a]anthracene	0.050	U	0.25	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[a]pyrene	0.040	U	0.25	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[b]fluoranthene	0.040	U	0.25	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[g,h,i]perylene	0.040	U	0.25	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzo[k]fluoranthene	0.050	U	0.25	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzoic acid	1.3	U	10	1.3	ug/L		12/27/21 10:48	12/28/21 12:40	1
Benzyl alcohol	0.18	U	5.0	0.18	ug/L		12/27/21 10:48	12/28/21 12:40	1
Bis(2-chloroethoxy)methane	0.050	U	0.60	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Bis(2-chloroethyl)ether	0.030	U	0.10	0.030	ug/L		12/27/21 10:48	12/28/21 12:40	1
Bis(2-ethylhexyl) phthalate	0.74	U	3.0	0.74	ug/L		12/27/21 10:48	12/28/21 12:40	1
bis(chloroisopropyl) ether	0.060	U	0.25	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Butyl benzyl phthalate	0.27	U	4.0	0.27	ug/L		12/27/21 10:48	12/28/21 12:40	1
Carbazole	0.10	U	0.60	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
Chrysene	0.040	U	0.25	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Dibenz(a,h)anthracene	0.070	U	0.25	0.070	ug/L		12/27/21 10:48	12/28/21 12:40	1
Dibenzofuran	0.10	U	0.40	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		12/27/21 10:48	12/28/21 12:40	1
Dimethyl phthalate	0.060	U	0.60	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Di-n-butyl phthalate	0.19	U	3.0	0.19	ug/L		12/27/21 10:48	12/28/21 12:40	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		12/27/21 10:48	12/28/21 12:40	1
Fluoranthene	0.060	U	0.25	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Fluorene	0.050	U	0.25	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Hexachlorobenzene	0.040	U	0.60	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
Hexachlorobutadiene	0.060	U	1.0	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
Hexachlorocyclopentadiene	0.14	U	1.0	0.14	ug/L		12/27/21 10:48	12/28/21 12:40	1
Hexachloroethane	0.050	U	1.0	0.050	ug/L		12/27/21 10:48	12/28/21 12:40	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.40	0.13	ug/L		12/27/21 10:48	12/28/21 12:40	1
Isophorone	0.10	U	0.40	0.10	ug/L		12/27/21 10:48	12/28/21 12:40	1
Naphthalene	0.16	U	0.40	0.16	ug/L		12/27/21 10:48	12/28/21 12:40	1
Nitrobenzene	0.040	U	1.0	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1
N-Nitrosodimethylamine	0.26	U	2.0	0.26	ug/L		12/27/21 10:48	12/28/21 12:40	1
N-Nitrosodi-n-propylamine	0.060	U	0.40	0.060	ug/L		12/27/21 10:48	12/28/21 12:40	1
N-Nitrosodiphenylamine	0.070	U	1.0	0.070	ug/L		12/27/21 10:48	12/28/21 12:40	1
Pentachlorophenol	0.51	U	10	0.51	ug/L		12/27/21 10:48	12/28/21 12:40	1

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QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: MB 580-376770/1-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 376770

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenanthrene	0.12	U	1.0	0.12	ug/L		12/27/21 10:48	12/28/21 12:40	1
Phenol	0.36	U	1.0	0.36	ug/L		12/27/21 10:48	12/28/21 12:40	1
Pyrene	0.040	U	1.0	0.040	ug/L		12/27/21 10:48	12/28/21 12:40	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				12/27/21 10:48	12/28/21 12:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	75		43 - 140	12/27/21 10:48	12/28/21 12:40	1
2-Fluorobiphenyl	98		44 - 119	12/27/21 10:48	12/28/21 12:40	1
2-Fluorophenol (Surr)	57		19 - 119	12/27/21 10:48	12/28/21 12:40	1
Nitrobenzene-d5 (Surr)	87		44 - 120	12/27/21 10:48	12/28/21 12:40	1
Phenol-d5 (Surr)	31		10 - 120	12/27/21 10:48	12/28/21 12:40	1
Terphenyl-d14	128		50 - 134	12/27/21 10:48	12/28/21 12:40	1

Lab Sample ID: LCS 580-376770/2-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	2.00	1.55		ug/L		77	29 - 116
1,2-Dichlorobenzene	2.00	1.46		ug/L		73	32 - 111
1,3-Dichlorobenzene	2.00	1.42		ug/L		71	28 - 110
1,4-Dichlorobenzene	2.00	1.41		ug/L		71	29 - 112
1-Methylnaphthalene	2.00	1.73		ug/L		86	41 - 119
2,4,5-Trichlorophenol	2.00	1.83		ug/L		92	53 - 123
2,4,6-Trichlorophenol	2.00	1.70		ug/L		85	50 - 125
2,4-Dichlorophenol	2.00	1.70		ug/L		85	47 - 121
2,4-Dimethylphenol	2.00	1.82	J	ug/L		91	31 - 124
2,4-Dinitrophenol	4.00	2.56	J	ug/L		64	23 - 143
2,4-Dinitrotoluene	2.00	1.79		ug/L		90	57 - 128
2,6-Dinitrotoluene	2.00	1.81		ug/L		90	57 - 124
2-Chloronaphthalene	2.00	1.76		ug/L		88	40 - 116
2-Chlorophenol	2.00	1.72		ug/L		86	38 - 117
2-Methylnaphthalene	2.00	1.82		ug/L		91	40 - 121
2-Methylphenol	2.00	1.56		ug/L		78	30 - 117
2-Nitroaniline	2.00	1.83		ug/L		91	55 - 127
2-Nitrophenol	2.00	1.71		ug/L		86	47 - 123
3 & 4 Methylphenol	2.00	1.43		ug/L		72	29 - 110
3,3'-Dichlorobenzidine	4.00	3.00		ug/L		75	27 - 129
3-Nitroaniline	2.00	1.53	J	ug/L		77	41 - 128
4,6-Dinitro-2-methylphenol	4.00	2.99		ug/L		75	44 - 137
4-Bromophenyl phenyl ether	2.00	1.83		ug/L		92	55 - 124
4-Chloro-3-methylphenol	2.00	1.69		ug/L		84	52 - 119
4-Chloroaniline	2.00	1.08	J	ug/L		54	33 - 117
4-Chlorophenyl phenyl ether	2.00	1.84		ug/L		92	53 - 121
4-Nitroaniline	2.00	1.49	J	ug/L		75	70 - 125
4-Nitrophenol	4.00	1.77	J	ug/L		44	35 - 145

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: LCS 580-376770/2-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	1.76		ug/L		88	47 - 122
Acenaphthylene	2.00	1.84		ug/L		92	41 - 130
Anthracene	2.00	1.75		ug/L		87	57 - 123
Benzo[a]anthracene	2.00	1.67		ug/L		83	58 - 125
Benzo[a]pyrene	2.00	1.69		ug/L		85	54 - 128
Benzo[b]fluoranthene	2.00	1.65		ug/L		82	53 - 131
Benzo[g,h,i]perylene	2.00	1.67		ug/L		83	50 - 134
Benzo[k]fluoranthene	2.00	1.79		ug/L		89	57 - 129
Benzoic acid	4.00	1.51	J	ug/L		38	20 - 140
Benzyl alcohol	2.00	2.39	J *+	ug/L		119	31 - 112
Bis(2-chloroethoxy)methane	2.00	1.93		ug/L		97	48 - 120
Bis(2-chloroethyl)ether	2.00	1.96		ug/L		98	43 - 118
Bis(2-ethylhexyl) phthalate	2.00	1.92	J	ug/L		96	55 - 135
bis(chloroisopropyl) ether	2.00	2.81	*+	ug/L		140	37 - 130
Butyl benzyl phthalate	2.00	1.97	J	ug/L		98	53 - 134
Carbazole	2.00	2.02		ug/L		101	60 - 122
Chrysene	2.00	1.91		ug/L		95	59 - 123
Dibenz(a,h)anthracene	2.00	1.54		ug/L		77	51 - 134
Dibenzofuran	2.00	1.89		ug/L		95	53 - 118
Diethyl phthalate	2.00	2.22		ug/L		111	56 - 125
Dimethyl phthalate	2.00	2.01		ug/L		101	45 - 127
Di-n-butyl phthalate	2.00	1.94	J	ug/L		97	59 - 127
Di-n-octyl phthalate	2.00	1.82		ug/L		91	51 - 140
Fluoranthene	2.00	1.94		ug/L		97	57 - 128
Fluorene	2.00	1.92		ug/L		96	52 - 124
Hexachlorobenzene	2.00	1.77		ug/L		88	53 - 125
Hexachlorobutadiene	2.00	1.42		ug/L		71	22 - 124
Hexachlorocyclopentadiene	2.00	0.996	J	ug/L		50	20 - 125
Hexachloroethane	2.00	1.48		ug/L		74	21 - 115
Indeno[1,2,3-cd]pyrene	2.00	1.51		ug/L		75	52 - 134
Isophorone	2.00	1.97		ug/L		98	42 - 124
Naphthalene	2.00	1.64		ug/L		82	40 - 121
Nitrobenzene	2.00	1.94		ug/L		97	45 - 121
N-Nitrosodimethylamine	2.00	1.31	J	ug/L		65	45 - 125
N-Nitrosodi-n-propylamine	2.00	2.13		ug/L		106	49 - 119
N-Nitrosodiphenylamine	2.00	1.78		ug/L		89	51 - 123
Pentachlorophenol	4.00	1.31	J *	ug/L		33	35 - 138
Phenanthrene	2.00	1.81		ug/L		90	59 - 120
Phenol	2.00	0.857	J	ug/L		43	13 - 120
Pyrene	2.00	1.93		ug/L		97	57 - 126

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	99		43 - 140
2-Fluorobiphenyl	92		44 - 119
2-Fluorophenol (Surr)	65		19 - 119
Nitrobenzene-d5 (Surr)	104		44 - 120
Phenol-d5 (Surr)	38		10 - 120
Terphenyl-d14	107		50 - 134

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: LCSD 580-376770/3-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.55		ug/L		77	29 - 116	0	20
1,2-Dichlorobenzene	2.00	1.47		ug/L		74	32 - 111	1	20
1,3-Dichlorobenzene	2.00	1.42		ug/L		71	28 - 110	0	20
1,4-Dichlorobenzene	2.00	1.39		ug/L		70	29 - 112	2	20
1-Methylnaphthalene	2.00	1.69		ug/L		84	41 - 119	2	20
2,4,5-Trichlorophenol	2.00	1.94		ug/L		97	53 - 123	6	20
2,4,6-Trichlorophenol	2.00	1.75		ug/L		88	50 - 125	3	20
2,4-Dichlorophenol	2.00	1.73		ug/L		87	47 - 121	2	20
2,4-Dimethylphenol	2.00	1.93	J	ug/L		97	31 - 124	6	20
2,4-Dinitrophenol	4.00	2.46	J	ug/L		61	23 - 143	4	20
2,4-Dinitrotoluene	2.00	1.81		ug/L		91	57 - 128	1	20
2,6-Dinitrotoluene	2.00	1.88		ug/L		94	57 - 124	4	20
2-Chloronaphthalene	2.00	1.83		ug/L		91	40 - 116	4	20
2-Chlorophenol	2.00	1.69		ug/L		84	38 - 117	2	20
2-Methylnaphthalene	2.00	1.82		ug/L		91	40 - 121	0	20
2-Methylphenol	2.00	1.68		ug/L		84	30 - 117	7	20
2-Nitroaniline	2.00	1.81		ug/L		91	55 - 127	1	20
2-Nitrophenol	2.00	1.64		ug/L		82	47 - 123	4	20
3 & 4 Methylphenol	2.00	1.42		ug/L		71	29 - 110	1	20
3,3'-Dichlorobenzidine	4.00	3.53		ug/L		88	27 - 129	16	20
3-Nitroaniline	2.00	1.77	J	ug/L		88	41 - 128	15	20
4,6-Dinitro-2-methylphenol	4.00	3.10		ug/L		78	44 - 137	4	20
4-Bromophenyl phenyl ether	2.00	1.80		ug/L		90	55 - 124	2	20
4-Chloro-3-methylphenol	2.00	1.85		ug/L		93	52 - 119	9	20
4-Chloroaniline	2.00	1.45	J *1	ug/L		73	33 - 117	29	20
4-Chlorophenyl phenyl ether	2.00	1.89		ug/L		95	53 - 121	3	20
4-Nitroaniline	2.00	1.85	J *1	ug/L		93	70 - 125	21	20
4-Nitrophenol	4.00	2.27	J *1	ug/L		57	35 - 145	25	20
Acenaphthene	2.00	1.90		ug/L		95	47 - 122	8	20
Acenaphthylene	2.00	1.93		ug/L		97	41 - 130	5	20
Anthracene	2.00	1.80		ug/L		90	57 - 123	3	20
Benzo[a]anthracene	2.00	1.75		ug/L		87	58 - 125	5	20
Benzo[a]pyrene	2.00	1.89		ug/L		95	54 - 128	11	20
Benzo[b]fluoranthene	2.00	1.76		ug/L		88	53 - 131	7	20
Benzo[g,h,i]perylene	2.00	1.87		ug/L		94	50 - 134	12	20
Benzo[k]fluoranthene	2.00	2.02		ug/L		101	57 - 129	12	20
Benzoic acid	4.00	1.50	J	ug/L		38	20 - 140	1	20
Benzyl alcohol	2.00	2.36	J *+	ug/L		118	31 - 112	1	20
Bis(2-chloroethoxy)methane	2.00	2.00		ug/L		100	48 - 120	4	20
Bis(2-chloroethyl)ether	2.00	1.93		ug/L		97	43 - 118	1	20
Bis(2-ethylhexyl) phthalate	2.00	1.94	J	ug/L		97	55 - 135	1	20
bis(chloroisopropyl) ether	2.00	2.86	*+	ug/L		143	37 - 130	2	20
Butyl benzyl phthalate	2.00	2.08	J	ug/L		104	53 - 134	5	20
Carbazole	2.00	2.17		ug/L		108	60 - 122	7	20
Chrysene	2.00	2.02		ug/L		101	59 - 123	6	20
Dibenz(a,h)anthracene	2.00	1.69		ug/L		85	51 - 134	9	20
Dibenzofuran	2.00	1.95		ug/L		97	53 - 118	3	20
Diethyl phthalate	2.00	2.26		ug/L		113	56 - 125	2	20

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: LCSD 580-376770/3-A

Matrix: Water

Analysis Batch: 376866

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 376770

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dimethyl phthalate	2.00	2.15		ug/L		108	45 - 127	7	20
Di-n-butyl phthalate	2.00	2.09	J	ug/L		105	59 - 127	7	20
Di-n-octyl phthalate	2.00	2.02		ug/L		101	51 - 140	10	20
Fluoranthene	2.00	2.02		ug/L		101	57 - 128	4	20
Fluorene	2.00	1.95		ug/L		98	52 - 124	2	20
Hexachlorobenzene	2.00	1.75		ug/L		88	53 - 125	1	20
Hexachlorobutadiene	2.00	1.32		ug/L		66	22 - 124	7	20
Hexachlorocyclopentadiene	2.00	1.02		ug/L		51	20 - 125	2	20
Hexachloroethane	2.00	1.36		ug/L		68	21 - 115	8	20
Indeno[1,2,3-cd]pyrene	2.00	1.49		ug/L		74	52 - 134	1	20
Isophorone	2.00	2.03		ug/L		102	42 - 124	3	20
Naphthalene	2.00	1.63		ug/L		82	40 - 121	1	20
Nitrobenzene	2.00	1.94		ug/L		97	45 - 121	0	20
N-Nitrosodimethylamine	2.00	1.14	J	ug/L		57	45 - 125	14	20
N-Nitrosodi-n-propylamine	2.00	2.03		ug/L		102	49 - 119	5	20
N-Nitrosodiphenylamine	2.00	1.86		ug/L		93	51 - 123	4	20
Pentachlorophenol	4.00	1.51	J	ug/L		38	35 - 138	14	20
Phenanthrene	2.00	1.88		ug/L		94	59 - 120	4	20
Phenol	2.00	0.803	J	ug/L		40	13 - 120	7	20
Pyrene	2.00	2.03		ug/L		101	57 - 126	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	94		43 - 140
2-Fluorobiphenyl	88		44 - 119
2-Fluorophenol (Surr)	59		19 - 119
Nitrobenzene-d5 (Surr)	98		44 - 120
Phenol-d5 (Surr)	36		10 - 120
Terphenyl-d14	108		50 - 134

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

Lab Sample ID: MB 580-376751/1-A

Matrix: Water

Analysis Batch: 376763

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 376751

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C24-C40	180	U	500	180	ug/L		12/26/21 11:17	12/26/21 14:10	1
C9-C25	90	U	500	90	ug/L		12/26/21 11:17	12/26/21 14:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	95		56 - 125	12/26/21 11:17	12/26/21 14:10	1

Lab Sample ID: LCS 580-376751/2-A

Matrix: Water

Analysis Batch: 376763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 376751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C24-C40	1000	997		ug/L		100	41 - 113

Eurofins Northwest, Seattle

QC Sample Results

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

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

Lab Sample ID: LCS 580-376751/2-A

Matrix: Water

Analysis Batch: 376763

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 376751

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C9-C25	1000	893		ug/L		89	36 - 132

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o</i> -Terphenyl	88		56 - 125

Lab Sample ID: LCSD 580-376751/3-A

Matrix: Water

Analysis Batch: 376763

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 376751

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
C24-C40	1000	988		ug/L		99	41 - 113	1	20
C9-C25	1000	865		ug/L		87	36 - 132	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>o</i> -Terphenyl	84		56 - 125

Lab Chronicle

Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Client Sample ID: ERH 5000

Lab Sample ID: 580-108711-1

Date Collected: 12/22/21 10:25

Matrix: Water

Date Received: 12/23/21 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	376759	12/25/21 23:19	JSM	FGS SEA
Total/NA	Analysis	8260D		1	376788	12/25/21 23:19	JSM	FGS SEA
Total/NA	Prep	3510C			376770	12/27/21 10:48	JHR	FGS SEA
Total/NA	Analysis	8270E		1	376866	12/28/21 14:11	ADB	FGS SEA
Total/NA	Prep	3510C	RA		376770	12/27/21 10:48	JHR	FGS SEA
Total/NA	Analysis	8270E	RA	1	376859	12/28/21 23:03	CJ	FGS SEA
Total/NA	Prep	3510C			376751	12/26/21 11:17	JCM	FGS SEA
Total/NA	Analysis	8015D DRO		1	376763	12/26/21 16:31	ADB	FGS SEA

Client Sample ID: ERH 5002

Lab Sample ID: 580-108711-2

Date Collected: 12/22/21 10:20

Matrix: Water

Date Received: 12/23/21 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	376759	12/25/21 23:44	JSM	FGS SEA
Total/NA	Analysis	8260D		1	376788	12/25/21 23:44	JSM	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
Project/Site: CV18F0126

Job ID: 580-108711-1

Laboratory: Eurofins Northwest, 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

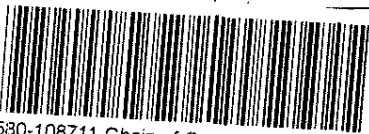
Client: AECOM
Project/Site: CV18F0126

Job ID: 580-108711-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-108711-1	ERH 5000	Water	12/22/21 10:25	12/23/21 11:00
580-108711-2	ERH 5002	Water	12/22/21 10:20	12/23/21 11:00

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- 10
- 11

 eurofins Environment Testing
America

Client Information		Sampler: AECOM		Lab PM: Elaine Walker		Carrier Tracking No(s): FedEx		COC No: 0018 # 0921					
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:		Analysis Requested									
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) EPA 8260 VOCs & TPH-g (HCl) EPA 8260 TPH-g (HCl) EPA 8270 SVOCs (none) EPA 8015 TPH-dlo (HCl) Total Number of containers									
City: Honolulu		TAT Requested (days): 3-day TAT 48hrs											
State, Zip: Hawaii 96813		Compliance Project: ☐ Yes ☐ 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 #:											
Site: RHSF		SSOW#:											
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=biota, AA=air)		Preservation Code:		Special Instructions/Note:	
ERH5000		12/22/21		1025		G		W		N N X		10	
ERH5000		12/22/21		1030		G		W		N N X		2	
													
580-108711 Chain of Custody													
Possible Hazard Identification		☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
				☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months									
Deliverable Requested: I, II, III, IV, Other (specify)		Prelim data (Level 1or2)=see TAT above. DoD Stage 4 report standard TAT. AECOM EQS EDD.		Special Instructions/QC Requirements: DOD QSM project.									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:							
Relinquished by: Sarah W/60		Date/Time: 12/22/21 1250		Company: AECOM		Received by: [Signature]		Date/Time: 12/23/21 1100		Company: EFHS			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:			
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:									

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-108711-1

Login Number: 108711

List Source: Eurofins Northwest, Seattle

List Number: 1

Creator: Vallelunga, Diana L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Work Orders: 2A05051

Project: 60674414, COC # 01042022DW-01

Attn: Margie Pascua

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

Report Date: 1/10/2022

Received Date: 01/05/2022

Turnaround Time: 3 workdays

Phones: (808) 529-7277

Fax: (808) 524-0246

P.O. #: reference number
60571032.02.46.01

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 1/05/22 with the Chain-of-Custody document. The samples were received in good condition, at 3.6 °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



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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
20220104-A1-ZT01	AECOM	2A05051-01	Water	01/04/22 10:45	
20220104-A1-ZT03	AECOM	2A05051-02	Water	01/04/22 10:50	
20220104-D1-ZT04	AECOM	2A05051-03	Water	01/04/22 12:35	

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Sample Results

Sample: 20220104-A1-ZT01
2A05051-01 (Water)

Sampled: 01/04/22 10:45 by AECOM

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS							
Method: EPA 524.2		Instr: GCMS14					
Batch ID: W2A0117	Preparation: EPA 5030		Prepared: 01/04/22 12:16			Analyst: cam	
1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	01/06/22	U
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	01/06/22	U
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	01/06/22	U
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	01/06/22	U
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	01/06/22	U
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	01/06/22	U
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	01/06/22	U
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	01/06/22	U
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	01/06/22	U
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	01/06/22	U
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	01/06/22	U
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	01/06/22	U
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	01/06/22	U
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	01/06/22	U
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	01/06/22	U
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	01/06/22	U
2-Butanone	ND	1.5	5.0	ug/l	1	01/06/22	U
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	01/06/22	U
2-Hexanone	ND	1.2	5.0	ug/l	1	01/06/22	U
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	01/06/22	U
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	01/06/22	U
Benzene	ND	0.15	0.50	ug/l	1	01/06/22	U
Bromobenzene	ND	0.15	0.50	ug/l	1	01/06/22	U
Bromochloromethane	ND	0.15	0.50	ug/l	1	01/06/22	U
Bromodichloromethane	ND	0.24	0.50	ug/l	1	01/06/22	U
Bromoform	ND	0.38	0.50	ug/l	1	01/06/22	U
Bromomethane	ND	0.27	0.50	ug/l	1	01/06/22	U
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	01/06/22	U
Chlorobenzene	ND	0.15	0.50	ug/l	1	01/06/22	U
Chloroethane	ND	0.17	0.50	ug/l	1	01/06/22	U
Chloroform	ND	0.27	0.50	ug/l	1	01/06/22	U
Chloromethane	ND	0.23	0.50	ug/l	1	01/06/22	U
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	01/06/22	U
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	01/06/22	U
Dibromochloromethane	ND	0.20	0.50	ug/l	1	01/06/22	U

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

Project Number: 60674414, COC # 01042022DW-01

Project Manager: Margie Pascua

Reported:
01/10/2022 20:22

Sample Results

(Continued)

Sample: 20220104-A1-ZT01
2A05051-01 (Water)

Sampled: 01/04/22 10:45 by AECOM

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W2A0117

Preparation: EPA 5030

Prepared: 01/04/22 12:16

Analyst: cam

Dibromomethane	ND	0.20	0.50	ug/l	1	01/06/22	U
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	01/06/22	U
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	01/06/22	U
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	01/06/22	U
Ethylbenzene	ND	0.21	0.50	ug/l	1	01/06/22	U
Freon 113	ND	1.5	5.0	ug/l	1	01/06/22	U
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	01/06/22	U
Isopropylbenzene	ND	0.18	0.50	ug/l	1	01/06/22	U
m,p-Xylene	ND	0.33	0.50	ug/l	1	01/06/22	U
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	01/06/22	U
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	01/06/22	U
Methylene chloride	ND	0.30	0.50	ug/l	1	01/06/22	U
Naphthalene	ND	0.35	0.50	ug/l	1	01/06/22	U
n-Butylbenzene	ND	0.29	0.50	ug/l	1	01/06/22	U
n-Propylbenzene	ND	0.18	0.50	ug/l	1	01/06/22	U
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	01/06/22	U
o-Xylene	ND	0.20	0.50	ug/l	1	01/06/22	U
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	01/06/22	U
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	01/06/22	U
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	01/06/22	U
Styrene	ND	0.19	0.50	ug/l	1	01/06/22	U
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	01/06/22	U
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	01/06/22	U
Tetrachloroethene	ND	0.18	0.50	ug/l	1	01/06/22	U
THMs, Total	ND		0.50	ug/l	1	01/06/22	U
Toluene	ND	0.29	0.50	ug/l	1	01/06/22	U
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	01/06/22	U
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	01/06/22	U
Trichloroethene	ND	0.18	0.50	ug/l	1	01/06/22	U
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	01/06/22	U
Vinyl chloride	ND	0.18	0.50	ug/l	1	01/06/22	U
Xylenes, Total	ND		0.50	ug/l	1	01/06/22	U

Surrogate(s)

1,2-Dichlorobenzene-d4	95%	Conc: 9.48	70-130	01/06/22
4-Bromofluorobenzene	99%	Conc: 9.86	70-130	01/06/22

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Sample Results

(Continued)

Sample: 20220104-A1-ZT03
2A05051-02 (Water) Sampled: 01/04/22 10:50 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	130%	Conc: 0.131	70-130			01/10/22	

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

Method: SM 5310B		Instr: TOC02					
Batch ID: W2A0252	Preparation: _NONE (TOC/TOX)		Prepared: 01/05/22 09:41			Analyst: ajc	
Total Organic Carbon (TOC)	0.67	0.19	0.30	mg/l	1	01/06/22	

Metals by EPA 200 Series Methods

Method: EPA 200.8		Instr: ICPMS04					
Batch ID: W2A0331	Preparation: EPA 200.2		Prepared: 01/05/22 17:05			Analyst: chc	
Antimony, Total	ND	0.089	0.50	ug/l	1	01/06/22	U
Arsenic, Total	ND	0.074	0.40	ug/l	1	01/07/22	U
Barium, Total	2.7	0.14	1.0	ug/l	1	01/06/22	
Beryllium, Total	ND	0.062	0.10	ug/l	1	01/07/22	U
Cadmium, Total	ND	0.042	0.20	ug/l	1	01/07/22	U
Chromium, Total	1.5	0.089	0.20	ug/l	1	01/07/22	
Copper, Total	24	0.23	0.50	ug/l	1	01/06/22	
Lead, Total	1.1	0.083	0.20	ug/l	1	01/06/22	
Selenium, Total	ND	0.067	0.40	ug/l	1	01/07/22	U
Thallium, Total	ND	0.021	0.20	ug/l	1	01/06/22	U

Method: EPA 245.1		Instr: HG03					
Batch ID: W2A0352	Preparation: EPA 245.1		Prepared: 01/06/22 09:30			Analyst: mpn	
Mercury, Total	ND	0.017	0.050	ug/l	1	01/06/22	U

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2		Instr: GCMS16					
Batch ID: W2A0245	Preparation: EPA 525.2/SPE		Prepared: 01/05/22 08:39			Analyst: rmr	
1-Methylnaphthalene	ND	0.0080	0.050	ug/l	1	01/07/22	U
2-Methylnaphthalene	ND	0.0090	0.050	ug/l	1	01/07/22	U

2A05051

Page 5 of 16

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Sample Results

(Continued)

Sample: 20220104-A1-ZT03
2A05051-02 (Water)

Sampled: 01/04/22 10:50 by AECOM
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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Semivolatile Organic Compounds by GC/MS (Continued)

Method: EPA 525.2

Instr: GCMS16

Batch ID: W2A0245

Preparation: EPA 525.2/SPE

Prepared: 01/05/22 08:39

Analyst: rmr

Alachlor	ND	0.011	0.10	ug/l	1	01/07/22	U
Atrazine	ND	0.0073	0.10	ug/l	1	01/07/22	U
Benzo (a) pyrene	ND	0.012	0.050	ug/l	1	01/07/22	Q-02, U
Bis(2-ethylhexyl)adipate	ND	0.0096	5.0	ug/l	1	01/07/22	U
Bis(2-ethylhexyl)phthalate	ND	0.44	3.0	ug/l	1	01/07/22	U
Endrin	ND	0.0099	0.20	ug/l	1	01/07/22	BS-04, U
gamma-BHC (Lindane)	ND	0.0063	0.10	ug/l	1	01/07/22	U
Heptachlor	ND	0.0096	0.10	ug/l	1	01/07/22	U
Heptachlor epoxide	ND	0.012	0.10	ug/l	1	01/07/22	U
Hexachlorobenzene	ND	0.098	0.10	ug/l	1	01/07/22	U
Hexachlorocyclopentadiene	ND	0.0059	1.0	ug/l	1	01/07/22	U
Methoxychlor	ND	0.0086	0.20	ug/l	1	01/07/22	BS-04, U
Naphthalene	ND	0.010	0.050	ug/l	1	01/07/22	U
Pentachlorophenol	ND	0.024	1.0	ug/l	1	01/07/22	U
Simazine	ND	0.0073	0.10	ug/l	1	01/07/22	U

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	114%	Conc: 0.578	70-130	01/07/22
Perylene-d12	76%	Conc: 0.385	70-130	01/07/22
Triphenyl phosphate	112%	Conc: 0.565	70-130	01/07/22

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS14

Batch ID: W2A0117

Preparation: EPA 5030

Prepared: 01/04/22 12:16

Analyst: cam

1,1,1,2-Tetrachloroethane	ND	0.24	0.50	ug/l	1	01/06/22	U
1,1,1-Trichloroethane	ND	0.26	0.50	ug/l	1	01/06/22	U
1,1,2,2-Tetrachloroethane	ND	0.20	0.50	ug/l	1	01/06/22	U
1,1,2-Trichloroethane	ND	0.19	0.50	ug/l	1	01/06/22	U
1,1-Dichloroethane	ND	0.27	0.50	ug/l	1	01/06/22	U
1,1-Dichloroethene	ND	0.16	0.50	ug/l	1	01/06/22	U
1,1-Dichloropropene	ND	0.14	0.50	ug/l	1	01/06/22	U
1,2,3-Trichlorobenzene	ND	0.40	0.50	ug/l	1	01/06/22	U
1,2,4-Trichlorobenzene	ND	0.17	0.50	ug/l	1	01/06/22	U
1,2,4-Trimethylbenzene	ND	0.20	0.50	ug/l	1	01/06/22	U
1,2-Dichloroethane	ND	0.24	0.50	ug/l	1	01/06/22	U
1,2-Dichloropropane	ND	0.13	0.50	ug/l	1	01/06/22	U
1,3,5-Trimethylbenzene	ND	0.17	0.50	ug/l	1	01/06/22	U
1,3-Dichloropropane	ND	0.27	0.50	ug/l	1	01/06/22	U

2A05051

Page 6 of 16

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Sample Results

(Continued)

Sample: 20220104-A1-ZT03
2A05051-02 (Water)

Sampled: 01/04/22 10:50 by AECOM

(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2		Instr: GCMS14					
Batch ID: W2A0117	Preparation: EPA 5030		Prepared: 01/04/22 12:16			Analyst: cam	
1,3-Dichloropropene, Total	ND		0.50	ug/l	1	01/06/22	U
2,2-Dichloropropane	ND	0.17	0.50	ug/l	1	01/06/22	U
2-Butanone	ND	1.5	5.0	ug/l	1	01/06/22	U
2-Chlorotoluene	ND	0.15	0.50	ug/l	1	01/06/22	U
2-Hexanone	ND	1.2	5.0	ug/l	1	01/06/22	U
4-Chlorotoluene	ND	0.15	0.50	ug/l	1	01/06/22	U
4-Methyl-2-pentanone	ND	1.8	5.0	ug/l	1	01/06/22	U
Benzene	ND	0.15	0.50	ug/l	1	01/06/22	U
Bromobenzene	ND	0.15	0.50	ug/l	1	01/06/22	U
Bromochloromethane	ND	0.15	0.50	ug/l	1	01/06/22	U
Bromodichloromethane	0.29	0.24	0.50	ug/l	1	01/06/22	J
Bromoform	0.86	0.38	0.50	ug/l	1	01/06/22	
Bromomethane	ND	0.27	0.50	ug/l	1	01/06/22	U
Carbon tetrachloride	ND	0.27	0.50	ug/l	1	01/06/22	U
Chlorobenzene	ND	0.15	0.50	ug/l	1	01/06/22	U
Chloroethane	ND	0.17	0.50	ug/l	1	01/06/22	U
Chloroform	ND	0.27	0.50	ug/l	1	01/06/22	U
Chloromethane	ND	0.23	0.50	ug/l	1	01/06/22	U
cis-1,2-Dichloroethene	ND	0.25	0.50	ug/l	1	01/06/22	U
cis-1,3-Dichloropropene	ND	0.30	0.50	ug/l	1	01/06/22	U
Dibromochloromethane	0.74	0.20	0.50	ug/l	1	01/06/22	
Dibromomethane	ND	0.20	0.50	ug/l	1	01/06/22	U
Dichlorodifluoromethane (Freon 12)	ND	0.45	0.50	ug/l	1	01/06/22	U
Di-isopropyl ether	ND	1.1	2.0	ug/l	1	01/06/22	U
Ethyl tert-butyl ether	ND	1.0	2.0	ug/l	1	01/06/22	U
Ethylbenzene	ND	0.21	0.50	ug/l	1	01/06/22	U
Freon 113	ND	1.5	5.0	ug/l	1	01/06/22	U
Hexachlorobutadiene	ND	0.40	0.50	ug/l	1	01/06/22	U
Isopropylbenzene	ND	0.18	0.50	ug/l	1	01/06/22	U
m,p-Xylene	ND	0.33	0.50	ug/l	1	01/06/22	U
m-Dichlorobenzene	ND	0.14	0.50	ug/l	1	01/06/22	U
Methyl tert-butyl ether (MTBE)	ND	0.94	2.0	ug/l	1	01/06/22	U
Methylene chloride	ND	0.30	0.50	ug/l	1	01/06/22	U
Naphthalene	ND	0.35	0.50	ug/l	1	01/06/22	U
n-Butylbenzene	ND	0.29	0.50	ug/l	1	01/06/22	U

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1001 Bishop Street Suite 1600
Honolulu, HI 96813

Project Number: 60674414, COC # 01042022DW-01

Project Manager: Margie Pascua

Reported:
01/10/2022 20:22

Sample Results

(Continued)

Sample: 20220104-A1-ZT03
2A05051-02 (Water)

Sampled: 01/04/22 10:50 by AECOM
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W2A0117

Preparation: EPA 5030

Prepared: 01/04/22 12:16

Analyst: cam

n-Propylbenzene	ND	0.18	0.50	ug/l	1	01/06/22	U
o-Dichlorobenzene	ND	0.19	0.50	ug/l	1	01/06/22	U
o-Xylene	ND	0.20	0.50	ug/l	1	01/06/22	U
p-Dichlorobenzene	ND	0.18	0.50	ug/l	1	01/06/22	U
p-Isopropyltoluene	ND	0.25	0.50	ug/l	1	01/06/22	U
sec-Butylbenzene	ND	0.24	0.50	ug/l	1	01/06/22	U
Styrene	ND	0.19	0.50	ug/l	1	01/06/22	U
Tert-amyl methyl ether	ND	0.59	2.0	ug/l	1	01/06/22	U
tert-Butylbenzene	ND	0.18	0.50	ug/l	1	01/06/22	U
Tetrachloroethene	ND	0.18	0.50	ug/l	1	01/06/22	U
THMs, Total	1.6		0.50	ug/l	1	01/06/22	
Toluene	ND	0.29	0.50	ug/l	1	01/06/22	U
trans-1,2-Dichloroethene	ND	0.26	0.50	ug/l	1	01/06/22	U
trans-1,3-Dichloropropene	ND	0.32	0.50	ug/l	1	01/06/22	U
Trichloroethene	ND	0.18	0.50	ug/l	1	01/06/22	U
Trichlorofluoromethane	ND	0.18	0.50	ug/l	1	01/06/22	U
Vinyl chloride	ND	0.18	0.50	ug/l	1	01/06/22	U
Xylenes, Total	ND		0.50	ug/l	1	01/06/22	U

Surrogate(s)

1,2-Dichlorobenzene-d4	89%	Conc: 8.86	70-130	01/06/22
4-Bromofluorobenzene	90%	Conc: 8.98	70-130	01/06/22

Sample Results

(Continued)

Sample: 20220104-D1-ZT04
2A05051-03 (Water)

Sampled: 01/04/22 12:35 by AECOM

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: SM 5310B

Instr: TOC02

Batch ID: W2A0252

Preparation: _NONE (TOC/TOX)

Prepared: 01/05/22 09:41

Analyst: ajc

Total Organic Carbon (TOC)	0.49	0.19	0.30	mg/l	1	01/06/22	
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AECOM - Honolulu
1001 Bishop Street Suite 1600
Honolulu, HI 96813

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Quality Control Results

Chlorinated Pesticides and/or PCBs by GC/ECD

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	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
<i>Surrogate(s)</i>											
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			
<i>Surrogate(s)</i>											
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	
<i>Surrogate(s)</i>											
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	Limits	RPD	Limit	Qualifier
Batch: W2A0252 - SM 5310B											
Blank (W2A0252-BLK1)						Prepared: 01/05/22 Analyzed: 01/06/22					
Total Organic Carbon (TOC)	ND	0.19	0.30	mg/l							U
LCS (W2A0252-BS1)						Prepared: 01/05/22 Analyzed: 01/06/22					
Total Organic Carbon (TOC)	0.996	0.19	0.30	mg/l	1.00		100	85-115			
Matrix Spike (W2A0252-MS1)						Source: 2A04062-01 Prepared: 01/05/22 Analyzed: 01/06/22					
Total Organic Carbon (TOC)	5.08	0.19	0.30	mg/l	5.00	0.693	88	76-115			
Matrix Spike Dup (W2A0252-MSD1)						Source: 2A04062-01 Prepared: 01/05/22 Analyzed: 01/06/22					
Total Organic Carbon (TOC)	5.03	0.19	0.30	mg/l	5.00	0.693	87	76-115	1	20	

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W2A0331 - EPA 200.8											
Blank (W2A0331-BLK1)					Prepared: 01/05/22 Analyzed: 01/06/22						
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 (W2A0331-BS1)					Prepared: 01/05/22 Analyzed: 01/06/22						
Antimony, Total	43.3	0.089	0.50	ug/l	50.0		87	85-115			
Arsenic, Total	49.1	0.074	0.40	ug/l	50.0		98	85-115			
Barium, Total	42.8	0.14	1.0	ug/l	50.0		86	85-115			
Beryllium, Total	45.3	0.062	0.10	ug/l	50.0		91	85-115			
Cadmium, Total	48.8	0.042	0.20	ug/l	50.0		98	85-115			
Chromium, Total	50.4	0.089	0.20	ug/l	50.0		101	85-115			
Copper, Total	44.2	0.23	0.50	ug/l	50.0		88	85-115			
Lead, Total	43.5	0.083	0.20	ug/l	50.0		87	85-115			
Selenium, Total	48.4	0.067	0.40	ug/l	50.0		97	85-115			
Thallium, Total	43.5	0.021	0.20	ug/l	50.0		87	85-115			
Matrix Spike (W2A0331-MS1)					Source: 1L22106-01 Prepared: 01/05/22 Analyzed: 01/06/22						
Antimony, Total	65.5	0.089	0.50	ug/l	50.0	21.5	88	70-130			
Arsenic, Total	49.5	0.074	0.40	ug/l	50.0	ND	99	70-130			
Barium, Total	47.3	0.14	1.0	ug/l	50.0	0.880	93	70-130			
Beryllium, Total	47.2	0.062	0.10	ug/l	50.0	ND	94	70-130			
Cadmium, Total	47.2	0.042	0.20	ug/l	50.0	ND	94	70-130			
Chromium, Total	49.7	0.089	0.20	ug/l	50.0	0.234	99	70-130			
Copper, Total	47.6	0.23	0.50	ug/l	50.0	0.456	94	70-130			
Lead, Total	45.8	0.083	0.20	ug/l	50.0	ND	92	70-130			
Selenium, Total	48.2	0.067	0.40	ug/l	50.0	0.0845	96	70-130			
Thallium, Total	45.9	0.021	0.20	ug/l	50.0	ND	92	70-130			
Matrix Spike Dup (W2A0331-MSD1)					Source: 1L22106-01 Prepared: 01/05/22 Analyzed: 01/06/22						
Antimony, Total	66.6	0.089	0.50	ug/l	50.0	21.5	90	70-130	2	30	
Arsenic, Total	50.7	0.074	0.40	ug/l	50.0	ND	101	70-130	2	30	
Barium, Total	46.6	0.14	1.0	ug/l	50.0	0.880	92	70-130	1	30	
Beryllium, Total	47.9	0.062	0.10	ug/l	50.0	ND	96	70-130	2	30	
Cadmium, Total	51.0	0.042	0.20	ug/l	50.0	ND	102	70-130	8	30	
Chromium, Total	53.3	0.089	0.20	ug/l	50.0	0.234	106	70-130	7	30	

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W2A0331 - EPA 200.8 (Continued)											
Matrix Spike Dup (W2A0331-MSD1)				Source: 1L22106-01		Prepared: 01/05/22 Analyzed: 01/07/22					
Copper, Total	46.1	0.23	0.50	ug/l	50.0	0.456	91	70-130	3	30	
Lead, Total	44.6	0.083	0.20	ug/l	50.0	ND	89	70-130	3	30	
Selenium, Total	50.5	0.067	0.40	ug/l	50.0	0.0845	101	70-130	5	30	
Thallium, Total	44.3	0.021	0.20	ug/l	50.0	ND	89	70-130	4	30	
Batch: W2A0352 - EPA 245.1											
Blank (W2A0352-BLK1)				Prepared & Analyzed: 01/06/22							
Mercury, Total	ND	0.017	0.050	ug/l							U
LCS (W2A0352-BS1)				Prepared & Analyzed: 01/06/22							
Mercury, Total	1.04	0.017	0.050	ug/l	1.00		104	85-115			
Matrix Spike (W2A0352-MS1)				Source: 2A05051-02		Prepared & Analyzed: 01/06/22					
Mercury, Total	1.05	0.017	0.050	ug/l	1.00	ND	105	70-130			
Matrix Spike Dup (W2A0352-MSD1)				Source: 2A05051-02		Prepared & Analyzed: 01/06/22					
Mercury, Total	1.06	0.017	0.050	ug/l	1.00	ND	106	70-130	0.9	20	

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W2A0245 - EPA 525.2											
Blank (W2A0245-BLK1)						Prepared: 01/05/22 Analyzed: 01/07/22					
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	0.495			ug/l	0.500		99	70-130			
Perylene-d12	0.253			ug/l	0.500		51	70-130			S-11
Triphenyl phosphate	0.445			ug/l	0.500		89	70-130			
LCS (W2A0245-BS1)						Prepared: 01/05/22 Analyzed: 01/07/22					
1-Methylnaphthalene	0.227	0.0080	0.050	ug/l	0.250		91	70-130			
2-Methylnaphthalene	0.230	0.0090	0.050	ug/l	0.250		92	70-130			
Alachlor	0.486	0.011	0.10	ug/l	0.500		97	70-130			
Atrazine	0.238	0.0073	0.10	ug/l	0.250		95	70-130			
Benzo (a) pyrene	0.143	0.012	0.050	ug/l	0.250		57	60-130			Q-02
Bis(2-ethylhexyl)adipate	0.215	0.0096	5.0	ug/l	0.250		86	70-130			J
Bis(2-ethylhexyl)phthalate	0.241	0.0	3.0	ug/l	0.250		97	70-130			J
Endrin	0.196	0.0099	0.20	ug/l	0.250		78	70-130			J
gamma-BHC (Lindane)	0.243	0.0063	0.10	ug/l	0.250		97	70-130			
Heptachlor	0.201	0.0096	0.10	ug/l	0.250		80	70-130			
Heptachlor epoxide	0.257	0.012	0.10	ug/l	0.250		103	70-130			
Hexachlorobenzene	0.0383	0.0	0.10	ug/l	0.0500		77	70-130			J
Hexachlorocyclopentadiene	0.127	0.0059	1.0	ug/l	0.250		51	33-106			J
Methoxychlor	0.223	0.0086	0.20	ug/l	0.250		89	70-130			
Naphthalene	0.209	0.010	0.050	ug/l	0.250		84	70-130			
Pentachlorophenol	0.137	0.024	1.0	ug/l	0.250		55	50-120			J
Simazine	0.225	0.0073	0.10	ug/l	0.250		90	60-130			

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

Project Number: 60674414, COC # 01042022DW-01

Project Manager: Margie Pascua

Reported:
01/10/2022 20:22

Quality Control Results

(Continued)

Semivolatle Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W2A0245 - EPA 525.2 (Continued)											
LCS (W2A0245-BS1)				Prepared: 01/05/22 Analyzed: 01/07/22							
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	0.527			ug/l	0.500		105	70-130			
Perylene-d12	0.372			ug/l	0.500		74	70-130			
Triphenyl phosphate	0.624			ug/l	0.500		125	70-130			
LCS Dup (W2A0245-BSD1)				Prepared: 01/05/22 Analyzed: 01/07/22							
1-Methylnaphthalene	0.224	0.0080	0.050	ug/l	0.250		90	70-130	1	30	
2-Methylnaphthalene	0.231	0.0090	0.050	ug/l	0.250		92	70-130	0.5	30	
Alachlor	0.368	0.011	0.10	ug/l	0.500		74	70-130	28	30	
Atrazine	0.218	0.0073	0.10	ug/l	0.250		87	70-130	9	30	
Benzo (a) pyrene	0.0503	0.012	0.050	ug/l	0.250		20	60-130	96	30	Q-02
Bis(2-ethylhexyl)adipate	0.210	0.0096	5.0	ug/l	0.250		84	70-130	3	30	J
Bis(2-ethylhexyl)phthalate	0.239	0.0	3.0	ug/l	0.250		96	70-130	0.9	30	J
Endrin	0.129	0.0099	0.20	ug/l	0.250		51	70-130	41	30	BS-04, J
gamma-BHC (Lindane)	0.236	0.0063	0.10	ug/l	0.250		94	70-130	3	30	
Heptachlor	0.189	0.0096	0.10	ug/l	0.250		75	70-130	6	30	
Heptachlor epoxide	0.248	0.012	0.10	ug/l	0.250		99	70-130	4	30	
Hexachlorobenzene	0.0363	0.0	0.10	ug/l	0.0500		73	70-130	5	30	J
Hexachlorocyclopentadiene	0.128	0.0059	1.0	ug/l	0.250		51	33-106	0.5	30	J
Methoxychlor	0.160	0.0086	0.20	ug/l	0.250		64	70-130	33	30	BS-04, J
Naphthalene	0.215	0.010	0.050	ug/l	0.250		86	70-130	3	30	
Pentachlorophenol	0.142	0.024	1.0	ug/l	0.250		57	50-120	4	30	J
Simazine	0.209	0.0073	0.10	ug/l	0.250		83	60-130	8	30	
Surrogate(s)											
1,3-Dimethyl-2-nitrobenzene	0.506			ug/l	0.500		101	70-130			
Perylene-d12	0.137			ug/l	0.500		27	70-130			S-11
Triphenyl phosphate	0.563			ug/l	0.500		113	70-130			

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W2A0117 - EPA 524.2											
Blank (W2A0117-BLK1)						Prepared: 01/04/22 Analyzed: 01/05/22					
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
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	8.78			ug/l	10.0		88	70-130			
4-Bromofluorobenzene	8.73			ug/l	10.0		87	70-130			
LCS (W2A0117-BS1)						Prepared: 01/04/22 Analyzed: 01/05/22					
1,1,1-Trichloroethane	4.63	0.26	0.50	ug/l	5.00		93	70-130			
1,1,2-Trichloroethane	5.01	0.19	0.50	ug/l	5.00		100	70-130			
1,1-Dichloroethene	4.97	0.16	0.50	ug/l	5.00		99	70-130			
1,2,4-Trichlorobenzene	5.19	0.17	0.50	ug/l	5.00		104	70-130			
1,2-Dichloroethane	4.92	0.24	0.50	ug/l	5.00		98	70-130			
1,2-Dichloropropane	4.99	0.13	0.50	ug/l	5.00		100	70-130			
Benzene	5.06	0.15	0.50	ug/l	5.00		101	70-130			
Carbon tetrachloride	4.60	0.27	0.50	ug/l	5.00		92	70-130			
Chlorobenzene	4.91	0.15	0.50	ug/l	5.00		98	70-130			
cis-1,2-Dichloroethene	5.16	0.25	0.50	ug/l	5.00		103	70-130			
Ethylbenzene	5.40	0.21	0.50	ug/l	5.00		108	70-130			
m,p-Xylene	5.15	0.33	0.50	ug/l	5.00		103	70-130			

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

Project Number: 60674414, COC # 01042022DW-01

Reported:
01/10/2022 20:22

Project Manager: Margie Pascua

Quality Control Results

(Continued)

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

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W2A0117 - EPA 524.2 (Continued)											
LCS (W2A0117-BS1)						Prepared: 01/04/22 Analyzed: 01/05/22					
Methylene chloride	4.96	0.30	0.50	ug/l	5.00		99	70-130			
o-Dichlorobenzene	5.12	0.19	0.50	ug/l	5.00		102	70-130			
o-Xylene	5.33	0.20	0.50	ug/l	5.00		107	70-130			
p-Dichlorobenzene	5.17	0.18	0.50	ug/l	5.00		103	70-130			
Styrene	5.39	0.19	0.50	ug/l	5.00		108	70-130			
Tetrachloroethene	4.69	0.18	0.50	ug/l	5.00		94	70-130			
Toluene	5.00	0.29	0.50	ug/l	5.00		100	70-130			
trans-1,2-Dichloroethene	5.20	0.26	0.50	ug/l	5.00		104	70-130			
Trichloroethene	5.70	0.18	0.50	ug/l	5.00		114	70-130			
Vinyl chloride	4.77	0.18	0.50	ug/l	5.00		95	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	11.5			ug/l	10.0		115	70-130			
4-Bromofluorobenzene	11.1			ug/l	10.0		111	70-130			
LCS Dup (W2A0117-BSD1)						Prepared: 01/04/22 Analyzed: 01/05/22					
1,1,1-Trichloroethane	4.66	0.26	0.50	ug/l	5.00		93	70-130	0.8	30	
1,1,2-Trichloroethane	4.89	0.19	0.50	ug/l	5.00		98	70-130	2	30	
1,1-Dichloroethene	5.20	0.16	0.50	ug/l	5.00		104	70-130	4	30	
1,2,4-Trichlorobenzene	5.13	0.17	0.50	ug/l	5.00		103	70-130	1	30	
1,2-Dichloroethane	4.86	0.24	0.50	ug/l	5.00		97	70-130	1	30	
1,2-Dichloropropane	5.13	0.13	0.50	ug/l	5.00		103	70-130	3	30	
Benzene	5.08	0.15	0.50	ug/l	5.00		102	70-130	0.3	30	
Carbon tetrachloride	4.62	0.27	0.50	ug/l	5.00		92	70-130	0.5	30	
Chlorobenzene	4.93	0.15	0.50	ug/l	5.00		99	70-130	0.4	30	
cis-1,2-Dichloroethene	5.20	0.25	0.50	ug/l	5.00		104	70-130	0.8	30	
Ethylbenzene	5.37	0.21	0.50	ug/l	5.00		107	70-130	0.6	30	
m,p-Xylene	5.12	0.33	0.50	ug/l	5.00		102	70-130	0.7	30	
Methylene chloride	5.03	0.30	0.50	ug/l	5.00		101	70-130	1	30	
o-Dichlorobenzene	5.03	0.19	0.50	ug/l	5.00		101	70-130	2	30	
o-Xylene	5.26	0.20	0.50	ug/l	5.00		105	70-130	1	30	
p-Dichlorobenzene	5.06	0.18	0.50	ug/l	5.00		101	70-130	2	30	
Styrene	5.34	0.19	0.50	ug/l	5.00		107	70-130	1	30	
Tetrachloroethene	4.72	0.18	0.50	ug/l	5.00		94	70-130	0.7	30	
Toluene	5.00	0.29	0.50	ug/l	5.00		100	70-130	0.07	30	
trans-1,2-Dichloroethene	5.29	0.26	0.50	ug/l	5.00		106	70-130	2	30	
Trichloroethene	5.89	0.18	0.50	ug/l	5.00		118	70-130	3	30	
Vinyl chloride	5.02	0.18	0.50	ug/l	5.00		100	70-130	5	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	10.8			ug/l	10.0		108	70-130			
4-Bromofluorobenzene	10.8			ug/l	10.0		108	70-130			

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

Project Number: 60674414, COC # 01042022DW-01

Project Manager: Margie Pascua

Reported:
01/10/2022 20:22

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.
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.

ANALYTICAL REPORT

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

Laboratory Job ID: 580-108952-1
Client Project/Site: CV22F0106
Revision: 2

For:
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

Attn: Margie F Pascua

Kristine D. Allen

Authorized for release by:
1/13/2022 12:09:07 PM
Kristine Allen, Client Service Manager
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Designee for
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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.

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions	5
Client Sample Results	6
QC Sample Results	13
Chronicle	23
Certification Summary	24
Sample Summary	25
Chain of Custody	26
Receipt Checklists	28



Case Narrative

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Job ID: 580-108952-1

Laboratory: Eurofins Seattle

Narrative

Report revised 1/13/2022 to provide the following additional information regarding the original DRO results:

For SDG 580-108952, the DRO analysis was inadvertently logged in using 1L containers when we received 250mL containers which were used for the analysis. The initial sample volume is a factor in the RL and MDL calculations so the limits were incorrectly elevated four times in the report. By revising the log in to reflect the correct initial sample volume, the calculation of both the RL and MDL were corrected.

Report revised 1/12/2022 to correct the DRO results - the incorrect container volume was used in the calculation (1L instead of 250 mL).

Job Narrative 580-108952-1

Comments

No additional comments.

Receipt

The samples were received on 1/5/2022 7:55 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 0.9° C.

GC/MS VOA

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

GC/MS Semi VOA

Method 8270E: The following analyte 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%.

Method 8270E: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-377665 was outside criteria for the following analytes: Bis(2-chloroethyl)ether and N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analytes is considered estimated.

Method 8270E: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-377587 and analytical batch 580-377665 recovered outside control limits. The individual recoveries of both the LCS and LCSD met the acceptance criteria.

Method 8270E: The following analyte has been identified, in the reference method and/or via historical data, to be a poor and/or erratic performer: Hexachlorocyclopentadiene. This analyte may have a %D <60%; the data have been qualified and reported. 20220104-F1-TY-02 (580-108952-2).

Method 8270E: Surrogate recovery for the following sample was outside control limits: 20220104-F1-TY-02 (580-108952-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

GC Semi VOA

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

Organic Prep

Methods 3510C, CWA_Prep: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 580-377587, so a laboratory control sample/laboratory control sample duplicate were created and substituted for the MS/MSD/DUP.

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

Case Narrative

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Job ID: 580-108952-1 (Continued)

Laboratory: Eurofins Seattle (Continued)

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

VOA Prep

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

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Definitions/Glossary

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
*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 Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Client Sample ID: 20220104-F1-TY-01

Lab Sample ID: 580-108952-1

Date Collected: 01/04/22 14:00

Matrix: Water

Date Received: 01/05/22 07:55

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			01/05/22 15:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		69 - 133					01/05/22 15:02	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			01/05/22 15:02	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/05/22 15:02	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/05/22 15:02	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/05/22 15:02	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/05/22 15:02	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/05/22 15:02	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/05/22 15:02	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/05/22 15:02	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/05/22 15:02	1
4-Methyl-2-pentanone (MIBK)	2.5	U	5.0	2.5	ug/L			01/05/22 15:02	1
Acetone	3.2	U	15	3.2	ug/L			01/05/22 15:02	1
Benzene	0.24	U	1.0	0.24	ug/L			01/05/22 15:02	1
Dichlorobromomethane	0.29	U	1.0	0.29	ug/L			01/05/22 15:02	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/05/22 15:02	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/05/22 15:02	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/05/22 15:02	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/05/22 15:02	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/05/22 15:02	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/05/22 15:02	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/05/22 15:02	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/05/22 15:02	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/05/22 15:02	1
Chlorodibromomethane	0.43	U	1.0	0.43	ug/L			01/05/22 15:02	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			01/05/22 15:02	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/05/22 15:02	1
Methylene Chloride	1.4	U	3.0	1.4	ug/L			01/05/22 15:02	1
Chloroethane	0.35	U	1.0	0.35	ug/L			01/05/22 15:02	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/05/22 15:02	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			01/05/22 15:02	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/05/22 15:02	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/05/22 15:02	1
Styrene	0.53	U	1.0	0.53	ug/L			01/05/22 15:02	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/05/22 15:02	1
Toluene	0.39	U	1.0	0.39	ug/L			01/05/22 15:02	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/05/22 15:02	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/05/22 15:02	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/05/22 15:02	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/05/22 15:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		81 - 118					01/05/22 15:02	1
4-Bromofluorobenzene (Surr)	106		85 - 114					01/05/22 15:02	1
Dibromofluoromethane (Surr)	102		80 - 119					01/05/22 15:02	1

Eurofins Seattle

Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Client Sample ID: 20220104-F1-TY-01

Lab Sample ID: 580-108952-1

Date Collected: 01/04/22 14:00

Matrix: Water

Date Received: 01/05/22 07:55

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

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
Toluene-d8 (Surr)	99		89 - 112		01/05/22 15:02	1

Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Client Sample ID: 20220104-F1-TY-02

Lab Sample ID: 580-108952-2

Date Collected: 01/04/22 14:05

Matrix: Water

Date Received: 01/05/22 07:55

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			01/05/22 15:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		69 - 133					01/05/22 15:27	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			01/05/22 15:27	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/05/22 15:27	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/05/22 15:27	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/05/22 15:27	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/05/22 15:27	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/05/22 15:27	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/05/22 15:27	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/05/22 15:27	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/05/22 15:27	1
4-Methyl-2-pentanone (MIBK)	2.5	U	5.0	2.5	ug/L			01/05/22 15:27	1
Acetone	3.2	U	15	3.2	ug/L			01/05/22 15:27	1
Benzene	0.24	U	1.0	0.24	ug/L			01/05/22 15:27	1
Dichlorobromomethane	0.29	U	1.0	0.29	ug/L			01/05/22 15:27	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/05/22 15:27	1
Bromomethane	0.21	U	1.0	0.21	ug/L			01/05/22 15:27	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/05/22 15:27	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/05/22 15:27	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/05/22 15:27	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/05/22 15:27	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/05/22 15:27	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/05/22 15:27	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/05/22 15:27	1
Chlorodibromomethane	0.43	U	1.0	0.43	ug/L			01/05/22 15:27	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			01/05/22 15:27	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/05/22 15:27	1
Methylene Chloride	1.4	U	3.0	1.4	ug/L			01/05/22 15:27	1
Chloroethane	0.35	U	1.0	0.35	ug/L			01/05/22 15:27	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/05/22 15:27	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			01/05/22 15:27	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/05/22 15:27	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/05/22 15:27	1
Styrene	0.53	U	1.0	0.53	ug/L			01/05/22 15:27	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/05/22 15:27	1
Toluene	0.39	U	1.0	0.39	ug/L			01/05/22 15:27	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/05/22 15:27	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/05/22 15:27	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/05/22 15:27	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/05/22 15:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		81 - 118					01/05/22 15:27	1
4-Bromofluorobenzene (Surr)	101		85 - 114					01/05/22 15:27	1
Dibromofluoromethane (Surr)	103		80 - 119					01/05/22 15:27	1

Eurofins Seattle

Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Client Sample ID: 20220104-F1-TY-02

Lab Sample ID: 580-108952-2

Date Collected: 01/04/22 14:05

Matrix: Water

Date Received: 01/05/22 07:55

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		89 - 112		01/05/22 15:27	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.052	U	0.41	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
Acenaphthylene	0.062	U	1.0	0.062	ug/L		01/06/22 10:50	01/06/22 23:06	1
Anthracene	0.052	U	1.0	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
Benzo[a]anthracene	0.052	U *1	0.26	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
Benzo[a]pyrene	0.041	U	0.26	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
Benzo[b]fluoranthene	0.041	U	0.26	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
Benzo[g,h,i]perylene	0.041	U	0.26	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
Benzo[k]fluoranthene	0.052	U *1	0.26	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
Bis(2-chloroethoxy)methane	0.052	U	0.62	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
Bis(2-chloroethyl)ether	0.031	U	0.10	0.031	ug/L		01/06/22 10:50	01/06/22 23:06	1
Bis(2-ethylhexyl) phthalate	0.76	U *1	3.1	0.76	ug/L		01/06/22 10:50	01/06/22 23:06	1
4-Bromophenyl phenyl ether	0.062	U	0.62	0.062	ug/L		01/06/22 10:50	01/06/22 23:06	1
Butyl benzyl phthalate	0.28	U *1	4.1	0.28	ug/L		01/06/22 10:50	01/06/22 23:06	1
Carbazole	0.10	U	0.62	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1
4-Chloroaniline	0.61	U	2.1	0.61	ug/L		01/06/22 10:50	01/06/22 23:06	1
4-Chloro-3-methylphenol	0.13	U	0.62	0.13	ug/L		01/06/22 10:50	01/06/22 23:06	1
2-Chloronaphthalene	0.072	U	1.0	0.072	ug/L		01/06/22 10:50	01/06/22 23:06	1
2-Chlorophenol	0.052	U	1.0	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
4-Chlorophenyl phenyl ether	0.052	U	0.62	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
Chrysene	0.041	U *1	0.26	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
Dibenz(a,h)anthracene	0.072	U	0.26	0.072	ug/L		01/06/22 10:50	01/06/22 23:06	1
Dibenzofuran	0.10	U	0.41	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1
Di-n-butyl phthalate	0.20	U	3.1	0.20	ug/L		01/06/22 10:50	01/06/22 23:06	1
1,2-Dichlorobenzene	0.052	U	0.41	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
1,3-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
1,4-Dichlorobenzene	0.041	U	0.41	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
3,3'-Dichlorobenzidine	0.27	U *1	1.0	0.27	ug/L		01/06/22 10:50	01/06/22 23:06	1
2,4-Dichlorophenol	0.21	U *1	1.0	0.21	ug/L		01/06/22 10:50	01/06/22 23:06	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		01/06/22 10:50	01/06/22 23:06	1
2,4-Dimethylphenol	0.16	U	4.1	0.16	ug/L		01/06/22 10:50	01/06/22 23:06	1
Dimethyl phthalate	0.062	U	0.62	0.062	ug/L		01/06/22 10:50	01/06/22 23:06	1
4,6-Dinitro-2-methylphenol	0.57	U	2.1	0.57	ug/L		01/06/22 10:50	01/06/22 23:06	1
2,4-Dinitrophenol	1.6	U	5.2	1.6	ug/L		01/06/22 10:50	01/06/22 23:06	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1
2,6-Dinitrotoluene	0.10	U	0.41	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		01/06/22 10:50	01/06/22 23:06	1
Fluoranthene	0.062	U	0.26	0.062	ug/L		01/06/22 10:50	01/06/22 23:06	1
Fluorene	0.052	U	0.26	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
Hexachlorobenzene	0.041	U	0.62	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
Hexachlorobutadiene	0.062	U	1.0	0.062	ug/L		01/06/22 10:50	01/06/22 23:06	1
Hexachlorocyclopentadiene	0.14	U Q	1.0	0.14	ug/L		01/06/22 10:50	01/06/22 23:06	1
Hexachloroethane	0.052	U	1.0	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
Indeno[1,2,3-cd]pyrene	0.13	U *1	0.41	0.13	ug/L		01/06/22 10:50	01/06/22 23:06	1
Isophorone	0.10	U	0.41	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1
1-Methylnaphthalene	0.052	U	1.0	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1

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Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Client Sample ID: 20220104-F1-TY-02

Lab Sample ID: 580-108952-2

Date Collected: 01/04/22 14:05

Matrix: Water

Date Received: 01/05/22 07:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	0.062	U	0.41	0.062	ug/L		01/06/22 10:50	01/06/22 23:06	1
2-Methylphenol	0.052	U	0.62	0.052	ug/L		01/06/22 10:50	01/06/22 23:06	1
3 & 4 Methylphenol	0.10	U	0.62	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1
Naphthalene	0.16	U	0.41	0.16	ug/L		01/06/22 10:50	01/06/22 23:06	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1
3-Nitroaniline	0.16	U	3.1	0.16	ug/L		01/06/22 10:50	01/06/22 23:06	1
4-Nitroaniline	0.22	U	2.1	0.22	ug/L		01/06/22 10:50	01/06/22 23:06	1
Nitrobenzene	0.041	U	1.0	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
4-Nitrophenol	1.8	U	10	1.8	ug/L		01/06/22 10:50	01/06/22 23:06	1
N-Nitrosodi-n-propylamine	0.062	U *1	0.41	0.062	ug/L		01/06/22 10:50	01/06/22 23:06	1
N-Nitrosodiphenylamine	0.072	U	1.0	0.072	ug/L		01/06/22 10:50	01/06/22 23:06	1
Pentachlorophenol	0.53	U	10	0.53	ug/L		01/06/22 10:50	01/06/22 23:06	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		01/06/22 10:50	01/06/22 23:06	1
Phenol	0.37	U	1.0	0.37	ug/L		01/06/22 10:50	01/06/22 23:06	1
Pyrene	0.041	U	1.0	0.041	ug/L		01/06/22 10:50	01/06/22 23:06	1
1,2,4-Trichlorobenzene	0.093	U	0.41	0.093	ug/L		01/06/22 10:50	01/06/22 23:06	1
2,4,5-Trichlorophenol	0.10	U	0.41	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1
2,4,6-Trichlorophenol	0.10	U	0.62	0.10	ug/L		01/06/22 10:50	01/06/22 23:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	52		44 - 119	01/06/22 10:50	01/06/22 23:06	1
2-Fluorophenol (Surr)	0.2	S1-	19 - 119	01/06/22 10:50	01/06/22 23:06	1
Nitrobenzene-d5 (Surr)	65		44 - 120	01/06/22 10:50	01/06/22 23:06	1
Phenol-d5 (Surr)	0.1	S1-	10 - 120	01/06/22 10:50	01/06/22 23:06	1
Terphenyl-d14	100		50 - 134	01/06/22 10:50	01/06/22 23:06	1
2,4,6-Tribromophenol	41	S1-	43 - 140	01/06/22 10:50	01/06/22 23:06	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.089	U	0.11	0.089	mg/L		01/07/22 14:03	01/08/22 00:33	1
C24-C40	0.18	U	0.34	0.18	mg/L		01/07/22 14:03	01/08/22 00:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	80		56 - 125	01/07/22 14:03	01/08/22 00:33	1

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Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Client Sample ID: 20220104-A1-ZT02

Lab Sample ID: 580-108952-3

Date Collected: 01/04/22 10:45

Matrix: Water

Date Received: 01/05/22 07:55

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			01/05/22 15:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		69 - 133					01/05/22 15:52	1

Client Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Client Sample ID: 20220104-A1-ZT03

Lab Sample ID: 580-108952-4

Date Collected: 01/04/22 10:50

Matrix: Water

Date Received: 01/05/22 07:55

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			01/05/22 16:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		69 - 133					01/05/22 16:17	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		01/07/22 14:03	01/08/22 00:53	1
C24-C40	0.18	U	0.36	0.18	mg/L		01/07/22 14:03	01/08/22 00:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		56 - 125				01/07/22 14:03	01/08/22 00:53	1

QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: MB 580-377704/5

Matrix: Water

Analysis Batch: 377704

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			01/05/22 12:58	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		69 - 133					01/05/22 12:58	1

Lab Sample ID: LCS 580-377704/8

Matrix: Water

Analysis Batch: 377704

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	1.04		mg/L		104	78 - 122	
Surrogate	LCS %Recovery	LCS Qualifier	Limits					
4-Bromofluorobenzene (Surr)	106		69 - 133					

Lab Sample ID: LCSD 580-377704/9

Matrix: Water

Analysis Batch: 377704

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	1.03		mg/L		103	78 - 122	1	30
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	109		69 - 133						

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

Lab Sample ID: MB 580-377707/5

Matrix: Water

Analysis Batch: 377707

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			01/05/22 12:58	1
1,1,2,2-Tetrachloroethane	0.52	U	1.0	0.52	ug/L			01/05/22 12:58	1
1,1,2-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/05/22 12:58	1
1,1-Dichloroethane	0.22	U	1.0	0.22	ug/L			01/05/22 12:58	1
1,1-Dichloroethene	0.28	U	1.0	0.28	ug/L			01/05/22 12:58	1
1,2-Dichloroethane	0.42	U	1.0	0.42	ug/L			01/05/22 12:58	1
1,2-Dichloroethene, Total	0.39	U	1.0	0.39	ug/L			01/05/22 12:58	1
1,2-Dichloropropane	0.18	U	1.0	0.18	ug/L			01/05/22 12:58	1
2-Hexanone	4.0	U	15	4.0	ug/L			01/05/22 12:58	1
4-Methyl-2-pentanone (MIBK)	2.5	U	5.0	2.5	ug/L			01/05/22 12:58	1
Acetone	3.2	U	15	3.2	ug/L			01/05/22 12:58	1
Benzene	0.24	U	1.0	0.24	ug/L			01/05/22 12:58	1
Dichlorobromomethane	0.29	U	1.0	0.29	ug/L			01/05/22 12:58	1
Bromoform	0.51	U	1.0	0.51	ug/L			01/05/22 12:58	1

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QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: MB 580-377707/5

Matrix: Water

Analysis Batch: 377707

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	0.21	U	1.0	0.21	ug/L			01/05/22 12:58	1
Carbon disulfide	0.53	U	1.0	0.53	ug/L			01/05/22 12:58	1
Carbon tetrachloride	0.30	U	1.0	0.30	ug/L			01/05/22 12:58	1
trans-1,2-Dichloroethene	0.39	U	1.0	0.39	ug/L			01/05/22 12:58	1
Chlorobenzene	0.44	U	1.0	0.44	ug/L			01/05/22 12:58	1
Chloroform	0.26	U	1.0	0.26	ug/L			01/05/22 12:58	1
Chloromethane	0.28	U	1.0	0.28	ug/L			01/05/22 12:58	1
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	ug/L			01/05/22 12:58	1
Chlorodibromomethane	0.43	U	1.0	0.43	ug/L			01/05/22 12:58	1
1,2-Dibromo-3-Chloropropane	0.57	U	3.0	0.57	ug/L			01/05/22 12:58	1
cis-1,2-Dichloroethene	0.35	U	1.0	0.35	ug/L			01/05/22 12:58	1
Methylene Chloride	1.4	U	3.0	1.4	ug/L			01/05/22 12:58	1
Chloroethane	0.35	U	1.0	0.35	ug/L			01/05/22 12:58	1
Ethylbenzene	0.50	U	1.0	0.50	ug/L			01/05/22 12:58	1
2-Butanone (MEK)	4.7	U	15	4.7	ug/L			01/05/22 12:58	1
m-Xylene & p-Xylene	0.53	U	2.0	0.53	ug/L			01/05/22 12:58	1
o-Xylene	0.39	U	1.0	0.39	ug/L			01/05/22 12:58	1
Styrene	0.53	U	1.0	0.53	ug/L			01/05/22 12:58	1
Tetrachloroethene	0.41	U	1.0	0.41	ug/L			01/05/22 12:58	1
Toluene	0.39	U	1.0	0.39	ug/L			01/05/22 12:58	1
trans-1,3-Dichloropropene	0.41	U	1.0	0.41	ug/L			01/05/22 12:58	1
Trichloroethene	0.26	U	1.0	0.26	ug/L			01/05/22 12:58	1
Vinyl chloride	0.22	U	1.0	0.22	ug/L			01/05/22 12:58	1
Xylenes, Total	0.53	U	2.0	0.53	ug/L			01/05/22 12:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		81 - 118		01/05/22 12:58	1
4-Bromofluorobenzene (Surr)	107		85 - 114		01/05/22 12:58	1
Dibromofluoromethane (Surr)	100		80 - 119		01/05/22 12:58	1
Toluene-d8 (Surr)	105		89 - 112		01/05/22 12:58	1

Lab Sample ID: LCS 580-377707/6

Matrix: Water

Analysis Batch: 377707

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	10.3		ug/L		103	74 - 131
1,1,2,2-Tetrachloroethane	10.0	9.27		ug/L		93	71 - 121
1,1,2-Trichloroethane	10.0	9.86		ug/L		99	80 - 119
1,1-Dichloroethane	10.0	10.1		ug/L		101	77 - 125
1,1-Dichloroethene	10.0	10.4		ug/L		104	71 - 131
1,2-Dichloroethane	10.0	9.69		ug/L		97	73 - 128
1,2-Dichloroethene, Total	20.0	20.5		ug/L		103	78 - 123
1,2-Dichloropropane	10.0	9.98		ug/L		100	78 - 122
2-Hexanone	50.0	52.3		ug/L		105	57 - 139
4-Methyl-2-pentanone (MIBK)	50.0	51.9		ug/L		104	67 - 130
Acetone	50.0	47.5		ug/L		95	39 - 160
Benzene	10.0	10.4		ug/L		104	79 - 120

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QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: LCS 580-377707/6

Matrix: Water

Analysis Batch: 377707

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorobromomethane	10.0	10.2		ug/L		102	79 - 125
Bromoform	10.0	11.2		ug/L		112	66 - 130
Bromomethane	10.0	10.2		ug/L		102	53 - 141
Carbon disulfide	10.0	10.2		ug/L		102	64 - 133
Carbon tetrachloride	10.0	9.95		ug/L		99	72 - 136
trans-1,2-Dichloroethene	10.0	10.4		ug/L		104	75 - 124
Chlorobenzene	10.0	10.3		ug/L		103	82 - 118
Chloroform	10.0	10.5		ug/L		105	79 - 124
Chloromethane	10.0	8.66		ug/L		87	50 - 139
cis-1,3-Dichloropropene	10.0	9.64		ug/L		96	75 - 124
Chlorodibromomethane	10.0	10.8		ug/L		108	74 - 126
1,2-Dibromo-3-Chloropropane	10.0	9.01		ug/L		90	62 - 128
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	78 - 123
Methylene Chloride	10.0	10.3		ug/L		103	74 - 124
Chloroethane	10.0	9.47		ug/L		95	60 - 138
Ethylbenzene	10.0	10.4		ug/L		104	79 - 121
2-Butanone (MEK)	50.0	51.6		ug/L		103	56 - 143
m-Xylene & p-Xylene	10.0	10.2		ug/L		102	80 - 121
o-Xylene	10.0	10.5		ug/L		105	78 - 122
Styrene	10.0	10.2		ug/L		102	78 - 123
Tetrachloroethene	10.0	10.3		ug/L		103	74 - 129
Toluene	10.0	10.5		ug/L		105	80 - 121
trans-1,3-Dichloropropene	10.0	10.1		ug/L		101	73 - 127
Trichloroethene	10.0	10.6		ug/L		106	79 - 123
Vinyl chloride	10.0	9.61		ug/L		96	58 - 137
Xylenes, Total	20.0	20.7		ug/L		104	79 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		81 - 118
4-Bromofluorobenzene (Surr)	105		85 - 114
Dibromofluoromethane (Surr)	99		80 - 119
Toluene-d8 (Surr)	103		89 - 112

Lab Sample ID: LCSD 580-377707/7

Matrix: Water

Analysis Batch: 377707

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,1-Trichloroethane	10.0	10.2		ug/L		102	74 - 131	2	20
1,1,2,2-Tetrachloroethane	10.0	9.52		ug/L		95	71 - 121	3	20
1,1,2-Trichloroethane	10.0	10.0		ug/L		100	80 - 119	2	20
1,1-Dichloroethane	10.0	9.95		ug/L		99	77 - 125	1	20
1,1-Dichloroethene	10.0	10.1		ug/L		101	71 - 131	2	20
1,2-Dichloroethane	10.0	9.94		ug/L		99	73 - 128	3	20
1,2-Dichloroethene, Total	20.0	20.4		ug/L		102	78 - 123	0	20
1,2-Dichloropropane	10.0	9.64		ug/L		96	78 - 122	3	20
2-Hexanone	50.0	54.5		ug/L		109	57 - 139	4	20
4-Methyl-2-pentanone (MIBK)	50.0	52.7		ug/L		105	67 - 130	1	20

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QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: LCSD 580-377707/7

Matrix: Water

Analysis Batch: 377707

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	50.0	49.5		ug/L		99	39 - 160	4	20
Benzene	10.0	10.4		ug/L		104	79 - 120	0	20
Dichlorobromomethane	10.0	10.1		ug/L		101	79 - 125	1	20
Bromoform	10.0	11.6		ug/L		116	66 - 130	4	20
Bromomethane	10.0	10.5		ug/L		105	53 - 141	3	20
Carbon disulfide	10.0	10.0		ug/L		100	64 - 133	2	20
Carbon tetrachloride	10.0	9.72		ug/L		97	72 - 136	2	20
trans-1,2-Dichloroethene	10.0	10.4		ug/L		104	75 - 124	0	20
Chlorobenzene	10.0	10.1		ug/L		101	82 - 118	3	20
Chloroform	10.0	10.3		ug/L		103	79 - 124	1	20
Chloromethane	10.0	8.58		ug/L		86	50 - 139	1	20
cis-1,3-Dichloropropene	10.0	9.43		ug/L		94	75 - 124	2	20
Chlorodibromomethane	10.0	10.7		ug/L		107	74 - 126	1	20
1,2-Dibromo-3-Chloropropane	10.0	9.47		ug/L		95	62 - 128	5	20
cis-1,2-Dichloroethene	10.0	10.0		ug/L		100	78 - 123	0	20
Methylene Chloride	10.0	10.2		ug/L		102	74 - 124	1	20
Chloroethane	10.0	9.71		ug/L		97	60 - 138	3	20
Ethylbenzene	10.0	10.2		ug/L		102	79 - 121	2	20
2-Butanone (MEK)	50.0	54.3		ug/L		109	56 - 143	5	20
m-Xylene & p-Xylene	10.0	10.1		ug/L		101	80 - 121	1	20
o-Xylene	10.0	10.3		ug/L		103	78 - 122	2	20
Styrene	10.0	10.1		ug/L		101	78 - 123	1	20
Tetrachloroethene	10.0	10.3		ug/L		103	74 - 129	0	20
Toluene	10.0	10.3		ug/L		103	80 - 121	2	20
trans-1,3-Dichloropropene	10.0	10.5		ug/L		105	73 - 127	3	20
Trichloroethene	10.0	10.4		ug/L		104	79 - 123	2	20
Vinyl chloride	10.0	9.57		ug/L		96	58 - 137	0	20
Xylenes, Total	20.0	20.4		ug/L		102	79 - 121	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	97		81 - 118
4-Bromofluorobenzene (Surr)	105		85 - 114
Dibromofluoromethane (Surr)	102		80 - 119
Toluene-d8 (Surr)	105		89 - 112

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

Lab Sample ID: MB 580-377587/1-A

Matrix: Water

Analysis Batch: 377665

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 377587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.050	U	0.40	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
Acenaphthylene	0.060	U	1.0	0.060	ug/L		01/06/22 10:50	01/06/22 21:57	1
Anthracene	0.050	U	1.0	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
Benzo[a]anthracene	0.050	U	0.25	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
Benzo[a]pyrene	0.040	U	0.25	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1
Benzo[b]fluoranthene	0.040	U	0.25	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1
Benzo[g,h,i]perylene	0.040	U	0.25	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1

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QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: MB 580-377587/1-A

Matrix: Water

Analysis Batch: 377665

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 377587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	0.050	U	0.25	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
Bis(2-chloroethoxy)methane	0.050	U	0.60	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
Bis(2-chloroethyl)ether	0.030	U	0.10	0.030	ug/L		01/06/22 10:50	01/06/22 21:57	1
Bis(2-ethylhexyl) phthalate	0.74	U	3.0	0.74	ug/L		01/06/22 10:50	01/06/22 21:57	1
4-Bromophenyl phenyl ether	0.060	U	0.60	0.060	ug/L		01/06/22 10:50	01/06/22 21:57	1
Butyl benzyl phthalate	0.27	U	4.0	0.27	ug/L		01/06/22 10:50	01/06/22 21:57	1
Carbazole	0.10	U	0.60	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1
4-Chloroaniline	0.59	U	2.0	0.59	ug/L		01/06/22 10:50	01/06/22 21:57	1
4-Chloro-3-methylphenol	0.13	U	0.60	0.13	ug/L		01/06/22 10:50	01/06/22 21:57	1
2-Chloronaphthalene	0.070	U	1.0	0.070	ug/L		01/06/22 10:50	01/06/22 21:57	1
2-Chlorophenol	0.050	U	1.0	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
4-Chlorophenyl phenyl ether	0.050	U	0.60	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
Chrysene	0.040	U	0.25	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1
Dibenz(a,h)anthracene	0.070	U	0.25	0.070	ug/L		01/06/22 10:50	01/06/22 21:57	1
Dibenzofuran	0.10	U	0.40	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1
Di-n-butyl phthalate	0.19	U	3.0	0.19	ug/L		01/06/22 10:50	01/06/22 21:57	1
1,2-Dichlorobenzene	0.050	U	0.40	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
1,3-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1
1,4-Dichlorobenzene	0.040	U	0.40	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1
3,3'-Dichlorobenzidine	0.26	U	1.0	0.26	ug/L		01/06/22 10:50	01/06/22 21:57	1
2,4-Dichlorophenol	0.20	U	1.0	0.20	ug/L		01/06/22 10:50	01/06/22 21:57	1
Diethyl phthalate	0.15	U	1.0	0.15	ug/L		01/06/22 10:50	01/06/22 21:57	1
2,4-Dimethylphenol	0.16	U	4.0	0.16	ug/L		01/06/22 10:50	01/06/22 21:57	1
Dimethyl phthalate	0.060	U	0.60	0.060	ug/L		01/06/22 10:50	01/06/22 21:57	1
4,6-Dinitro-2-methylphenol	0.55	U	2.0	0.55	ug/L		01/06/22 10:50	01/06/22 21:57	1
2,4-Dinitrophenol	1.6	U	5.0	1.6	ug/L		01/06/22 10:50	01/06/22 21:57	1
2,4-Dinitrotoluene	0.10	U	1.0	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1
2,6-Dinitrotoluene	0.10	U	0.40	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1
Di-n-octyl phthalate	0.13	U	1.0	0.13	ug/L		01/06/22 10:50	01/06/22 21:57	1
Fluoranthene	0.060	U	0.25	0.060	ug/L		01/06/22 10:50	01/06/22 21:57	1
Fluorene	0.050	U	0.25	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
Hexachlorobenzene	0.040	U	0.60	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1
Hexachlorobutadiene	0.060	U	1.0	0.060	ug/L		01/06/22 10:50	01/06/22 21:57	1
Hexachlorocyclopentadiene	0.14	U	1.0	0.14	ug/L		01/06/22 10:50	01/06/22 21:57	1
Hexachloroethane	0.050	U	1.0	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
Indeno[1,2,3-cd]pyrene	0.13	U	0.40	0.13	ug/L		01/06/22 10:50	01/06/22 21:57	1
Isophorone	0.10	U	0.40	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1
1-Methylnaphthalene	0.050	U	1.0	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
2-Methylnaphthalene	0.060	U	0.40	0.060	ug/L		01/06/22 10:50	01/06/22 21:57	1
2-Methylphenol	0.050	U	0.60	0.050	ug/L		01/06/22 10:50	01/06/22 21:57	1
3 & 4 Methylphenol	0.10	U	0.60	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1
Naphthalene	0.16	U	0.40	0.16	ug/L		01/06/22 10:50	01/06/22 21:57	1
2-Nitroaniline	0.10	U	1.0	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1
3-Nitroaniline	0.16	U	3.0	0.16	ug/L		01/06/22 10:50	01/06/22 21:57	1
4-Nitroaniline	0.21	U	2.0	0.21	ug/L		01/06/22 10:50	01/06/22 21:57	1
Nitrobenzene	0.040	U	1.0	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1
4-Nitrophenol	1.7	U	10	1.7	ug/L		01/06/22 10:50	01/06/22 21:57	1
N-Nitrosodi-n-propylamine	0.060	U	0.40	0.060	ug/L		01/06/22 10:50	01/06/22 21:57	1
N-Nitrosodiphenylamine	0.070	U	1.0	0.070	ug/L		01/06/22 10:50	01/06/22 21:57	1

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QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: MB 580-377587/1-A

Matrix: Water

Analysis Batch: 377665

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 377587

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	0.51	U	10	0.51	ug/L		01/06/22 10:50	01/06/22 21:57	1
Phenanthrene	0.12	U	1.0	0.12	ug/L		01/06/22 10:50	01/06/22 21:57	1
Phenol	0.36	U	1.0	0.36	ug/L		01/06/22 10:50	01/06/22 21:57	1
Pyrene	0.040	U	1.0	0.040	ug/L		01/06/22 10:50	01/06/22 21:57	1
1,2,4-Trichlorobenzene	0.090	U	0.40	0.090	ug/L		01/06/22 10:50	01/06/22 21:57	1
2,4,5-Trichlorophenol	0.10	U	0.40	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1
2,4,6-Trichlorophenol	0.10	U	0.60	0.10	ug/L		01/06/22 10:50	01/06/22 21:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	60		44 - 119	01/06/22 10:50	01/06/22 21:57	1
2-Fluorophenol (Surr)	40		19 - 119	01/06/22 10:50	01/06/22 21:57	1
Nitrobenzene-d5 (Surr)	62		44 - 120	01/06/22 10:50	01/06/22 21:57	1
Phenol-d5 (Surr)	23		10 - 120	01/06/22 10:50	01/06/22 21:57	1
Terphenyl-d14	95		50 - 134	01/06/22 10:50	01/06/22 21:57	1
2,4,6-Tribromophenol	66		43 - 140	01/06/22 10:50	01/06/22 21:57	1

Lab Sample ID: LCS 580-377587/2-A

Matrix: Water

Analysis Batch: 377665

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 377587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	2.00	1.35		ug/L		67	47 - 122
Acenaphthylene	2.00	1.32		ug/L		66	41 - 130
Anthracene	2.00	1.50		ug/L		75	57 - 123
Benzo[a]anthracene	2.00	1.40		ug/L		70	58 - 125
Benzo[a]pyrene	2.00	1.43		ug/L		71	54 - 128
Benzo[b]fluoranthene	2.00	1.45		ug/L		72	53 - 131
Benzo[g,h,i]perylene	2.00	1.40		ug/L		70	50 - 134
Benzo[k]fluoranthene	2.00	1.35		ug/L		68	57 - 129
Bis(2-chloroethoxy)methane	2.00	1.41		ug/L		71	48 - 120
Bis(2-ethylhexyl) phthalate	2.00	1.68	J	ug/L		84	55 - 135
4-Bromophenyl phenyl ether	2.00	1.39		ug/L		69	55 - 124
Butyl benzyl phthalate	2.00	1.65	J	ug/L		82	53 - 134
Carbazole	2.00	1.62		ug/L		81	60 - 122
4-Chloroaniline	2.00	1.17	J	ug/L		58	33 - 117
4-Chloro-3-methylphenol	2.00	1.25		ug/L		62	52 - 119
2-Chloronaphthalene	2.00	1.31		ug/L		66	40 - 116
2-Chlorophenol	2.00	1.25		ug/L		63	38 - 117
4-Chlorophenyl phenyl ether	2.00	1.43		ug/L		72	53 - 121
Chrysene	2.00	1.58		ug/L		79	59 - 123
Dibenz(a,h)anthracene	2.00	1.35		ug/L		67	51 - 134
Dibenzofuran	2.00	1.44		ug/L		72	53 - 118
Di-n-butyl phthalate	2.00	1.71	J	ug/L		85	59 - 127
1,2-Dichlorobenzene	2.00	1.11		ug/L		56	32 - 111
1,3-Dichlorobenzene	2.00	1.05		ug/L		52	28 - 110
1,4-Dichlorobenzene	2.00	1.07		ug/L		53	29 - 112
3,3'-Dichlorobenzidine	4.00	2.81		ug/L		70	27 - 129
2,4-Dichlorophenol	2.00	1.14		ug/L		57	47 - 121

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QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: LCS 580-377587/2-A

Matrix: Water

Analysis Batch: 377665

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 377587

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diethyl phthalate	2.00	1.80		ug/L		90	56 - 125
2,4-Dimethylphenol	2.00	1.40	J	ug/L		70	31 - 124
Dimethyl phthalate	2.00	1.70		ug/L		85	45 - 127
4,6-Dinitro-2-methylphenol	4.00	2.37		ug/L		59	44 - 137
2,4-Dinitrophenol	4.00	2.61	J	ug/L		65	23 - 143
2,4-Dinitrotoluene	2.00	1.48		ug/L		74	57 - 128
2,6-Dinitrotoluene	2.00	1.42		ug/L		71	57 - 124
Di-n-octyl phthalate	2.00	1.61		ug/L		81	51 - 140
Fluoranthene	2.00	1.62		ug/L		81	57 - 128
Fluorene	2.00	1.50		ug/L		75	52 - 124
Hexachlorobenzene	2.00	1.29		ug/L		64	53 - 125
Hexachlorobutadiene	2.00	1.03		ug/L		51	22 - 124
Hexachlorocyclopentadiene	2.00	0.445	J	ug/L		22	20 - 125
Hexachloroethane	2.00	1.05		ug/L		53	21 - 115
Indeno[1,2,3-cd]pyrene	2.00	1.16		ug/L		58	52 - 134
Isophorone	2.00	1.42		ug/L		71	42 - 124
1-Methylnaphthalene	2.00	1.17		ug/L		58	41 - 119
2-Methylnaphthalene	2.00	1.26		ug/L		63	40 - 121
2-Methylphenol	2.00	1.19		ug/L		59	30 - 117
3 & 4 Methylphenol	2.00	1.13		ug/L		56	29 - 110
Naphthalene	2.00	1.14		ug/L		57	40 - 121
2-Nitroaniline	2.00	1.38		ug/L		69	55 - 127
3-Nitroaniline	2.00	1.37	J	ug/L		69	41 - 128
4-Nitroaniline	2.00	1.50	J	ug/L		75	70 - 125
Nitrobenzene	2.00	1.44		ug/L		72	45 - 121
4-Nitrophenol	4.00	1.85	J	ug/L		46	35 - 145
N-Nitrosodi-n-propylamine	2.00	1.46		ug/L		73	49 - 119
N-Nitrosodiphenylamine	2.00	1.43		ug/L		71	51 - 123
Pentachlorophenol	4.00	2.01	J	ug/L		50	35 - 138
Phenanthrene	2.00	1.41		ug/L		71	59 - 120
Phenol	2.00	0.602	J	ug/L		30	13 - 120
Pyrene	2.00	1.63		ug/L		82	57 - 126
1,2,4-Trichlorobenzene	2.00	1.12		ug/L		56	29 - 116
2,4,5-Trichlorophenol	2.00	1.51		ug/L		75	53 - 123
2,4,6-Trichlorophenol	2.00	1.24		ug/L		62	50 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	63		44 - 119
2-Fluorophenol (Surr)	43		19 - 119
Nitrobenzene-d5 (Surr)	70		44 - 120
Phenol-d5 (Surr)	27		10 - 120
Terphenyl-d14	88		50 - 134
2,4,6-Tribromophenol	77		43 - 140

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QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: LCSD 580-377587/3-A

Matrix: Water

Analysis Batch: 377665

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 377587

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	2.00	1.52		ug/L		76	47 - 122	12	20
Acenaphthylene	2.00	1.56		ug/L		78	41 - 130	17	20
Anthracene	2.00	1.51		ug/L		75	57 - 123	0	20
Benzo[a]anthracene	2.00	1.76	*1	ug/L		88	58 - 125	23	20
Benzo[a]pyrene	2.00	1.74		ug/L		87	54 - 128	20	20
Benzo[b]fluoranthene	2.00	1.57		ug/L		78	53 - 131	8	20
Benzo[g,h,i]perylene	2.00	1.66		ug/L		83	50 - 134	17	20
Benzo[k]fluoranthene	2.00	1.91	*1	ug/L		96	57 - 129	34	20
Bis(2-chloroethoxy)methane	2.00	1.65		ug/L		83	48 - 120	16	20
Bis(2-ethylhexyl) phthalate	2.00	2.13	J *1	ug/L		106	55 - 135	23	20
4-Bromophenyl phenyl ether	2.00	1.50		ug/L		75	55 - 124	8	20
Butyl benzyl phthalate	2.00	2.06	J *1	ug/L		103	53 - 134	22	20
Carbazole	2.00	1.81		ug/L		90	60 - 122	11	20
4-Chloroaniline	2.00	1.09	J	ug/L		54	33 - 117	7	20
4-Chloro-3-methylphenol	2.00	1.50		ug/L		75	52 - 119	19	20
2-Chloronaphthalene	2.00	1.47		ug/L		73	40 - 116	11	20
2-Chlorophenol	2.00	1.47		ug/L		74	38 - 117	16	20
4-Chlorophenyl phenyl ether	2.00	1.65		ug/L		82	53 - 121	14	20
Chrysene	2.00	2.01	*1	ug/L		101	59 - 123	24	20
Dibenz(a,h)anthracene	2.00	1.61		ug/L		80	51 - 134	18	20
Dibenzofuran	2.00	1.64		ug/L		82	53 - 118	13	20
Di-n-butyl phthalate	2.00	1.89	J	ug/L		94	59 - 127	10	20
1,2-Dichlorobenzene	2.00	1.19		ug/L		59	32 - 111	7	20
1,3-Dichlorobenzene	2.00	1.11		ug/L		56	28 - 110	6	20
1,4-Dichlorobenzene	2.00	1.11		ug/L		56	29 - 112	4	20
3,3'-Dichlorobenzidine	4.00	3.47	*1	ug/L		87	27 - 129	21	20
2,4-Dichlorophenol	2.00	1.42	*1	ug/L		71	47 - 121	22	20
Diethyl phthalate	2.00	1.98		ug/L		99	56 - 125	10	20
2,4-Dimethylphenol	2.00	1.68	J	ug/L		84	31 - 124	18	20
Dimethyl phthalate	2.00	1.80		ug/L		90	45 - 127	6	20
4,6-Dinitro-2-methylphenol	4.00	2.74		ug/L		68	44 - 137	14	20
2,4-Dinitrophenol	4.00	3.21	J	ug/L		80	23 - 143	20	20
2,4-Dinitrotoluene	2.00	1.69		ug/L		84	57 - 128	13	20
2,6-Dinitrotoluene	2.00	1.65		ug/L		82	57 - 124	15	20
Di-n-octyl phthalate	2.00	1.97		ug/L		99	51 - 140	20	20
Fluoranthene	2.00	1.75		ug/L		87	57 - 128	8	20
Fluorene	2.00	1.66		ug/L		83	52 - 124	10	20
Hexachlorobenzene	2.00	1.46		ug/L		73	53 - 125	13	20
Hexachlorobutadiene	2.00	1.00		ug/L		50	22 - 124	2	20
Hexachlorocyclopentadiene	2.00	0.460	J	ug/L		23	20 - 125	3	20
Hexachloroethane	2.00	1.13		ug/L		56	21 - 115	7	20
Indeno[1,2,3-cd]pyrene	2.00	1.46	*1	ug/L		73	52 - 134	23	20
Isophorone	2.00	1.60		ug/L		80	42 - 124	12	20
1-Methylnaphthalene	2.00	1.35		ug/L		67	41 - 119	14	20
2-Methylnaphthalene	2.00	1.34		ug/L		67	40 - 121	6	20
2-Methylphenol	2.00	1.45		ug/L		73	30 - 117	20	20
3 & 4 Methylphenol	2.00	1.30		ug/L		65	29 - 110	14	20
Naphthalene	2.00	1.33		ug/L		66	40 - 121	15	20

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: LCSD 580-377587/3-A

Matrix: Water

Analysis Batch: 377665

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 377587

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Nitroaniline	2.00	1.56		ug/L		78	55 - 127	12	20
3-Nitroaniline	2.00	1.44	J	ug/L		72	41 - 128	5	20
4-Nitroaniline	2.00	1.84	J	ug/L		92	70 - 125	20	20
Nitrobenzene	2.00	1.62		ug/L		81	45 - 121	12	20
4-Nitrophenol	4.00	1.95	J	ug/L		49	35 - 145	5	20
N-Nitrosodi-n-propylamine	2.00	1.80	*1	ug/L		90	49 - 119	21	20
N-Nitrosodiphenylamine	2.00	1.55		ug/L		78	51 - 123	9	20
Pentachlorophenol	4.00	2.13	J	ug/L		53	35 - 138	6	20
Phenanthrene	2.00	1.54		ug/L		77	59 - 120	8	20
Phenol	2.00	0.655	J	ug/L		33	13 - 120	8	20
Pyrene	2.00	1.78		ug/L		89	57 - 126	8	20
1,2,4-Trichlorobenzene	2.00	1.26		ug/L		63	29 - 116	12	20
2,4,5-Trichlorophenol	2.00	1.47		ug/L		73	53 - 123	3	20
2,4,6-Trichlorophenol	2.00	1.45		ug/L		73	50 - 125	16	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	72		44 - 119
2-Fluorophenol (Surr)	51		19 - 119
Nitrobenzene-d5 (Surr)	82		44 - 120
Phenol-d5 (Surr)	31		10 - 120
Terphenyl-d14	96		50 - 134
2,4,6-Tribromophenol	80		43 - 140

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

Lab Sample ID: MB 580-377700/1-A

Matrix: Water

Analysis Batch: 377794

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 377700

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C9-C25	0.090	U	0.11	0.090	mg/L		01/07/22 10:54	01/07/22 20:31	1
C24-C40	0.18	U	0.35	0.18	mg/L		01/07/22 10:54	01/07/22 20:31	1

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

Lab Sample ID: LCS 580-377700/2-A

Matrix: Water

Analysis Batch: 377794

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 377700

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C9-C25	4.00	2.87		mg/L		72	36 - 132
C24-C40	4.00	3.62		mg/L		91	41 - 113

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

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

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

Lab Sample ID: LCSD 580-377700/3-A

Matrix: Water

Analysis Batch: 377794

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 377700

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C9-C25	4.00	2.89		mg/L		72	36 - 132	1	20
C24-C40	4.00	3.57		mg/L		89	41 - 113	2	20

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

Lab Chronicle

Client: AECOM
Project/Site: CV22F0106

Job ID: 580-108952-1

Client Sample ID: 20220104-F1-TY-01

Lab Sample ID: 580-108952-1

Date Collected: 01/04/22 14:00

Matrix: Water

Date Received: 01/05/22 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377704	01/05/22 15:02	JSM	FGS SEA
Total/NA	Analysis	8260D		1	377707	01/05/22 15:02	JSM	FGS SEA

Client Sample ID: 20220104-F1-TY-02

Lab Sample ID: 580-108952-2

Date Collected: 01/04/22 14:05

Matrix: Water

Date Received: 01/05/22 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377704	01/05/22 15:27	JSM	FGS SEA
Total/NA	Analysis	8260D		1	377707	01/05/22 15:27	JSM	FGS SEA
Total/NA	Prep	3510C			377587	01/06/22 10:50	M1E	FGS SEA
Total/NA	Analysis	8270E		1	377665	01/06/22 23:06	E1L	FGS SEA
Total/NA	Prep	3510C			377700	01/07/22 14:03	M1E	FGS SEA
Total/NA	Analysis	8015D DRO		1	377794	01/08/22 00:33	JAE	FGS SEA

Client Sample ID: 20220104-A1-ZT02

Lab Sample ID: 580-108952-3

Date Collected: 01/04/22 10:45

Matrix: Water

Date Received: 01/05/22 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377704	01/05/22 15:52	JSM	FGS SEA

Client Sample ID: 20220104-A1-ZT03

Lab Sample ID: 580-108952-4

Date Collected: 01/04/22 10:50

Matrix: Water

Date Received: 01/05/22 07:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260/CALUFT DOD		1	377704	01/05/22 16:17	JSM	FGS SEA
Total/NA	Prep	3510C			377700	01/07/22 14:03	M1E	FGS SEA
Total/NA	Analysis	8015D DRO		1	377794	01/08/22 00:53	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: 580-108952-1

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: 580-108952-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-108952-1	20220104-F1-TY-01	Water	01/04/22 14:00	01/05/22 07:55
580-108952-2	20220104-F1-TY-02	Water	01/04/22 14:05	01/05/22 07:55
580-108952-3	20220104-A1-ZT02	Water	01/04/22 10:45	01/05/22 07:55
580-108952-4	20220104-A1-ZT03	Water	01/04/22 10:50	01/05/22 07:55

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Environment Testing
America

[illegible]

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-108952-1

Login Number: 108952

List Source: Eurofins Seattle

List Number: 1

Creator: Vallelunga, Diana L

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ 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 $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Work Orders: 1L27032

Project: 60674414.00.46.01. COC # 12232021 DW-3

Attn: Terri-Ann Ka'aihili-Choy

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

Report Date: 1/19/2022

Received Date: 12/27/2021

Turnaround Time: 1 workday

Phones: 1(808) 356-5330

Fax: (808) 524-0246

P.O. #:

Billing Code:

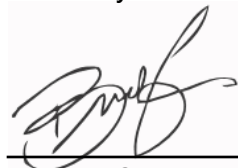
ELAP-CA #1132 • EPA-UCMR #CA00211 • Guam-EPA #17-008R • HW-DOH #4047 • LACSD #10143 • NELAP-OR #4047 • NJ-DEP
#CA015 • NV-DEP #NAC 445A • SCAQMD #93LA1006

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 Terri-Ann Ka'aihili-Choy,

Enclosed are the results of analyses for samples received 12/27/21 with the Chain-of-Custody document. The samples were received in good condition, at 3.8 °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:



Brandon Gee For Kim G. Tu
Project Manager



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

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Case Narrative

SUPP Report generated to correct and update RLs for compounds reported . BG 1/18/22

Sample Summary

Sample Name	Sampled By	Lab ID	Matrix	Sampled	Qualifiers
A1-DWS-A1-7-122321-N	AECOM	1L27032-01	Water	12/23/21 10:15	

Analyses Accreditation Summary

Analyte	CAS #	Not By NELAP	ANAB ISO 17025
SRL 524M-TCP in Water 1,2,3-Trichloropropane	96-18-4	✓	

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

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Sample Results

Sample: A1-DWS-A1-7-122321-N
1L27032-01 (Water)

Sampled: 12/23/21 10:15 by AECOM

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Method: SRL 524M-TCP

Instr: GCMS04

Batch ID: W1L1799

Preparation: Method (P+T)

Prepared: 12/27/21 14:28

Analyst: ADM

1,2,3-Trichloropropane	0.0176	0.00120	0.00500	ug/l	1	12/27/21	A-01
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Metals by EPA 200 Series Methods

Method: EPA 200.8

Instr: ICPMS04

Batch ID: W1L1828

Preparation: EPA 200.2

Prepared: 12/27/21 16:50

Analyst: mpn

Antimony, Total	ND	0.0889	0.500	ug/l	1	12/29/21	U
Arsenic, Total	0.160	0.0741	0.400	ug/l	1	12/29/21	J
Barium, Total	2.47	0.142	1.00	ug/l	1	12/29/21	
Beryllium, Total	ND	0.0624	0.100	ug/l	1	12/29/21	U
Cadmium, Total	ND	0.0416	0.200	ug/l	1	12/29/21	U
Chromium, Total	1.54	0.0887	0.200	ug/l	1	12/29/21	
Copper, Total	8.67	0.225	0.500	ug/l	1	12/29/21	
Lead, Total	0.449	0.0827	0.200	ug/l	1	12/29/21	
Selenium, Total	0.0705	0.0666	0.400	ug/l	1	12/29/21	J
Thallium, Total	ND	0.0210	0.200	ug/l	1	12/29/21	U

Method: EPA 245.1

Instr: HG03

Batch ID: W1L1838

Preparation: Method (Hot Block)

Prepared: 12/27/21 18:01

Analyst: kvm

Mercury, Total	ND	0.0170	0.0500	ug/l	1	12/28/21	U
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Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2

Instr: GCMS19

Batch ID: W1L1802

Preparation: Method (SPE)

Prepared: 12/27/21 14:23

Analyst: EFC

1-Methylnaphthalene	ND	0.00801	0.0500	ug/l	1	12/28/21	U
2-Methylnaphthalene	ND	0.00904	0.0500	ug/l	1	12/28/21	U
Acenaphthene	ND	0.00523	0.0500	ug/l	1	12/28/21	U
Acenaphthylene	ND	0.00624	0.0500	ug/l	1	12/28/21	U
Alachlor	ND	0.0110	0.100	ug/l	1	12/28/21	U
alpha-Chlordane	ND	0.0226	0.100	ug/l	1	12/28/21	U
Anthracene	ND	0.00753	0.0500	ug/l	1	12/28/21	U
Atrazine	ND	0.00734	0.100	ug/l	1	12/28/21	U
Benzo (a) anthracene	ND	0.0116	0.0500	ug/l	1	12/28/21	U
Benzo (a) pyrene	ND	0.0117	0.100	ug/l	1	12/28/21	U
Benzo (b) fluoranthene	ND	0.00895	0.0500	ug/l	1	12/28/21	U
Benzo (g,h,i) perylene	ND	0.0103	0.0500	ug/l	1	12/28/21	U
Benzo (k) fluoranthene	ND	0.0102	0.0500	ug/l	1	12/28/21	U
Bis(2-ethylhexyl)adipate	0.0311	0.00962	5.00	ug/l	1	12/28/21	J
Bis(2-ethylhexyl)phthalate	ND	0.437	3.00	ug/l	1	12/28/21	U
Chrysene	ND	0.00660	0.0500	ug/l	1	12/28/21	U

1L27032

Page 3 of 18

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

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Sample Results

(Continued)

Sample: A1-DWS-A1-7-122321-N
1L27032-01 (Water)

Sampled: 12/23/21 10:15 by AECOM
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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Semivolatile Organic Compounds by GC/MS (Continued)

Method: EPA 525.2

Instr: GCMS19

Batch ID: W1L1802

Preparation: Method (SPE)

Prepared: 12/27/21 14:23

Analyst: EFC

cis-Nonachlor	0.0256	0.00300	0.0500	ug/l	1	12/28/21	B-02, J
Dibenzo (a,h) anthracene	ND	0.00955	0.0500	ug/l	1	12/28/21	U
Endrin	ND	0.00991	0.200	ug/l	1	12/28/21	U
Fluoranthene	ND	0.00499	0.0500	ug/l	1	12/28/21	U
Fluorene	ND	0.00550	0.0500	ug/l	1	12/28/21	U
gamma-BHC (Lindane)	ND	0.00633	0.100	ug/l	1	12/28/21	U
gamma-Chlordane	ND	0.0237	0.100	ug/l	1	12/28/21	U
Heptachlor	ND	0.00965	0.100	ug/l	1	12/28/21	U
Heptachlor epoxide	ND	0.0122	0.100	ug/l	1	12/28/21	U
Hexachlorocyclopentadiene	ND	0.00594	1.00	ug/l	1	12/28/21	U
Indeno (1,2,3-cd) pyrene	ND	0.00986	0.0500	ug/l	1	12/28/21	U
Methoxychlor	ND	0.00863	0.200	ug/l	1	12/28/21	U
Naphthalene	ND	0.0103	0.0500	ug/l	1	12/28/21	U
Pentachlorophenol	ND	0.0242	1.00	ug/l	1	12/28/21	Q-02, U
Phenanthrene	ND	0.00498	0.0500	ug/l	1	12/28/21	U
Phenol	ND	0.0150	0.0500	ug/l	1	12/28/21	BS-L, U
Pyrene	ND	0.00492	0.0500	ug/l	1	12/28/21	U
Simazine	ND	0.00734	0.100	ug/l	1	12/28/21	U
trans-Nonachlor	0.0215	0.00100	0.0500	ug/l	1	12/28/21	B-02, J

Surrogate(s)

1,3-Dimethyl-2-nitrobenzene	111%	Conc: 0.564	70-130	12/28/21
Perylene-d12	113%	Conc: 0.576	70-130	12/28/21
Triphenyl phosphate	132%	Conc: 0.669	70-130	12/28/21 A-01a

Volatile Organic Compounds by P&T and GC/MS

Method: EPA 524.2

Instr: GCMS14

Batch ID: W1L1403

Preparation: Method (P+T)

Prepared: 12/27/21 14:30

Analyst: cam

1,1,1,2-Tetrachloroethane	ND	0.237	0.500	ug/l	1	12/27/21	U
1,1,1-Trichloroethane	ND	0.256	0.500	ug/l	1	12/27/21	U
1,1,2,2-Tetrachloroethane	ND	0.200	0.500	ug/l	1	12/27/21	U
1,1,2-Trichloroethane	ND	0.190	0.500	ug/l	1	12/27/21	U
1,1-Dichloroethane	ND	0.267	0.500	ug/l	1	12/27/21	U
1,1-Dichloroethene	ND	0.160	0.500	ug/l	1	12/27/21	U
1,1-Dichloropropene	ND	0.140	0.500	ug/l	1	12/27/21	U
1,2,3-Trichlorobenzene	ND	0.398	0.500	ug/l	1	12/27/21	U
1,2,4-Trichlorobenzene	ND	0.170	0.500	ug/l	1	12/27/21	U
1,2,4-Trimethylbenzene	ND	0.200	0.500	ug/l	1	12/27/21	U

1L27032

Page 4 of 18

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

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Sample Results

(Continued)

Sample: A1-DWS-A1-7-122321-N
1L27032-01 (Water)

Sampled: 12/23/21 10:15 by AECOM
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
Volatile Organic Compounds by P&T and GC/MS (Continued)							
Method: EPA 524.2		Instr: GCMS14					
Batch ID: W1L1403	Preparation: Method (P+T)		Prepared: 12/27/21 14:30			Analyst: cam	
1,2-Dichloroethane	ND	0.243	0.500	ug/l	1	12/27/21	U
1,2-Dichloropropane	ND	0.130	0.500	ug/l	1	12/27/21	U
1,3,5-Trimethylbenzene	ND	0.170	0.500	ug/l	1	12/27/21	U
1,3-Dichloropropane	ND	0.267	0.500	ug/l	1	12/27/21	U
1,3-Dichloropropene, Total	ND		0.500	ug/l	1	12/27/21	U
2,2-Dichloropropane	ND	0.170	0.500	ug/l	1	12/27/21	U
2-Butanone	ND	1.50	5.00	ug/l	1	12/27/21	U
2-Chlorotoluene	ND	0.150	0.500	ug/l	1	12/27/21	U
2-Hexanone	ND	1.20	5.00	ug/l	1	12/27/21	U
4-Chlorotoluene	ND	0.150	0.500	ug/l	1	12/27/21	U
4-Methyl-2-pentanone	ND	1.80	5.00	ug/l	1	12/27/21	U
Benzene	ND	0.150	0.500	ug/l	1	12/27/21	U
Bromobenzene	ND	0.150	0.500	ug/l	1	12/27/21	U
Bromochloromethane	ND	0.150	0.500	ug/l	1	12/27/21	U
Bromodichloromethane	0.253	0.243	0.500	ug/l	1	12/27/21	J
Bromoform	0.766	0.381	0.500	ug/l	1	12/27/21	
Bromomethane	ND	0.270	0.500	ug/l	1	12/27/21	U
Carbon tetrachloride	ND	0.270	0.500	ug/l	1	12/27/21	U
Chlorobenzene	ND	0.150	0.500	ug/l	1	12/27/21	U
Chloroethane	ND	0.170	0.500	ug/l	1	12/27/21	U
Chloroform	ND	0.270	0.500	ug/l	1	12/27/21	U
Chloromethane	ND	0.230	0.500	ug/l	1	12/27/21	U
cis-1,2-Dichloroethene	ND	0.250	0.500	ug/l	1	12/27/21	U
cis-1,3-Dichloropropene	ND	0.304	0.500	ug/l	1	12/27/21	U
Dibromochloromethane	0.638	0.200	0.500	ug/l	1	12/27/21	
Dibromomethane	ND	0.200	0.500	ug/l	1	12/27/21	U
Dichlorodifluoromethane (Freon 12)	ND	0.450	0.500	ug/l	1	12/27/21	U
Di-isopropyl ether	ND	1.07	2.00	ug/l	1	12/27/21	U
Ethyl tert-butyl ether	ND	1.00	2.00	ug/l	1	12/27/21	U
Ethylbenzene	ND	0.210	0.500	ug/l	1	12/27/21	U
Freon 113	ND	1.50	5.00	ug/l	1	12/27/21	U
Hexachlorobutadiene	ND	0.400	0.500	ug/l	1	12/27/21	U
Isopropylbenzene	ND	0.180	0.500	ug/l	1	12/27/21	U
m,p-Xylene	ND	0.330	0.500	ug/l	1	12/27/21	U
m-Dichlorobenzene	ND	0.140	0.500	ug/l	1	12/27/21	U

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Project Number: 60674414.00.46.01. COC # 12232021 DW-3

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01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Sample Results

(Continued)

Sample: A1-DWS-A1-7-122321-N
1L27032-01 (Water)

Sampled: 12/23/21 10:15 by AECOM
(Continued)

Analyte	Result	MDL	MRL	Units	Dil	Analyzed	Qualifier
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Volatile Organic Compounds by P&T and GC/MS (Continued)

Method: EPA 524.2

Instr: GCMS14

Batch ID: W1L1403

Preparation: Method (P+T)

Prepared: 12/27/21 14:30

Analyst: cam

Methyl tert-butyl ether (MTBE)	ND	0.939	2.00	ug/l	1	12/27/21	U
Methylene chloride	ND	0.303	0.500	ug/l	1	12/27/21	U
Naphthalene	ND	0.350	0.500	ug/l	1	12/27/21	U
n-Butylbenzene	ND	0.290	0.500	ug/l	1	12/27/21	U
n-Propylbenzene	ND	0.180	0.500	ug/l	1	12/27/21	U
o-Dichlorobenzene	ND	0.190	0.500	ug/l	1	12/27/21	U
o-Xylene	ND	0.200	0.500	ug/l	1	12/27/21	U
p-Dichlorobenzene	ND	0.180	0.500	ug/l	1	12/27/21	U
p-Isopropyltoluene	ND	0.250	0.500	ug/l	1	12/27/21	U
sec-Butylbenzene	ND	0.240	0.500	ug/l	1	12/27/21	U
Styrene	ND	0.190	0.500	ug/l	1	12/27/21	U
Tert-amyl methyl ether	ND	0.590	2.00	ug/l	1	12/27/21	U
tert-Butylbenzene	ND	0.180	0.500	ug/l	1	12/27/21	U
Tetrachloroethene	ND	0.180	0.500	ug/l	1	12/27/21	U
THMs, Total	1.41		0.500	ug/l	1	12/27/21	
Toluene	ND	0.294	0.500	ug/l	1	12/27/21	U
trans-1,2-Dichloroethene	ND	0.259	0.500	ug/l	1	12/27/21	U
trans-1,3-Dichloropropene	ND	0.324	0.500	ug/l	1	12/27/21	U
Trichloroethene	ND	0.180	0.500	ug/l	1	12/27/21	U
Trichlorofluoromethane	ND	0.180	0.500	ug/l	1	12/27/21	U
Vinyl chloride	ND	0.180	0.500	ug/l	1	12/27/21	U
Xylenes, Total	ND	0.330	0.500	ug/l	1	12/27/21	U

Surrogate(s)

1,2-Dichlorobenzene-d4	90%	Conc: 8.97	70-130	12/27/21
4-Bromofluorobenzene	89%	Conc: 8.87	70-130	12/27/21

Volatile Organics by P&T and GC/MS

Method: EPA 524.3

Instr: GCMS12

Batch ID: W1L1775

Preparation: Method (P+T)

Prepared: 12/27/21 11:44

Analyst: cam

1,2-Dibromo-3-chloropropane	ND	0.00420	0.0100	ug/l	1	12/27/21	U
1,2-Dibromoethane (EDB)	ND	0.00290	0.0200	ug/l	1	12/27/21	U

Surrogate(s)

1,2-Dichlorobenzene-d4	97%	Conc: 0.388	70-130	12/27/21
4-Bromofluorobenzene	101%	Conc: 0.403	70-130	12/27/21

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Project Number: 60674414.00.46.01. COC # 12232021 DW-3

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01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

Low Level 1,2,3-TCP by SRL Method, P&T, GC/MS SIM

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W1L1799 - SRL 524M-TCP											
Blank (W1L1799-BLK1)					Prepared & Analyzed: 12/27/21						
1,2,3-Trichloropropane	ND	0.00120	0.00500	ug/l							U
LCS (W1L1799-BS1)					Prepared & Analyzed: 12/27/21						
1,2,3-Trichloropropane	0.0197	0.00120	0.00500	ug/l	0.0200		98	80-120			
LCS Dup (W1L1799-BSD1)					Prepared & Analyzed: 12/27/21						
1,2,3-Trichloropropane	0.0197	0.00120	0.00500	ug/l	0.0200		99	80-120	0.3	20	
Duplicate (W1L1799-DUP1)					Source: 1K29104-01 Prepared & Analyzed: 12/27/21						
1,2,3-Trichloropropane	ND	0.00120	0.00500	ug/l		ND				20	U

Quality Control Results

Metals by EPA 200 Series Methods

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W1L1828 - EPA 200.8											
Blank (W1L1828-BLK1)					Prepared: 12/27/21 Analyzed: 12/29/21						
Antimony, Total	ND	0.0889	0.500	ug/l							U
Arsenic, Total	ND	0.0741	0.400	ug/l							U
Barium, Total	ND	0.142	1.00	ug/l							U
Beryllium, Total	ND	0.0624	0.100	ug/l							U
Cadmium, Total	0.0449	0.0416	0.200	ug/l							B-06, J
Chromium, Total	ND	0.0887	0.200	ug/l							U
Copper, Total	ND	0.225	0.500	ug/l							U
Lead, Total	ND	0.0827	0.200	ug/l							U
Selenium, Total	ND	0.0666	0.400	ug/l							U
Thallium, Total	ND	0.0210	0.200	ug/l							U
LCS (W1L1828-BS1)					Prepared: 12/27/21 Analyzed: 12/29/21						
Antimony, Total	48.4	0.0889	0.500	ug/l	50.0		97	85-115			
Arsenic, Total	55.0	0.0741	0.400	ug/l	50.0		110	85-115			
Barium, Total	48.2	0.142	1.00	ug/l	50.0		96	85-115			
Beryllium, Total	46.7	0.0624	0.100	ug/l	50.0		93	85-115			
Cadmium, Total	55.1	0.0416	0.200	ug/l	50.0		110	85-115			
Chromium, Total	56.5	0.0887	0.200	ug/l	50.0		113	85-115			
Copper, Total	50.9	0.225	0.500	ug/l	50.0		102	85-115			
Lead, Total	48.6	0.0827	0.200	ug/l	50.0		97	85-115			
Selenium, Total	54.6	0.0666	0.400	ug/l	50.0		109	85-115			
Thallium, Total	48.4	0.0210	0.200	ug/l	50.0		97	85-115			
Matrix Spike (W1L1828-MS1)					Source: 1L27032-01 Prepared: 12/27/21 Analyzed: 12/29/21						
Antimony, Total	47.5	0.0889	0.500	ug/l	50.0	ND	95	70-130			
Arsenic, Total	52.2	0.0741	0.400	ug/l	50.0	0.160	104	70-130			
Barium, Total	50.0	0.142	1.00	ug/l	50.0	2.47	95	70-130			

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Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

Metals by EPA 200 Series Methods (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W1L1828 - EPA 200.8 (Continued)											
Matrix Spike (W1L1828-MS1)			Source: 1L27032-01			Prepared: 12/27/21 Analyzed: 12/29/21					
Beryllium, Total	46.7	0.0624	0.100	ug/l	50.0	ND	93	70-130			
Cadmium, Total	51.7	0.0416	0.200	ug/l	50.0	ND	103	70-130			
Chromium, Total	55.2	0.0887	0.200	ug/l	50.0	1.54	107	70-130			
Copper, Total	56.1	0.225	0.500	ug/l	50.0	8.67	95	70-130			
Lead, Total	47.3	0.0827	0.200	ug/l	50.0	0.449	94	70-130			
Selenium, Total	50.8	0.0666	0.400	ug/l	50.0	0.0705	101	70-130			
Thallium, Total	46.5	0.0210	0.200	ug/l	50.0	ND	93	70-130			
Matrix Spike Dup (W1L1828-MSD1)			Source: 1L27032-01			Prepared: 12/27/21 Analyzed: 12/29/21					
Antimony, Total	48.3	0.0889	0.500	ug/l	50.0	ND	97	70-130	2	30	
Arsenic, Total	52.7	0.0741	0.400	ug/l	50.0	0.160	105	70-130	0.9	30	
Barium, Total	51.1	0.142	1.00	ug/l	50.0	2.47	97	70-130	2	30	
Beryllium, Total	48.4	0.0624	0.100	ug/l	50.0	ND	97	70-130	4	30	
Cadmium, Total	52.5	0.0416	0.200	ug/l	50.0	ND	105	70-130	1	30	
Chromium, Total	55.6	0.0887	0.200	ug/l	50.0	1.54	108	70-130	0.8	30	
Copper, Total	57.5	0.225	0.500	ug/l	50.0	8.67	98	70-130	2	30	
Lead, Total	48.2	0.0827	0.200	ug/l	50.0	0.449	95	70-130	2	30	
Selenium, Total	51.7	0.0666	0.400	ug/l	50.0	0.0705	103	70-130	2	30	
Thallium, Total	47.3	0.0210	0.200	ug/l	50.0	ND	95	70-130	2	30	
Batch: W1L1838 - EPA 245.1											
Blank (W1L1838-BLK1)						Prepared: 12/27/21 Analyzed: 12/28/21					
Mercury, Total	ND	0.0170	0.0500	ug/l							U
LCS (W1L1838-BS1)						Prepared: 12/27/21 Analyzed: 12/28/21					
Mercury, Total	0.947	0.0170	0.0500	ug/l	1.00		95	85-115			
Matrix Spike (W1L1838-MS1)			Source: 1L27032-01			Prepared: 12/27/21 Analyzed: 12/28/21					
Mercury, Total	1.01	0.0170	0.0500	ug/l	1.00	ND	101	70-130			
Matrix Spike Dup (W1L1838-MSD1)			Source: 1L27032-01			Prepared: 12/27/21 Analyzed: 12/28/21					
Mercury, Total	0.991	0.0170	0.0500	ug/l	1.00	ND	99	70-130	2	20	

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Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

(Continued)

Quality Control Results

Semivolatile Organic Compounds by GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W1L1802 - EPA 525.2											
Blank (W1L1802-BLK1)						Prepared: 12/27/21 Analyzed: 12/28/21					
1-Methylnaphthalene	ND	0.00801	0.0500	ug/l							U
2-Methylnaphthalene	ND	0.00904	0.0500	ug/l							U
Acenaphthene	ND	0.00523	0.0500	ug/l							U
Acenaphthylene	ND	0.00624	0.0500	ug/l							U
Alachlor	ND	0.0110	0.100	ug/l							U
alpha-Chlordane	ND	0.0226	0.100	ug/l							U
Anthracene	ND	0.00753	0.0500	ug/l							U
Atrazine	ND	0.00734	0.100	ug/l							U
Benzo (a) anthracene	ND	0.0116	0.0500	ug/l							U
Benzo (a) pyrene	ND	0.0117	0.100	ug/l							U
Benzo (b) fluoranthene	ND	0.00895	0.0500	ug/l							U
Benzo (g,h,i) perylene	ND	0.0103	0.0500	ug/l							U
Benzo (k) fluoranthene	ND	0.0102	0.0500	ug/l							U
Bis(2-ethylhexyl)adipate	0.0215	0.00962	5.00	ug/l							J
Bis(2-ethylhexyl)phthalate	ND	0.437	3.00	ug/l							U
Chrysene	ND	0.00660	0.0500	ug/l							U
cis-Nonachlor	0.0252	0.00300	0.0500	ug/l							B-02, J
Dibenzo (a,h) anthracene	ND	0.00955	0.0500	ug/l							U
Endrin	ND	0.00991	0.200	ug/l							U
Fluoranthene	ND	0.00499	0.0500	ug/l							U
Fluorene	ND	0.00550	0.0500	ug/l							U
gamma-BHC (Lindane)	ND	0.00633	0.100	ug/l							U
gamma-Chlordane	ND	0.0237	0.100	ug/l							U
Heptachlor	ND	0.00965	0.100	ug/l							U
Heptachlor epoxide	ND	0.0122	0.100	ug/l							U
Hexachlorocyclopentadiene	ND	0.00594	1.00	ug/l							U
Indeno (1,2,3-cd) pyrene	ND	0.00986	0.0500	ug/l							U
Methoxychlor	ND	0.00863	0.200	ug/l							U
Naphthalene	ND	0.0103	0.0500	ug/l							U
Pentachlorophenol	ND	0.0242	1.00	ug/l							U
Phenanthrene	ND	0.00498	0.0500	ug/l							U
Phenol	ND	0.0150	0.0500	ug/l							U
Pyrene	ND	0.00492	0.0500	ug/l							U
Simazine	ND	0.00734	0.100	ug/l							U
trans-Nonachlor	0.0213	0.00100	0.0500	ug/l							B-02, J
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	0.591			ug/l	0.500		118	70-130			
Perylene-d12	0.611			ug/l	0.500		122	70-130			
Triphenyl phosphate	0.739			ug/l	0.500		148	70-130			A-01a

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Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W1L1802 - EPA 525.2 (Continued)											
LCS (W1L1802-BS1)					Prepared: 12/27/21 Analyzed: 12/28/21						
1-Methylnaphthalene	0.213	0.00801	0.0500	ug/l	0.250		85	70-130			
2-Methylnaphthalene	0.212	0.00904	0.0500	ug/l	0.250		85	70-130			
Acenaphthene	0.212	0.00523	0.0500	ug/l	0.250		85	70-130			
Acenaphthylene	0.215	0.00624	0.0500	ug/l	0.250		86	70-130			
Alachlor	0.482	0.0110	0.100	ug/l	0.500		96	70-130			
alpha-Chlordane	0.252	0.0226	0.100	ug/l	0.300		84	70-130			
Anthracene	0.199	0.00753	0.0500	ug/l	0.250		79	70-130			
Atrazine	0.230	0.00734	0.100	ug/l	0.250		92	70-130			
Benzo (a) anthracene	0.226	0.0116	0.0500	ug/l	0.250		90	70-130			
Benzo (a) pyrene	0.248	0.0117	0.100	ug/l	0.250		99	70-130			
Benzo (b) fluoranthene	0.265	0.00895	0.0500	ug/l	0.250		106	70-130			AN-IP
Benzo (g,h,i) perylene	0.196	0.0103	0.0500	ug/l	0.250		78	70-130			
Benzo (k) fluoranthene	0.211	0.0102	0.0500	ug/l	0.250		84	70-130			AN-IP
Bis(2-ethylhexyl)adipate	0.262	0.00962	5.00	ug/l	0.250		105	70-130			J
Bis(2-ethylhexyl)phthalate	ND	0.437	3.00	ug/l	0.250			70-130			U
Chrysene	0.179	0.00660	0.0500	ug/l	0.250		72	70-130			
cis-Nonachlor	0.216	0.00300	0.0500	ug/l	0.250		87	70-130			
Dibenzo (a,h) anthracene	0.194	0.00955	0.0500	ug/l	0.250		78	70-130			
Endrin	0.241	0.00991	0.200	ug/l	0.250		96	70-130			
Fluoranthene	0.233	0.00499	0.0500	ug/l	0.250		93	70-130			
Fluorene	0.208	0.00550	0.0500	ug/l	0.250		83	70-130			
gamma-BHC (Lindane)	0.212	0.00633	0.100	ug/l	0.250		85	70-130			
gamma-Chlordane	0.276	0.0237	0.100	ug/l	0.300		92	70-130			
Heptachlor	0.199	0.00965	0.100	ug/l	0.250		79	70-130			
Heptachlor epoxide	0.238	0.0122	0.100	ug/l	0.250		95	70-130			
Hexachlorocyclopentadiene	0.117	0.00594	1.00	ug/l	0.250		47	33-106			J
Indeno (1,2,3-cd) pyrene	0.224	0.00986	0.0500	ug/l	0.250		89	70-130			
Methoxychlor	0.252	0.00863	0.200	ug/l	0.250		101	70-130			
Naphthalene	0.208	0.0103	0.0500	ug/l	0.250		83	70-130			
Pentachlorophenol	0.0799	0.0242	1.00	ug/l	0.250		32	50-120			Q-02, J
Phenanthrene	0.213	0.00498	0.0500	ug/l	0.250		85	70-130			
Phenol	0.0240	0.0150	0.0500	ug/l	0.250		10	70-130			BS-L, J
Pyrene	0.230	0.00492	0.0500	ug/l	0.250		92	70-130			
Simazine	0.229	0.00734	0.100	ug/l	0.250		92	60-130			
trans-Nonachlor	0.204	0.00100	0.0500	ug/l	0.250		82	70-130			
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	0.549			ug/l	0.500		110	70-130			
Perylene-d12	0.628			ug/l	0.500		126	70-130			
Triphenyl phosphate	0.886			ug/l	0.500		177	70-130			A-01a

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Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

Semivolatile Organic Compounds by GC/MS (Continued)

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W1L1802 - EPA 525.2 (Continued)											
LCS Dup (W1L1802-BSD1)					Prepared: 12/27/21 Analyzed: 12/28/21						
1-Methylnaphthalene	0.200	0.00801	0.0500	ug/l	0.250		80	70-130	6	30	
2-Methylnaphthalene	0.205	0.00904	0.0500	ug/l	0.250		82	70-130	3	30	
Acenaphthene	0.199	0.00523	0.0500	ug/l	0.250		80	70-130	6	30	
Acenaphthylene	0.213	0.00624	0.0500	ug/l	0.250		85	70-130	1	30	
Alachlor	0.455	0.0110	0.100	ug/l	0.500		91	70-130	6	30	
alpha-Chlordane	0.225	0.0226	0.100	ug/l	0.300		75	70-130	12	30	
Anthracene	0.190	0.00753	0.0500	ug/l	0.250		76	70-130	5	30	
Atrazine	0.220	0.00734	0.100	ug/l	0.250		88	70-130	5	30	
Benzo (a) anthracene	0.216	0.0116	0.0500	ug/l	0.250		86	70-130	5	30	
Benzo (a) pyrene	0.238	0.0117	0.100	ug/l	0.250		95	70-130	4	30	
Benzo (b) fluoranthene	0.266	0.00895	0.0500	ug/l	0.250		106	70-130	0.5	30	AN-IP
Benzo (g,h,i) perylene	0.250	0.0103	0.0500	ug/l	0.250		100	70-130	24	30	
Benzo (k) fluoranthene	0.226	0.0102	0.0500	ug/l	0.250		90	70-130	7	30	AN-IP
Bis(2-ethylhexyl)adipate	0.275	0.00962	5.00	ug/l	0.250		110	70-130	5	30	J
Bis(2-ethylhexyl)phthalate	ND	0.437	3.00	ug/l	0.250			60-130	200	30	U
Chrysene	0.169	0.00660	0.0500	ug/l	0.250		68	70-130	6	30	Q-ME
cis-Nonachlor	0.189	0.00300	0.0500	ug/l	0.250		75	70-130	14	30	
Dibenzo (a,h) anthracene	0.266	0.00955	0.0500	ug/l	0.250		106	70-130	31	30	Q-12
Endrin	0.216	0.00991	0.200	ug/l	0.250		86	70-130	11	30	
Fluoranthene	0.211	0.00499	0.0500	ug/l	0.250		84	70-130	10	30	
Fluorene	0.196	0.00550	0.0500	ug/l	0.250		78	70-130	6	30	
gamma-BHC (Lindane)	0.198	0.00633	0.100	ug/l	0.250		79	70-130	7	30	
gamma-Chlordane	0.241	0.0237	0.100	ug/l	0.300		80	70-130	13	30	
Heptachlor	0.179	0.00965	0.100	ug/l	0.250		71	70-130	11	30	
Heptachlor epoxide	0.211	0.0122	0.100	ug/l	0.250		85	70-130	12	30	
Hexachlorocyclopentadiene	0.115	0.00594	1.00	ug/l	0.250		46	33-106	2	30	J
Indeno (1,2,3-cd) pyrene	0.253	0.00986	0.0500	ug/l	0.250		101	70-130	12	30	
Methoxychlor	0.235	0.00863	0.200	ug/l	0.250		94	70-130	7	30	
Naphthalene	0.194	0.0103	0.0500	ug/l	0.250		77	70-130	7	30	
Pentachlorophenol	0.0858	0.0242	1.00	ug/l	0.250		34	50-120	7	30	Q-02, J
Phenanthrene	0.203	0.00498	0.0500	ug/l	0.250		81	70-130	5	30	
Phenol	0.0254	0.0150	0.0500	ug/l	0.250		10	70-130	6	30	BS-L, J
Pyrene	0.204	0.00492	0.0500	ug/l	0.250		82	70-130	12	30	
Simazine	0.217	0.00734	0.100	ug/l	0.250		87	70-130	5	30	
trans-Nonachlor	0.193	0.00100	0.0500	ug/l	0.250		77	70-130	5	30	
<i>Surrogate(s)</i>											
1,3-Dimethyl-2-nitrobenzene	0.543			ug/l	0.500		109	70-130			
Perylene-d12	0.666			ug/l	0.500		133	70-130			A-01b
Triphenyl phosphate	0.854			ug/l	0.500		171	70-130			A-01a

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1001 Bishop Street Suite 1600
Honolulu, HI 96813

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

Volatile Organic Compounds by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W1L1403 - EPA 524.2											
Blank (W1L1403-BLK1)						Prepared: 12/20/21 Analyzed: 12/27/21					
1,1,1,2-Tetrachloroethane	ND	0.237	0.500	ug/l							U
1,1,1-Trichloroethane	ND	0.256	0.500	ug/l							U
1,1,2,2-Tetrachloroethane	ND	0.200	0.500	ug/l							U
1,1,2-Trichloroethane	ND	0.190	0.500	ug/l							U
1,1-Dichloroethane	ND	0.267	0.500	ug/l							U
1,1-Dichloroethene	ND	0.160	0.500	ug/l							U
1,1-Dichloropropene	ND	0.140	0.500	ug/l							U
1,2,3-Trichlorobenzene	ND	0.398	0.500	ug/l							U
1,2,4-Trichlorobenzene	ND	0.170	0.500	ug/l							U
1,2,4-Trimethylbenzene	ND	0.200	0.500	ug/l							U
1,2-Dichloroethane	ND	0.243	0.500	ug/l							U
1,2-Dichloropropane	ND	0.130	0.500	ug/l							U
1,3,5-Trimethylbenzene	ND	0.170	0.500	ug/l							U
1,3-Dichloropropane	ND	0.267	0.500	ug/l							U
1,3-Dichloropropene, Total	ND		0.500	ug/l							U
2,2-Dichloropropane	ND	0.170	0.500	ug/l							U
2-Butanone	ND	1.50	5.00	ug/l							U
2-Chlorotoluene	ND	0.150	0.500	ug/l							U
2-Hexanone	ND	1.20	5.00	ug/l							U
4-Chlorotoluene	ND	0.150	0.500	ug/l							U
4-Methyl-2-pentanone	ND	1.80	5.00	ug/l							U
Benzene	ND	0.150	0.500	ug/l							U
Bromobenzene	ND	0.150	0.500	ug/l							U
Bromochloromethane	ND	0.150	0.500	ug/l							U
Bromodichloromethane	ND	0.243	0.500	ug/l							U
Bromoform	ND	0.381	0.500	ug/l							U
Bromomethane	ND	0.270	0.500	ug/l							U
Carbon tetrachloride	ND	0.270	0.500	ug/l							U
Chlorobenzene	ND	0.150	0.500	ug/l							U
Chloroethane	ND	0.170	0.500	ug/l							U
Chloroform	ND	0.270	0.500	ug/l							U
Chloromethane	ND	0.230	0.500	ug/l							U
cis-1,2-Dichloroethene	ND	0.250	0.500	ug/l							U
cis-1,3-Dichloropropene	ND	0.304	0.500	ug/l							U
Dibromochloromethane	ND	0.200	0.500	ug/l							U
Dibromomethane	ND	0.200	0.500	ug/l							U
Dichlorodifluoromethane (Freon 12)	ND	0.450	0.500	ug/l							U
Di-isopropyl ether	ND	1.07	2.00	ug/l							U
Ethyl tert-butyl ether	ND	1.00	2.00	ug/l							U

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1001 Bishop Street Suite 1600
Honolulu, HI 96813

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

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

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W1L1403 - EPA 524.2 (Continued)											
Blank (W1L1403-BLK1)						Prepared: 12/20/21 Analyzed: 12/27/21					
Ethylbenzene	ND	0.210	0.500	ug/l							U
Freon 113	ND	1.50	5.00	ug/l							U
Hexachlorobutadiene	ND	0.400	0.500	ug/l							U
Isopropylbenzene	ND	0.180	0.500	ug/l							U
m,p-Xylene	ND	0.330	0.500	ug/l							U
m-Dichlorobenzene	ND	0.140	0.500	ug/l							U
Methyl tert-butyl ether (MTBE)	ND	0.939	2.00	ug/l							U
Methylene chloride	ND	0.303	0.500	ug/l							U
Naphthalene	ND	0.350	0.500	ug/l							U
n-Butylbenzene	ND	0.290	0.500	ug/l							U
n-Propylbenzene	ND	0.180	0.500	ug/l							U
o-Dichlorobenzene	ND	0.190	0.500	ug/l							U
o-Xylene	ND	0.200	0.500	ug/l							U
p-Dichlorobenzene	ND	0.180	0.500	ug/l							U
p-Isopropyltoluene	ND	0.250	0.500	ug/l							U
sec-Butylbenzene	ND	0.240	0.500	ug/l							U
Styrene	ND	0.190	0.500	ug/l							U
Tert-amyl methyl ether	ND	0.590	2.00	ug/l							U
tert-Butylbenzene	ND	0.180	0.500	ug/l							U
Tetrachloroethene	ND	0.180	0.500	ug/l							U
THMs, Total	ND		0.500	ug/l							U
Toluene	ND	0.294	0.500	ug/l							U
trans-1,2-Dichloroethene	ND	0.259	0.500	ug/l							U
trans-1,3-Dichloropropene	ND	0.324	0.500	ug/l							U
Trichloroethene	ND	0.180	0.500	ug/l							U
Trichlorofluoromethane	ND	0.180	0.500	ug/l							U
Vinyl chloride	ND	0.180	0.500	ug/l							U
Xylenes, Total	ND	0.330	0.500	ug/l							U
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	9.94			ug/l	10.0		99	70-130			
4-Bromofluorobenzene	9.89			ug/l	10.0		99	70-130			
LCS (W1L1403-BS1)						Prepared: 12/20/21 Analyzed: 12/27/21					
1,1,1,2-Tetrachloroethane	5.33	0.237	0.500	ug/l	5.00		107	70-130			
1,1,1-Trichloroethane	5.24	0.256	0.500	ug/l	5.00		105	70-130			
1,1,2,2-Tetrachloroethane	6.35	0.200	0.500	ug/l	5.00		127	70-130			
1,1,2-Trichloroethane	5.24	0.190	0.500	ug/l	5.00		105	70-130			
1,1-Dichloroethane	4.90	0.267	0.500	ug/l	5.00		98	70-130			
1,1-Dichloroethene	5.05	0.160	0.500	ug/l	5.00		101	70-130			
1,1-Dichloropropene	4.99	0.140	0.500	ug/l	5.00		100	70-130			

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1001 Bishop Street Suite 1600
Honolulu, HI 96813

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

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

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	RPD Limit	Qualifier
Batch: W1L1403 - EPA 524.2 (Continued)											
LCS (W1L1403-BS1)					Prepared: 12/20/21 Analyzed: 12/27/21						
1,2,3-Trichlorobenzene	5.41	0.398	0.500	ug/l	5.00		108	70-130			
1,2,4-Trichlorobenzene	5.57	0.170	0.500	ug/l	5.00		111	70-130			
1,2,4-Trimethylbenzene	5.70	0.200	0.500	ug/l	5.00		114	70-130			
1,2-Dichloroethane	4.91	0.243	0.500	ug/l	5.00		98	70-130			
1,2-Dichloropropane	5.03	0.130	0.500	ug/l	5.00		101	70-130			
1,3,5-Trimethylbenzene	5.67	0.170	0.500	ug/l	5.00		113	70-130			
1,3-Dichloropropane	5.34	0.267	0.500	ug/l	5.00		107	70-130			
2,2-Dichloropropane	5.15	0.170	0.500	ug/l	5.00		103	70-130			
2-Butanone	4.96	1.50	5.00	ug/l	5.00		99	70-130			J
2-Chlorotoluene	5.59	0.150	0.500	ug/l	5.00		112	70-130			
2-Hexanone	5.14	1.20	5.00	ug/l	5.00		103	70-130			
4-Chlorotoluene	5.56	0.150	0.500	ug/l	5.00		111	70-130			
4-Methyl-2-pentanone	4.85	1.80	5.00	ug/l	5.00		97	70-130			J
Benzene	4.98	0.150	0.500	ug/l	5.00		100	70-130			
Bromobenzene	5.41	0.150	0.500	ug/l	5.00		108	70-130			
Bromochloromethane	5.01	0.150	0.500	ug/l	5.00		100	70-130			
Bromodichloromethane	5.42	0.243	0.500	ug/l	5.00		108	70-130			
Bromoform	5.74	0.381	0.500	ug/l	5.00		115	70-130			
Bromomethane	5.18	0.270	0.500	ug/l	5.00		104	70-130			
Carbon tetrachloride	5.40	0.270	0.500	ug/l	5.00		108	70-130			
Chlorobenzene	5.25	0.150	0.500	ug/l	5.00		105	70-130			
Chloroethane	4.92	0.170	0.500	ug/l	5.00		98	70-130			
Chloroform	5.27	0.270	0.500	ug/l	5.00		105	70-130			
Chloromethane	4.80	0.230	0.500	ug/l	5.00		96	70-130			
cis-1,2-Dichloroethene	5.04	0.250	0.500	ug/l	5.00		101	70-130			
cis-1,3-Dichloropropene	5.18	0.304	0.500	ug/l	5.00		104	70-130			
Dibromochloromethane	5.62	0.200	0.500	ug/l	5.00		112	70-130			
Dibromomethane	5.26	0.200	0.500	ug/l	5.00		105	70-130			
Dichlorodifluoromethane (Freon 12)	5.05	0.450	0.500	ug/l	5.00		101	70-130			
Di-isopropyl ether	19.6	1.07	2.00	ug/l	20.0		98	70-130			
Ethyl tert-butyl ether	19.6	1.00	2.00	ug/l	20.0		98	70-130			
Ethylbenzene	5.66	0.210	0.500	ug/l	5.00		113	70-130			
Freon 113	5.27	1.50	5.00	ug/l	5.00		105	70-130			
Hexachlorobutadiene	5.29	0.400	0.500	ug/l	5.00		106	70-130			
Isopropylbenzene	5.81	0.180	0.500	ug/l	5.00		116	70-130			
m,p-Xylene	5.46	0.330	0.500	ug/l	5.00		109	70-130			
m-Dichlorobenzene	5.38	0.140	0.500	ug/l	5.00		108	70-130			
Methyl tert-butyl ether (MTBE)	19.8	0.939	2.00	ug/l	20.0		99	70-130			
Methylene chloride	5.00	0.303	0.500	ug/l	5.00		100	70-130			

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1001 Bishop Street Suite 1600
Honolulu, HI 96813

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

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

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W1L1403 - EPA 524.2 (Continued)											
LCS (W1L1403-BS1)						Prepared: 12/20/21 Analyzed: 12/27/21					
Naphthalene	5.65	0.350	0.500	ug/l	5.00		113	70-130			
n-Butylbenzene	5.54	0.290	0.500	ug/l	5.00		111	70-130			
n-Propylbenzene	5.80	0.180	0.500	ug/l	5.00		116	70-130			
o-Dichlorobenzene	5.30	0.190	0.500	ug/l	5.00		106	70-130			
o-Xylene	5.62	0.200	0.500	ug/l	5.00		112	70-130			
p-Dichlorobenzene	5.35	0.180	0.500	ug/l	5.00		107	70-130			
p-Isopropyltoluene	5.67	0.250	0.500	ug/l	5.00		113	70-130			
sec-Butylbenzene	5.75	0.240	0.500	ug/l	5.00		115	70-130			
Styrene	5.55	0.190	0.500	ug/l	5.00		111	70-130			
Tert-amyl methyl ether	20.4	0.590	2.00	ug/l	20.0		102	70-130			
tert-Butylbenzene	5.63	0.180	0.500	ug/l	5.00		113	70-130			
Tetrachloroethene	5.00	0.180	0.500	ug/l	5.00		100	70-130			
Toluene	5.28	0.294	0.500	ug/l	5.00		106	70-130			
trans-1,2-Dichloroethene	5.04	0.259	0.500	ug/l	5.00		101	70-130			
trans-1,3-Dichloropropene	4.68	0.324	0.500	ug/l	5.00		94	70-130			
Trichloroethene	4.55	0.180	0.500	ug/l	5.00		91	70-130			
Trichlorofluoromethane	5.34	0.180	0.500	ug/l	5.00		107	70-130			
Vinyl chloride	4.91	0.180	0.500	ug/l	5.00		98	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	12.0			ug/l	10.0		120	70-130			
4-Bromofluorobenzene	12.0			ug/l	10.0		120	70-130			
LCS Dup (W1L1403-BSD1)						Prepared: 12/20/21 Analyzed: 12/27/21					
1,1,1,2-Tetrachloroethane	5.60	0.237	0.500	ug/l	5.00		112	70-130	5	30	
1,1,1-Trichloroethane	5.61	0.256	0.500	ug/l	5.00		112	70-130	7	30	
1,1,2,2-Tetrachloroethane	6.51	0.200	0.500	ug/l	5.00		130	70-130	2	30	
1,1,2-Trichloroethane	5.49	0.190	0.500	ug/l	5.00		110	70-130	5	30	
1,1-Dichloroethane	5.31	0.267	0.500	ug/l	5.00		106	70-130	8	30	
1,1-Dichloroethene	5.60	0.160	0.500	ug/l	5.00		112	70-130	10	30	
1,1-Dichloropropene	5.41	0.140	0.500	ug/l	5.00		108	70-130	8	30	
1,2,3-Trichlorobenzene	5.70	0.398	0.500	ug/l	5.00		114	70-130	5	30	
1,2,4-Trichlorobenzene	5.92	0.170	0.500	ug/l	5.00		118	70-130	6	30	
1,2,4-Trimethylbenzene	6.36	0.200	0.500	ug/l	5.00		127	70-130	11	30	
1,2-Dichloroethane	5.23	0.243	0.500	ug/l	5.00		105	70-130	6	30	
1,2-Dichloropropane	5.25	0.130	0.500	ug/l	5.00		105	70-130	4	30	
1,3,5-Trimethylbenzene	6.13	0.170	0.500	ug/l	5.00		123	70-130	8	30	
1,3-Dichloropropane	5.64	0.267	0.500	ug/l	5.00		113	70-130	5	30	
2,2-Dichloropropane	5.51	0.170	0.500	ug/l	5.00		110	70-130	7	30	
2-Butanone	5.21	1.50	5.00	ug/l	5.00		104	70-130	5	30	
2-Chlorotoluene	5.79	0.150	0.500	ug/l	5.00		116	70-130	4	30	

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1001 Bishop Street Suite 1600
Honolulu, HI 96813

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

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

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W1L1403 - EPA 524.2 (Continued)											
LCS Dup (W1L1403-BSD1)					Prepared: 12/20/21 Analyzed: 12/27/21						
2-Hexanone	5.55	1.20	5.00	ug/l	5.00		111	70-130	8	30	
4-Chlorotoluene	5.80	0.150	0.500	ug/l	5.00		116	70-130	4	30	
4-Methyl-2-pentanone	5.30	1.80	5.00	ug/l	5.00		106	70-130	9	30	
Benzene	5.22	0.150	0.500	ug/l	5.00		104	70-130	5	30	
Bromobenzene	5.68	0.150	0.500	ug/l	5.00		114	70-130	5	30	
Bromochloromethane	5.31	0.150	0.500	ug/l	5.00		106	70-130	6	30	
Bromodichloromethane	5.70	0.243	0.500	ug/l	5.00		114	70-130	5	30	
Bromoform	6.01	0.381	0.500	ug/l	5.00		120	70-130	5	30	
Bromomethane	5.47	0.270	0.500	ug/l	5.00		109	70-130	5	30	
Carbon tetrachloride	5.74	0.270	0.500	ug/l	5.00		115	70-130	6	30	
Chlorobenzene	5.55	0.150	0.500	ug/l	5.00		111	70-130	6	30	
Chloroethane	5.57	0.170	0.500	ug/l	5.00		111	70-130	12	30	
Chloroform	5.52	0.270	0.500	ug/l	5.00		110	70-130	5	30	
Chloromethane	5.45	0.230	0.500	ug/l	5.00		109	70-130	13	30	
cis-1,2-Dichloroethene	5.34	0.250	0.500	ug/l	5.00		107	70-130	6	30	
cis-1,3-Dichloropropene	5.57	0.304	0.500	ug/l	5.00		111	70-130	7	30	
Dibromochloromethane	5.83	0.200	0.500	ug/l	5.00		117	70-130	4	30	
Dibromomethane	5.51	0.200	0.500	ug/l	5.00		110	70-130	5	30	
Dichlorodifluoromethane (Freon 12)	5.60	0.450	0.500	ug/l	5.00		112	70-130	10	30	
Di-isopropyl ether	21.0	1.07	2.00	ug/l	20.0		105	70-130	7	30	
Ethyl tert-butyl ether	21.1	1.00	2.00	ug/l	20.0		105	70-130	7	30	
Ethylbenzene	6.14	0.210	0.500	ug/l	5.00		123	70-130	8	30	
Freon 113	5.69	1.50	5.00	ug/l	5.00		114	70-130	8	30	
Hexachlorobutadiene	5.72	0.400	0.500	ug/l	5.00		114	70-130	8	30	
Isopropylbenzene	6.18	0.180	0.500	ug/l	5.00		124	70-130	6	30	
m,p-Xylene	6.54	0.330	0.500	ug/l	5.00		131	70-130	18	30	Q-08
m-Dichlorobenzene	5.67	0.140	0.500	ug/l	5.00		113	70-130	5	30	
Methyl tert-butyl ether (MTBE)	21.3	0.939	2.00	ug/l	20.0		106	70-130	7	30	
Methylene chloride	5.29	0.303	0.500	ug/l	5.00		106	70-130	6	30	
Naphthalene	5.98	0.350	0.500	ug/l	5.00		120	70-130	6	30	
n-Butylbenzene	5.98	0.290	0.500	ug/l	5.00		120	70-130	8	30	
n-Propylbenzene	6.28	0.180	0.500	ug/l	5.00		126	70-130	8	30	
o-Dichlorobenzene	5.62	0.190	0.500	ug/l	5.00		112	70-130	6	30	
o-Xylene	6.36	0.200	0.500	ug/l	5.00		127	70-130	12	30	
p-Dichlorobenzene	5.61	0.180	0.500	ug/l	5.00		112	70-130	5	30	
p-Isopropyltoluene	6.05	0.250	0.500	ug/l	5.00		121	70-130	6	30	
sec-Butylbenzene	6.21	0.240	0.500	ug/l	5.00		124	70-130	8	30	
Styrene	5.86	0.190	0.500	ug/l	5.00		117	70-130	5	30	
Tert-amyl methyl ether	21.1	0.590	2.00	ug/l	20.0		106	70-130	3	30	

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

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Quality Control Results

(Continued)

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

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W1L1403 - EPA 524.2 (Continued)											
LCS Dup (W1L1403-BSD1)					Prepared: 12/20/21 Analyzed: 12/27/21						
tert-Butylbenzene	6.02	0.180	0.500	ug/l	5.00		120	70-130	7	30	
Tetrachloroethene	5.27	0.180	0.500	ug/l	5.00		105	70-130	5	30	
Toluene	6.05	0.294	0.500	ug/l	5.00		121	70-130	14	30	
trans-1,2-Dichloroethene	5.34	0.259	0.500	ug/l	5.00		107	70-130	6	30	
trans-1,3-Dichloropropene	4.98	0.324	0.500	ug/l	5.00		100	70-130	6	30	
Trichloroethene	5.02	0.180	0.500	ug/l	5.00		100	70-130	10	30	
Trichlorofluoromethane	5.69	0.180	0.500	ug/l	5.00		114	70-130	6	30	
Vinyl chloride	5.44	0.180	0.500	ug/l	5.00		109	70-130	10	30	
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	11.1			ug/l	10.0		111	70-130			
4-Bromofluorobenzene	11.0			ug/l	10.0		110	70-130			

Quality Control Results

(Continued)

Volatile Organics by P&T and GC/MS

Analyte	Result	MDL	MRL	Units	Spike Level	Source Result	%REC	Limits	RPD	Limit	Qualifier
Batch: W1L1775 - EPA 524.3											
Blank (W1L1775-BLK1)					Prepared & Analyzed: 12/27/21						
1,2-Dibromo-3-chloropropane	ND	0.00420	0.0100	ug/l							U
1,2-Dibromoethane (EDB)	ND	0.00290	0.0200	ug/l							U
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.394			ug/l	0.400		98	70-130			
4-Bromofluorobenzene	0.394			ug/l	0.400		99	70-130			
LCS (W1L1775-BS1)					Prepared & Analyzed: 12/27/21						
1,2-Dibromo-3-chloropropane	0.0453	0.00420	0.0100	ug/l	0.0500		91	70-130			
1,2-Dibromoethane (EDB)	0.0538	0.00290	0.0200	ug/l	0.0500		108	70-130			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.394			ug/l	0.400		98	70-130			
4-Bromofluorobenzene	0.394			ug/l	0.400		98	70-130			
Matrix Spike (W1L1775-MS1)					Source: 1L23059-01 Prepared & Analyzed: 12/27/21						
1,2-Dibromo-3-chloropropane	0.0406	0.00420	0.0100	ug/l	0.0500	ND	81	65-135			
1,2-Dibromoethane (EDB)	0.0475	0.00290	0.0200	ug/l	0.0500	ND	95	65-135			
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.385			ug/l	0.400		96	70-130			
4-Bromofluorobenzene	0.404			ug/l	0.400		101	70-130			
Matrix Spike Dup (W1L1775-MSD1)					Source: 1L23059-01 Prepared & Analyzed: 12/27/21						
1,2-Dibromo-3-chloropropane	0.0521	0.00420	0.0100	ug/l	0.0500	ND	104	65-135	25	30	
1,2-Dibromoethane (EDB)	0.145	0.00290	0.0200	ug/l	0.0500	ND	290	65-135	101	30	MS-05
<i>Surrogate(s)</i>											
1,2-Dichlorobenzene-d4	0.386			ug/l	0.400		96	70-130			
4-Bromofluorobenzene	0.404			ug/l	0.400		101	70-130			

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

Project Number: 60674414.00.46.01. COC # 12232021 DW-3

Reported:
01/19/2022 12:11

Project Manager: Terri-Ann Ka'aihili-Choy

Notes and Definitions

Item	Definition
A-01	Clear vial
A-01a	High surrogate bias due to a possible method related issue. Sample is ND.
A-01b	Surrogate has a marginally high bias. Sample is ND and the first surrogate for this QC meets criteria.
AN-IP	Sample results for structural isomers may have contribution from their isomeric pair.
B-02	This analyte is detected in the method blank below the MRL, but above the method acceptance criteria. The batch was accepted since this analyte was not detected in the sample.
B-06	This analyte was found in the method blank, which was possibly contaminated during sample preparation. The batch was accepted since this analyte was either not detected or more than 10 times of the blank value for all the samples in the batch.
BS-L	The recovery of this analyte in the BS/LCS was below the control limit. Sample result is suspect.
J	Estimated conc. detected <MRL and >MDL.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
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.
Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
Q-ME	Acceptable QC with marginal exceedance
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.



Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

Standard CHAIN OF CUSTODY RECORD

14859 Clark Avenue : Industry : CA 91745

Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com

COC# 12232021 DW-3

CLIENT NAME:		PROJECT:		ANALYSES REQUESTED										SPECIAL HANDLING				
ADDRESS:		PHONE:		VOCs (Full Suite) by 524.2										Charges will apply for weekends/holidays				
PROJECT MANAGER		SAMPLER		EDB and DBCP by 524.3										Method of Shipment: FedEx				
ID#	DATE	TIME	SMPL	C _{1/2}	SAMPLE IDENTIFICATION/SITE LOCATION	# OF	1,2,3-Trichloropropane (TCP) by 524.2M										COMMENTS	
(Lab Use Only)	SAMPLED	SAMPLED	TYPE	Y/N		CONT.	Synthetic Organic Chemicals (SOC) by 525.2											
							Metals by 200.8											
							Mercury by 245.1											
	12/23/21	10:15	G	N	AI-DWS-AI-7-122321-N	13	X	X	X	X	X	X	X	X				
2nd	12/23/21	10:10	G	N	AI-DWS-TBAI-7-122321-N	2												
Nothing Follows Fa																		
12/28/21: Per Traci, Metals list is: Antimony Arsenic Barium Beryllium Cadmium Chromium Copper Lead Mercury Selenium Thallium																		
RELINQUISHED BY		DATE / TIME		RECEIVED BY		DATE / TIME		SAMPLE CONDITION:				SAMPLE TYPE CODE:						
Thomas Aguilo Pargiel		12/23/21 1305		FedEx				Actual Temperature: 3.8°C				Thermometer #: 702321						
RELINQUISHED BY		DATE / TIME		RECEIVED BY		DATE / TIME		Received On Ice				Y N						
FedEx				J. Sanchez		12/27/21 1153		Samples Preserved				Y N						
RELINQUISHED BY		DATE / TIME		RECEIVED BY		DATE / TIME		Evidence Seals Present				Y N						
								Container Attacked				Y N						
PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS						SPECIAL REQUIREMENTS / BILLING INFORMATION												
Client agrees to Terms & Conditions at: www.wecklabs.com						COC version: 210608												



WECK LABORATORIES, INC.

Sample Receipt Checklist

Week WKO: 1L27032

Date/Time Received: 12/27/21 11:53

WKO Logged by: Jaime Gomez

of Samples: 1

Samples Checked by: Jaime Gomez

Delivered by: FedEx

Task	Yes	No	N/A	Comments
COC				
COC present at receipt?	☒	☐		
COC properly completed?	☒	☐		
COC matches sample labels?	☒	☐		
Project Manager notified?	☐	☒	☐	
Sample Temperature				
Samples received on Ice?	☒	☐		
Ice Type (Blue/Wet)				
All samples intact?	☒	☐		
Samples in proper containers?	☒	☐		
Sufficient sample volume?	☒	☐		
Samples intact?	☒	☐		
Received within holding time?	☐	☐		
Project Manager notified?	☐	☒	☐	
Sample labels checked for correct preservation?	☐	☐	☒	
VOC Headspace: none, <6mm, <Pea size?	☐	☒	☐	
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT				
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 adjusted for O&G	☐	☐	☐	pH Reading
Project Manager notified?	☐	☐	☐	Acid Lot#
				Amt added

PM Comments

Sample Receipt Checklist Prepared by:

Signature: Jaime Gomez

Date: 12/27/21



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2A05051

COC# 01042022 DW-01

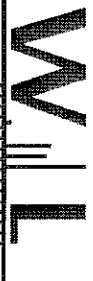
CLIENT NAME: AECOM		PROJECT: 60674414		ANALYSES REQUESTED								SPECIAL HANDLING				
ADDRESS: 1001 Bishop St., Ste. 1600 Honolulu, HI 96813		PHONE: 808-364-8050		SOCs by 525.2 (sodium sulfite + HCl) Metals by 200.8/245.1 (nitric acid) TOC by 5310B (HCl) VOC 524.2								Same Day Rush 150% 24 Hour Rush 100% 48-72 Hour Rush 75% 4 - 5 Day Rush 30% Rush Extractions 50% 10 - 15 Business Days QA/QC Data Package				
PROJECT MANAGER Margie Pascua		SAMPLER AECOM										Charges will apply for weekends/holidays Method of Shipment: FedEx				
ID# (Lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	CL ₂ Y/N	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.									COMMENTS	
	1/4/2022	1045	DW		20220104-A1-2101	1										
	1/4/2022	1050	DW		20220104-A1-2103	1	X	X	X	X						8 Containers, not 6 CR
	1/4/2022	1235	DW		20220104-D1-2104	1				X						
CR 7/4/22																
RELINQUISHED BY Mike Gavett		DATE / TIME 1/4/22 1240		RECEIVED BY Mike Easterday		DATE / TIME 1/4/22 1241		SAMPLE CONDITION: Actual Temperature: 3.6° Thermometer #: T-0230				SAMPLE TYPE CODE: DW = Drinking Water WW = Waste Water GW = Ground Water SF = Surface Water SW = Sea Water SO = Solid/Soil SL = Sludge				
RELINQUISHED BY Mike Easterday		DATE / TIME 1/4/22 1303		RECEIVED BY Conner Rothe		DATE / TIME 1/4/22 1303		Received On Ice				N				
RELINQUISHED BY Conner Rothe		DATE / TIME 1/4/22 1500		RECEIVED BY		DATE / TIME		Samples Preserved				N				
PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS		Client agrees to Terms & Conditions at: www.wecklabs.com		SPECIAL REQUIREMENTS / BILLING INFORMATION												

FedEx

1/5/22

for

10:25



WECK LABORATORIES, INC.

Sample Receipt Checklist

Weck WKO: 2A05051

Date/Time Received: 01/05/22 @ 10:25

WKO Logged by: Lester Abad

of Samples: 03

Samples Checked by: LKA

Delivered by: Fedex

Task	Yes	No	N/A	Comments
COC present at receipt?	☒	☐		
COC properly completed?	☒	☐		
COC matches sample labels?	☒	☐		
Project Manager notified?	☐	☐	☒	
Sample Temperature	☒	☐		3.6°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 labels checked for correct preservation?	☒	☐	☐	
VOC Headspace: none, <6mm/<Pea size?		☒	☐	
524.2, 524.3, 624.1, 8260, 1666 P/T, LUFT	☐	☒	☐	
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 adjusted for O&G	☐	☐	☐	pH Reading:
				Acid Lot#
				Amt added:
Project Manager notified?	☐	☐	☒	

PM Comments

Sample Receipt Checklist Prepared by:

Signature:

Date: 01/05/22

Memorandum

To	Karen Mixon, Data Validation Manager	Info	Completed
Subject	Summary Data Quality Review Joint Base Pearl Harbor-Hickam, Hawaii Red Hill Bulk Fuel Storage Facility		
From	Kristin Rutherford, Chemist		
Date	January 18, 2022		

The summary data quality review of one water sample and one trip blank collected on December 25, 2021, has been completed. The samples were collected by AECOM personnel and were analyzed at Eurofins TestAmerica, in Monrovia, California for volatile organic compounds (VOCs) by EPA Method 524.2; semivolatile organic compounds (SVOCs) by EPA Method 525.2; 1,2,3-trichloropropane (123TCP), 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA Method 504.1; total metals and mercury by EPA Method 200.8; PCBs (Aroclors) and organochlorine pesticides by EPA Method 505; and herbicides (pentachlorophenol) by EPA Method 515.4. The analyses were performed in general accordance with the methods specified in EPA's drinking water program. The laboratory provided a summary report containing sample results and associated quality assurance (QA) and quality control (QC) data. The following samples are associated with Eurofins TestAmerica-Monrovia laboratory group 976956:

Sample ID	Laboratory IDs	Requested Analyses
A1-DWS-A1-7-122521-N	202112260028	VOCs, SVOCs, EDB/DBCP/123TCP, Metals/Mercury, PCB/Pest, Herbicide*
A1-DWS-TBA1-7-122521-N (Trip blank)	202112260029	VOCs, EDB/DBCP/123TCP

*pentachlorophenol only

Upon receipt by the laboratory, the sample jar information was compared to the associated chain-of-custody (COC) and the cooler temperatures were recorded. The cooler temperatures were received within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C.

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

- No data were qualified in association with this laboratory group.
- The following analytes exceeded the Incident Specific Screening Criteria:

Sample Name	Analyte	Result	MDL	Incident Specific Screening Criteria	Units
A1-DWS-A1-7-122521-N	Endrin	ND	0.005	0.0023	µg/L
A1-DWS-A1-7-122521-N	Heptachlor Epoxide	ND	0.005	0.0036	µg/L
A1-DWS-A1-7-122521-N	Hexachlorobenzene	ND	0.041	0.0003	µg/L



Summary Data Quality Review
Joint Base Pearl Harbor-Hickam, Hawaii
Red Hill Bulk Fuel Storage Facility

Sample Name	Analyte	Result	MDL	Incident Specific Screening Criteria	Units
A1-DWS-A1-7-122521-N	Methoxychlor	ND	0.032	0.03	µg/L

Memorandum

To	Karen Mixon, Data Validation Manager	Info	Completed
Subject	Summary Data Quality Review Joint Base Pearl Harbor-Hickam, Hawaii Red Hill Bulk Fuel Storage Facility		
From	Kristin Rutherford, Chemist		
Date	January 17, 2022		

The summary data quality review of eight water samples and one trip blank collected on December 23 and 25, 2021, and January 11, 2022, has been completed. The samples were collected by AECOM personnel and were analyzed at Eurofins TestAmerica, in Seattle, Washington for total petroleum hydrocarbons (TPHs) by EPA Method 8260/CALUFT (gasoline-range, C6-C12 hydrocarbons), EPA Method 8015D (diesel range, C9-C25 hydrocarbons, and motor oil range, C24-C40 hydrocarbons), for volatile organic compounds (VOCs) by EPA Method 8260D, and semivolatile organic compounds (SVOCs) by EPA Method 8270E. The analyses were performed in general accordance with the specified TPH methods and/or with methods specified in EPA's *Test Methods for Evaluating Solid Waste (SW-846)*. The laboratory provided a summary report containing sample results and associated quality assurance (QA) and quality control (QC) data. The following samples are associated with Eurofins TestAmerica-Seattle laboratory groups 580-108724-1, 580-108747-1, and 580-109249-1:

Sample ID	Laboratory IDs	Requested Analyses
H2-DWS-H2-377-122321-A	580-108724-1	TPH, VOCs, SVOCs
H2-DWS-TBH2-377-122321-A (Trip blank)	580-108724-2	TPH, VOCs
A1-DWS-A1-7-122321-N	580-108724-3	TPH
A1-DWS-TBA1-7-122321-N	580-108724-4	TPH
A1-DWS-A1-7-122521-N	580-108747-1	TPH
A1-DWS-TBA1-7-122521-N	580-108747-2	TPH
220111-A1-XT01	580-109249-1	TPH
220111-A1-XT02	580-109249-2	TPH
220111-A1-XT03	580-109249-3	TPH

Upon receipt by the laboratory, the sample jar information was compared to the associated chain-of-custody (COC) and the cooler temperatures were recorded. The cooler temperatures were received within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C except for samples A1-DWS-A1-7-122521-N and A1-DWS-TBA1-7-122521-N which were received at -1.0°C. Based on professional judgment, no qualifications were made since the samples were received at the laboratory in good condition on the same day they were collected.

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:

- No TPH data were qualified in association with these laboratory groups.
- The following percent recoveries for the SVOC surrogates were below the laboratory control limits:

**Summary Data Quality Review
Joint Base Pearl Harbor-Hickam, Hawaii
Red Hill Bulk Fuel Storage Facility**

Sample	Surrogate	%Recovery	Control Limits
H2-DWS-H2-377-122321-A	2-Fluorophenol	0%	21-120%
	Phenol-d5	0%	10-120%

The results for the acid compounds in sample H2-DWS-H2-377-122321-A noted in the table above were rejected and flagged 'R' based on the acid surrogate recoveries. The compounds are listed below:

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

- The following VOC laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery was outside the laboratory control limits:

LCS/LCSD ID	Compound	%Recovery LCS/LCSD	Control Limits	Sample(s)
LCS 580-376788/5 LCSD 580-376788/6	Chloroform	126%/ok	79-124%	H2-DWS-TBH2-377-122321-A

The positive result for chloroform in sample H2-DWS-TBH2-377-122321-A was qualified as estimated and flagged 'J' based on high recovery in the LCS.

- The following VOC LCS/LCSD relative percent differences (RPDs) were outside the laboratory control limits and resulted in data qualification:

LCS/LCSD ID	Compound	%RPD LCS/LCSD	Control Limit	Sample(s)
LCS 580-376788/5	Bromoform	22%	<20%	H2-DWS-H2-377-122321-A
LCSD 580-376788/6	Dibromochloromethane	21%	<20%	H2-DWS-H2-377-122321-A

The positive results for bromoform and dibromochloromethane in sample H2-DWS-H2-377-122321-A were qualified as estimated and flagged 'J' based on LCS/LCSD precision.

**Summary Data Quality Review
Joint Base Pearl Harbor-Hickam, Hawaii
Red Hill Bulk Fuel Storage Facility**

- The following SVOC LCS/LCSD recovery was outside the laboratory control limits:

LCS/LCSD ID	Compound	%Recovery LCS/LCSD	Control Limits	Sample(s)
LCS 580-376770/2-A LCSD 580-376770/3-A	Pentachlorophenol	33%/ok	35-138%	H2-DWS-H2-377-122321-A

The non-detect result for pentachlorophenol in sample H2-DWS-H2-377-122321-A was previously rejected and flagged 'R' based on the acid surrogate recoveries; therefore, no further qualifications were applied for low LCS recovery.

- Project screening levels were met for all non-detect SVOC results, with the exception of hexachlorobenzene in sample H2-DWS-H2-377-122321-A that had a method detection limit of 0.041 ug/L, which exceeded the project screening level of 0.0003 ug/L.
- The laboratory noted that the minimum response factors (RFs) for n-nitroso-di-n-propylamine and bis(2-chloroethyl)ether were outside the method control criteria in the continuing calibration verification (CCV) associated with sample H2-DWS-H2-377-122321-A. The results for these compounds in sample H2-DWS-H2-377-122321-A were qualified as estimated and flagged 'J.'
- The laboratory noted that the VOC continuing calibration verification (CCV) associated with batch 580-376788 recovered above the upper control limit for naphthalene, 1,2,4-trichlorobenzene, hexachlorobutadiene, 1,2,3-trichlorobenzene, 2,2-dichloropropane, dichlorodifluoromethane, 1,1-dichloroethene, bromomethane, vinyl chloride, carbon tetrachloride, carbon disulfide, and tetrachloroethene. The non-detect results associated with this CCV in samples H2-DWS-H2-377-122321-A and H2-DWS-TBH2-377-122321-A were qualified as estimated and flagged 'J.'
- The laboratory noted that the SVOC CCV associated with batch 580-376866 recovered above the upper control limit for benzyl alcohol and bis(chloroisopropyl) ether. The non-detect results associated with this CCV in sample H2-DWS-H2-377-122321-A were qualified as estimated and flagged 'J.'

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	Jennifer B. Garner, Chemist		
Date	January 21, 2022		

The summary data quality review of 1 water sample and 1 trip blank collected on December 22, 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 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 a summary report containing sample results and associated quality assurance (QA) and quality control (QC) data. The following samples are associated with Eurofins TestAmerica-Seattle laboratory group 580-108711-1:

Sample ID	Laboratory IDs	Requested Analyses
ERH 5000	580-108711-1	VOCs, SVOCs, TPH
ERH 5002 (trip blank)	580-108711-2	VOCs, Gasoline-Range TPH

Upon receipt by the laboratory, 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. The cooler 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 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 following percent recoveries for the SVOC surrogates were below the laboratory control limits and <10%:

Sample ID	2-Fluorophenol (19-119%)	Phenol-d5 (10-120%)
Control Limits:		
ERH 5000	0%	0.4%
ERH 5000 (re-analysis)	0%	0%

All acid-fraction SVOCs in sample ERH 5000 were rejected and flagged 'R' based on the acid-fraction surrogate recoveries. The re-extraction confirmed the original result. Acid-fraction SVOCs are listed below:



Summary Data Quality Review
Joint Base Pearl Harbor-Hickam, Hawaii
Red Hill Bulk Fuel Storage Facility

Acid-Fraction SVOCs
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2-Chlorophenol
2-Methylphenol
2-Nitrophenol
3&4-Methylphenol
4,6-Dinitro-2-methylphenol
4-Chloro-3-methylphenol
4-Nitrophenol
Benzoic acid
Benzyl alcohol
Pentachlorophenol
Phenol

- The laboratory noted that the minimum response factor (RF) for n-nitroso-di-n-propylamine was outside the method control criteria in the continuing calibration verification associated with analysis batch 376866. The result for n-nitroso-di-n-propylamine in ERH 5000 was 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
ERH 5000	Benzo(a)pyrene	ND	0.041	0.06	µg/L
ERH 5000	Hexachlorobenzene	ND	0.041	0.0003	µg/L

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 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:

Summary Data Quality Review
Joint Base Pearl Harbor-Hickam, Hawaii
Red Hill Bulk Fuel Storage Facility

- 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

Memorandum

To	Karen Mixon, Data Validation Manager	Info	Completed
Subject	Summary Data Quality Review Joint Base Pearl Harbor-Hickam, Hawaii Red Hill Bulk Fuel Storage Facility		
From	Kristin Rutherford, Chemist		
Date	January 19, 2022		

The summary data quality review of four water samples collected on December 23, 2021 and January 11, 2022, has been completed. The samples were collected by AECOM personnel and were analyzed at WECK Laboratories, in City of Industry, California, for volatile organic compounds (VOCs) by EPA Method 524.2; semivolatile organic compounds (SVOCs) and organochlorine pesticides by EPA Method 525.2; 1,2,3-trichloropropane (123TCP) by EPA Method 524M; 1,2-dibromo-3-chloropropane (DBCP) and 1,2-Dibromoethane (EDB) by EPA Method 524.3; total metals by EPA Method 200.8; total mercury by EPA Method 245.1; PCBs (Aroclors) and chlordane by EPA Method 508.1; and total organic carbon (TOC) by Standard Methods 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 Laboratories groups 1L27032, 2A12053, 2A12054, and 2A12055:

Sample ID	Laboratory IDs	Requested Analyses
A1-DWS-A1-7-122321-N	1L27032-01	VOC, SVOC/Pest, EDB/DBCP, 123TCP, Metals/Mercury
220111-A1-XT01	2A12053-01	VOC, SVOC/Pest, Metals/Mercury, TOC, PCB/Chlordane
220111-A1-XT02	2A12054-01	VOC, SVOC/Pest, Metals/Mercury, TOC, PCB/Chlordane
220111-A1-XT03	2A12055-01	VOC, SVOC/Pest, Metals/Mercury, TOC, PCB/Chlordane

Upon receipt by the laboratory, the sample jar information was compared to the associated chain-of-custody (COC) and the cooler temperatures were recorded. The cooler temperatures were received within the EPA-recommended limits of greater than 0°C and less than or equal to 6°C.

Data validation is based on method performance criteria and QC criteria documented in the laboratory reports. Holding times, field/method/trip blanks, surrogate recoveries, laboratory control sample results, and reporting limits were reviewed to assess compliance with applicable methods and laboratory control criteria. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA 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:

- No data were qualified for VOCs, Mercury, TOC, or PCBs/Chlordane in association with laboratory groups 1L27032, 2A12053, 2A12054, and 2A12055.

Summary Data Quality Review
Joint Base Pearl Harbor-Hickam, Hawaii
Red Hill Bulk Fuel Storage Facility

- The selenium result in sample 220111-A1-XT01 was qualified as non-detect and flagged 'U' due to method blank contamination.
- The following percent recoveries for the SVOC/Pesticide laboratory control sample (LCS) were below the laboratory control limits:

LCS	Analyte	%Recovery	Control Limits
W2A0884-BS1	Benzo (a) pyrene	56%	60-130%
W2A0884-BS1D	Benzo (a) pyrene	56%	60-130%
W1L1802-BS1	Pentachlorophenol	32%	50-120%
W1L1802-BSD1	Pentachlorophenol	34%	50-120%
W1L1802-BS1	Phenol	10%	70-130%
W1L1802-BSD1	Phenol	10%	70-130%
W1L1802-BSD1	Chrysene	68%	70-130%

The positive and non-detect results for benzo(a)pyrene in samples 220111-A1-XT01, 220111-A1-XT02, and 220111-A1-XT03; and the results for pentachlorophenol, phenol, and chrysene in sample A1-DWS-A1-7-122321-N were qualified as estimated and flagged 'J' based on the LCS recoveries noted in the table above.

- The following analytes exceeded the Incident Specific Screening Criteria:

Sample Name	Analyte	Result	MDL	Incident Specific Screening Criteria	Units
A1-DWS-A1-7-122321-N	Endrin	ND	0.05	0.0023	µg/L
A1-DWS-A1-7-122321-N	Heptachlor	ND	0.05	0.0036	µg/L
A1-DWS-A1-7-122321-N	Heptachlor epoxide	ND	0.05	0.0036	µg/L
A1-DWS-A1-7-122321-N	gamma-BHC (Lindane)	ND	0.094	0.063	µg/L
A1-DWS-A1-7-122321-N	Methoxychlor	ND	0.05	0.03	µg/L
220111-A1-XT01	Endrin	ND	0.00991	0.0023	µg/L
220111-A1-XT01	Heptachlor	ND	0.00965	0.0036	µg/L
220111-A1-XT01	Heptachlor epoxide	ND	0.0122	0.0036	µg/L
220111-A1-XT01	Hexachlorobenzene	ND	0.098	0.0003	µg/L
220111-A1-XT02	Endrin	ND	0.00991	0.0023	µg/L
220111-A1-XT02	Heptachlor	ND	0.00965	0.0036	µg/L
220111-A1-XT02	Heptachlor epoxide	ND	0.0122	0.0036	µg/L
220111-A1-XT02	Hexachlorobenzene	ND	0.098	0.0003	µg/L
220111-A1-XT03	Endrin	ND	0.00991	0.0023	µg/L
220111-A1-XT03	Heptachlor	ND	0.00965	0.0036	µg/L
220111-A1-XT03	Heptachlor epoxide	ND	0.0122	0.0036	µg/L
220111-A1-XT03	Hexachlorobenzene	ND	0.098	0.0003	µg/L

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	Jennifer B. Garner, Chemist		
Date	January 20, 2022		

The summary data quality review of 2 water samples and 1 trip blank collected on January 4, 2022, has been completed. The samples were collected by AECOM personnel and were analyzed at Weck Laboratories, Inc. (Weck) in City of Industry, CA 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 by EPA Method 200.8, mercury by EPA Method 245.1, and total organic carbon (TOC) by EPA Method 5310B. Samples were also analyzed at Eurofins TestAmerica, in Seattle, Washington, for 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 drinking water program or 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 Weck laboratory group 2A05051 and Eurofins TestAmerica-Seattle laboratory group 580-108952:

Sample ID	Laboratory IDs	Requested Analyses
20220104-A1-ZT01	2A05051-01	VOCs
20220104-A1-ZT03	2A05051-02	VOCs, PCBs, SVOCs, Metals, TOC
20220104-A1-ZT02 (trip blank)	580-108952-3	TPH (gasoline-range)
20220104-A1-ZT03	580-108952-4	TPH

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

Data validation is based on method performance criteria and QC criteria documented in the laboratory reports. Holding times, field/method/trip blanks, surrogate recoveries, laboratory control sample results, and reporting limits were reviewed to assess compliance with applicable methods and laboratory control criteria. If data qualification was required, data were qualified based on the definitions and use of qualifying flags outlined in the EPA 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 following percent recoveries and/or relative percent differences (RPDs) in the LCS/LCSD associated with Weck batch W2A0245 were outside of the control limits:

Analyte	LCS	LCSD	RPD	Control Limits (LCS / RPD)
Benzo(a)pyrene	57%	20%	96%	60-130%/30%
Endrin	ok	51%	41%	70-130%/30%
Methoxychlor	ok	64%	33%	70-130%/30%



Summary Data Quality Review
Joint Base Pearl Harbor-Hickam, Hawaii
Red Hill Bulk Fuel Storage Facility

The results for benzo(a)pyrene, endrin, and methoxychlor were qualified as estimated and flagged 'UJ' in 20220104-A1-ZT03.

- The following analytes exceeded the Incident Specific Screening Criteria:

Sample Name	Analyte	Result	MDL	Incident Specific Screening Criteria	Units
20220104-A1-ZT03	Endrin	ND	0.0099	0.0023	µg/L
20220104-A1-ZT03	Heptachlor	ND	0.0096	0.0036	µg/L
20220104-A1-ZT03	Heptachlor epoxide	ND	0.012	0.0036	µg/L
20220104-A1-ZT03	Hexachlorobenzene	ND	0.098	0.0003	µg/L