

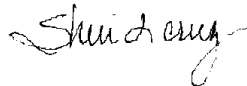
ANALYTICAL REPORT

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

Laboratory Job ID: 580-111058-1
Client Project/Site: Red Hill GW

For:
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

Attn: Alethea Ramos



Authorized for release by:
3/16/2022 4:05:50 PM
Sheri Cruz, Project Manager I
(253)922-2310
Sheri.Cruz@Eurofinset.com
Designee for
Elaine Walker, Project Manager II
(253)248-4972
m.elaine.walker@eurofinset.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.eurofinsus.com/Env

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

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



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions	5
Client Sample Results	6
QC Sample Results	10
Chronicle	21
Certification Summary	22
Sample Summary	23
Chain of Custody	24
Receipt Checklists	26

Case Narrative

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

Job ID: 580-111058-1

Laboratory: Eurofins Seattle

Narrative

CASE NARRATIVE
Client: AECOM
Project: Red Hill GW
Report Number: 580-111058-1

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

The samples were received on 03/05/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers 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.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples ERH2671 (RHMW15-5) (580-111058-1) and ERH2680 (HDMW2253-3) (580-111058-2) were analyzed for semivolatile organic compounds (GC-MS) in accordance with 8270E. The samples were prepared on 03/09/2022 and 03/11/2022 and analyzed on 03/10/2022 and 03/14/2022.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-383282 and 580-383282 and analytical batch 580-383442 recovered outside control limits for the following analytes: Phenol, Pentachlorophenol, 2,4-Dimethylphenol, Hexachloroethane, 1,2-Dichlorobenzene, Nitrobenzene, 2-Chloronaphthalene, Bis(2-chloroethyl)ether, 2,4,6-Trichlorophenol, 1,2,4-Trichlorobenzene, Isophorone, 1,3-Dichlorobenzene, N-Nitrosodi-n-propylamine, 2-Methylphenol, 2,4-Dichlorophenol, Hexachlorocyclopentadiene, 2-Chlorophenol, Bis(2-chloroethoxy)methane, 1,4-Dichlorobenzene, Hexachlorobutadiene, 3&4 Methylphenol, bis (2-chloroisopropyl) ether and 2-Nitrophenol.

Diethyl phthalate was detected in method blank MB 580-383558/1-A at a level that was above the method detection limit. This target analyte concentration was less than half the Limit of Quantitation(1/2LOQ); therefore, re-extraction and/or re-analysis of samples was not performed

The laboratory control sample (LCS) for preparation batch 580-383558 and analytical batch 580-383728 recovered outside control limits

Case Narrative

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

Job ID: 580-111058-1 (Continued)

Laboratory: Eurofins Seattle (Continued)

for the following analyte: 4-Nitrophenol. 4-Nitrophenol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for this analyte. These results have been reported and qualified.

The laboratory control sample duplicate (LCS/LCSD) for preparation batch 580-383558 and analytical batch 580-383728 recovered outside control limits for the following analyte: Pyridine and 4-Nitrophenol. Pyridine and 4-Nitrophenol have been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. Batch precision also exceeded control limits for this analyte. These results have been reported and qualified.

The continuing calibration verification (CCV) associated with batch 580-383728 recovered above the upper control limit for Bis(2-ethylhexyl) phthalate and Butyl benzyl phthalate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: ERH2671 (RHMW15-5) (580-111058-1) and (CCVIS 580-383728/3).

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS SIM)

Samples ERH2671 (RHMW15-5) (580-111058-1) and ERH2680 (HDMW2253-3) (580-111058-2) were analyzed for semivolatile organic compounds (GC-MS SIM) in accordance with 8270E SIM. The samples were prepared on 03/09/2022 and 03/11/2022 and analyzed on 03/10/2022 and 03/14/2022.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-383282 and 580-383282 and analytical batch 580-383445 recovered outside control limits for the following analytes: Naphthalene, Acenaphthene, 2-Methylnaphthalene, 1-Methylnaphthalene and Acenaphthylene.

The method blank for preparation batch 580-383558 and analytical batch 580-383722 contained Phenanthrene above the method detection limit. This target analyte concentration was less than half the Limit of Quantitation(1/2LOQ); therefore, re-extraction and/or re-analysis of samples was not performed.

(DFTPP 580-383722/2) presents tailing factor outside the threshold for (Pentachlorophenol and Benzidine). For selective ion monitoring, tailing factor is not defined in the parent method and is not listed as a tune criteria under Appendix B-22 of the DoD QSM; therefore, the data is reported.

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: Red Hill GW

Job ID: 580-111058-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Estimated: The analyte was positively identified; the quantitation is an estimation
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

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
CFI	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: Red Hill GW

Job ID: 580-111058-1

Client Sample ID: ERH2671 (RHMW15-5)

Lab Sample ID: 580-111058-1

Date Collected: 03/04/22 08:45

Matrix: Water

Date Received: 03/05/22 11:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.032	U	0.10	0.019	ug/L		03/11/22 09:25	03/14/22 21:22	1
2-Methylnaphthalene	0.080	U	0.20	0.039	ug/L		03/11/22 09:25	03/14/22 21:22	1
Acenaphthene	0.032	U	0.10	0.014	ug/L		03/11/22 09:25	03/14/22 21:22	1
Acenaphthylene	0.032	U	0.050	0.0091	ug/L		03/11/22 09:25	03/14/22 21:22	1
Anthracene	0.080	U	0.10	0.022	ug/L		03/11/22 09:25	03/14/22 21:22	1
Benzo[a]anthracene	0.032	U	0.050	0.014	ug/L		03/11/22 09:25	03/14/22 21:22	1
Benzo[a]pyrene	0.032	U	0.10	0.011	ug/L		03/11/22 09:25	03/14/22 21:22	1
Benzo[b]fluoranthene	0.032	U M	0.050	0.011	ug/L		03/11/22 09:25	03/14/22 21:22	1
Benzo[g,h,i]perylene	0.032	U	0.050	0.012	ug/L		03/11/22 09:25	03/14/22 21:22	1
Benzo[k]fluoranthene	0.032	U	0.050	0.012	ug/L		03/11/22 09:25	03/14/22 21:22	1
Chrysene	0.032	U	0.10	0.016	ug/L		03/11/22 09:25	03/14/22 21:22	1
Dibenz(a,h)anthracene	0.032	U	0.10	0.026	ug/L		03/11/22 09:25	03/14/22 21:22	1
Fluoranthene	0.032	U	0.20	0.018	ug/L		03/11/22 09:25	03/14/22 21:22	1
Fluorene	0.032	U	0.10	0.017	ug/L		03/11/22 09:25	03/14/22 21:22	1
Indeno[1,2,3-cd]pyrene	0.032	U	0.050	0.014	ug/L		03/11/22 09:25	03/14/22 21:22	1
Naphthalene	0.080	U M	0.10	0.031	ug/L		03/11/22 09:25	03/14/22 21:22	1
Phenanthrene	0.080	U M	0.10	0.031	ug/L		03/11/22 09:25	03/14/22 21:22	1
Pyrene	0.080	U M	0.10	0.033	ug/L		03/11/22 09:25	03/14/22 21:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-methylnaphthalene-d10	46		40 - 140	03/11/22 09:25	03/14/22 21:22	1
Fluoranthene-d10 (Surr)	68		40 - 140	03/11/22 09:25	03/14/22 21:22	1
Terphenyl-d14	75		58 - 132	03/11/22 09:25	03/14/22 21:22	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.30	U	0.40	0.091	ug/L		03/11/22 09:25	03/14/22 16:19	1
1,2-Dichlorobenzene	0.15	U	0.40	0.050	ug/L		03/11/22 09:25	03/14/22 16:19	1
1,3-Dichlorobenzene	0.091	U	0.40	0.040	ug/L		03/11/22 09:25	03/14/22 16:19	1
1,4-Dichlorobenzene	0.091	U	0.40	0.040	ug/L		03/11/22 09:25	03/14/22 16:19	1
2,4,5-Trichlorophenol	0.30	U	0.40	0.10	ug/L		03/11/22 09:25	03/14/22 16:19	1
2,4,6-Trichlorophenol	0.30	U	0.60	0.10	ug/L		03/11/22 09:25	03/14/22 16:19	1
2,4-Dichlorophenol	0.50	U	1.0	0.20	ug/L		03/11/22 09:25	03/14/22 16:19	1
2,4-Dimethylphenol	0.50	U	4.0	0.16	ug/L		03/11/22 09:25	03/14/22 16:19	1
2,4-Dinitrophenol	3.2	U Q	5.0	1.6	ug/L		03/11/22 09:25	03/14/22 16:19	1
2,4-Dinitrotoluene	0.30	U	1.0	0.10	ug/L		03/11/22 09:25	03/14/22 16:19	1
2,6-Dinitrotoluene	0.30	U	0.40	0.10	ug/L		03/11/22 09:25	03/14/22 16:19	1
2-Chloronaphthalene	0.15	U	1.0	0.070	ug/L		03/11/22 09:25	03/14/22 16:19	1
2-Chlorophenol	0.15	U	1.0	0.050	ug/L		03/11/22 09:25	03/14/22 16:19	1
2-Nitrophenol	0.15	U	1.0	0.070	ug/L		03/11/22 09:25	03/14/22 16:19	1
3,3'-Dichlorobenzidine	0.60	U	1.0	0.26	ug/L		03/11/22 09:25	03/14/22 16:19	1
4,6-Dinitro-2-methylphenol	1.2	U Q	2.0	0.55	ug/L		03/11/22 09:25	03/14/22 16:19	1
4-Bromophenyl phenyl ether	0.15	U	0.60	0.060	ug/L		03/11/22 09:25	03/14/22 16:19	1
4-Chloro-3-methylphenol	0.30	U	0.60	0.13	ug/L		03/11/22 09:25	03/14/22 16:19	1
4-Chlorophenyl phenyl ether	0.15	U	0.60	0.050	ug/L		03/11/22 09:25	03/14/22 16:19	1
4-Nitrophenol	6.0	U Q	10	1.7	ug/L		03/11/22 09:25	03/14/22 16:19	1
Azobenzene	0.15	U M	2.0	0.060	ug/L		03/11/22 09:25	03/14/22 16:19	1
Bis(2-chloroethoxy)methane	0.15	U	0.60	0.050	ug/L		03/11/22 09:25	03/14/22 16:19	1
Bis(2-chloroethyl)ether	0.091	U	0.10	0.030	ug/L		03/11/22 09:25	03/14/22 16:19	1
Bis(2-ethylhexyl) phthalate	1.6	U Q	3.0	0.74	ug/L		03/11/22 09:25	03/14/22 16:19	1

Eurofins Seattle

Client Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

Client Sample ID: ERH2671 (RHMW15-5)

Lab Sample ID: 580-111058-1

Date Collected: 03/04/22 08:45

Matrix: Water

Date Received: 03/05/22 11:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
bis (2-chloroisopropyl) ether	0.15	U	0.25	0.060	ug/L		03/11/22 09:25	03/14/22 16:19	1
Butyl benzyl phthalate	0.60	U Q	4.0	0.27	ug/L		03/11/22 09:25	03/14/22 16:19	1
Diethyl phthalate	0.15	J	1.0	0.15	ug/L		03/11/22 09:25	03/14/22 16:19	1
Dimethyl phthalate	0.15	U	0.60	0.060	ug/L		03/11/22 09:25	03/14/22 16:19	1
Di-n-butyl phthalate	0.50	U	3.0	0.19	ug/L		03/11/22 09:25	03/14/22 16:19	1
Di-n-octyl phthalate	0.30	U M	1.0	0.13	ug/L		03/11/22 09:25	03/14/22 16:19	1
Hexachlorobenzene	0.091	U	0.60	0.040	ug/L		03/11/22 09:25	03/14/22 16:19	1
Hexachlorobutadiene	0.15	U	1.0	0.060	ug/L		03/11/22 09:25	03/14/22 16:19	1
Hexachlorocyclopentadiene	0.30	U	1.0	0.14	ug/L		03/11/22 09:25	03/14/22 16:19	1
Hexachloroethane	0.15	U	1.0	0.050	ug/L		03/11/22 09:25	03/14/22 16:19	1
Isophorone	0.30	U	0.40	0.10	ug/L		03/11/22 09:25	03/14/22 16:19	1
m+p-Cresol	0.30	U	0.60	0.10	ug/L		03/11/22 09:25	03/14/22 16:19	1
Nitrobenzene	0.091	U	1.0	0.040	ug/L		03/11/22 09:25	03/14/22 16:19	1
N-Nitrosodimethylamine	0.60	U	2.0	0.26	ug/L		03/11/22 09:25	03/14/22 16:19	1
N-Nitrosodi-n-propylamine	0.091	U	0.40	0.060	ug/L		03/11/22 09:25	03/14/22 16:19	1
N-Nitrosodiphenylamine	0.15	U M	1.0	0.070	ug/L		03/11/22 09:25	03/14/22 16:19	1
o-Cresol	0.15	U	0.60	0.050	ug/L		03/11/22 09:25	03/14/22 16:19	1
Pentachlorophenol	1.0	U	10	0.51	ug/L		03/11/22 09:25	03/14/22 16:19	1
Phenol	0.60	U	1.0	0.36	ug/L		03/11/22 09:25	03/14/22 16:19	1
Pyrene	0.091	U M	1.0	0.040	ug/L		03/11/22 09:25	03/14/22 16:19	1
Pyridine	3.2	U Q	10	1.1	ug/L		03/11/22 09:25	03/14/22 16:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	49		43 - 140	03/11/22 09:25	03/14/22 16:19	1
2-Fluorobiphenyl	69		44 - 119	03/11/22 09:25	03/14/22 16:19	1
2-Fluorophenol (Surr)	44		19 - 119	03/11/22 09:25	03/14/22 16:19	1
Nitrobenzene-d5 (Surr)	60		44 - 120	03/11/22 09:25	03/14/22 16:19	1
Phenol-d5 (Surr)	26		10 - 120	03/11/22 09:25	03/14/22 16:19	1
Terphenyl-d14	80		50 - 134	03/11/22 09:25	03/14/22 16:19	1

Client Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

Client Sample ID: ERH2680 (HDMW2253-3)

Lab Sample ID: 580-111058-2

Date Collected: 03/02/22 09:45

Matrix: Water

Date Received: 03/05/22 11:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.032	U M Q	0.10	0.019	ug/L		03/09/22 09:33	03/10/22 16:33	1
2-Methylnaphthalene	0.080	U M Q	0.20	0.039	ug/L		03/09/22 09:33	03/10/22 16:33	1
Acenaphthene	0.032	U M Q	0.10	0.014	ug/L		03/09/22 09:33	03/10/22 16:33	1
Acenaphthylene	0.032	U Q	0.050	0.0090	ug/L		03/09/22 09:33	03/10/22 16:33	1
Anthracene	0.080	U	0.10	0.022	ug/L		03/09/22 09:33	03/10/22 16:33	1
Benzo[a]anthracene	0.032	U	0.050	0.014	ug/L		03/09/22 09:33	03/10/22 16:33	1
Benzo[a]pyrene	0.032	U	0.10	0.011	ug/L		03/09/22 09:33	03/10/22 16:33	1
Benzo[b]fluoranthene	0.032	U	0.050	0.011	ug/L		03/09/22 09:33	03/10/22 16:33	1
Benzo[g,h,i]perylene	0.032	U	0.050	0.012	ug/L		03/09/22 09:33	03/10/22 16:33	1
Benzo[k]fluoranthene	0.032	U	0.050	0.012	ug/L		03/09/22 09:33	03/10/22 16:33	1
Chrysene	0.032	U	0.10	0.016	ug/L		03/09/22 09:33	03/10/22 16:33	1
Dibenz(a,h)anthracene	0.032	U	0.10	0.026	ug/L		03/09/22 09:33	03/10/22 16:33	1
Fluoranthene	0.032	U	0.20	0.018	ug/L		03/09/22 09:33	03/10/22 16:33	1
Fluorene	0.032	U	0.10	0.017	ug/L		03/09/22 09:33	03/10/22 16:33	1
Indeno[1,2,3-cd]pyrene	0.032	U	0.050	0.014	ug/L		03/09/22 09:33	03/10/22 16:33	1
Naphthalene	0.080	U M Q	0.10	0.031	ug/L		03/09/22 09:33	03/10/22 16:33	1
Phenanthrene	0.080	U M	0.10	0.031	ug/L		03/09/22 09:33	03/10/22 16:33	1
Pyrene	0.080	U M	0.10	0.033	ug/L		03/09/22 09:33	03/10/22 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-methylnaphthalene-d10	60		40 - 140	03/09/22 09:33	03/10/22 16:33	1
Fluoranthene-d10 (Surr)	92		40 - 140	03/09/22 09:33	03/10/22 16:33	1
Terphenyl-d14	101		58 - 132	03/09/22 09:33	03/10/22 16:33	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.30	U Q	0.40	0.090	ug/L		03/09/22 09:33	03/10/22 18:40	1
1,2-Dichlorobenzene	0.15	U Q	0.40	0.050	ug/L		03/09/22 09:33	03/10/22 18:40	1
1,3-Dichlorobenzene	0.090	U Q	0.40	0.040	ug/L		03/09/22 09:33	03/10/22 18:40	1
1,4-Dichlorobenzene	0.090	U Q	0.40	0.040	ug/L		03/09/22 09:33	03/10/22 18:40	1
2,4,5-Trichlorophenol	0.30	U	0.40	0.10	ug/L		03/09/22 09:33	03/10/22 18:40	1
2,4,6-Trichlorophenol	0.30	U Q	0.60	0.10	ug/L		03/09/22 09:33	03/10/22 18:40	1
2,4-Dichlorophenol	0.50	U Q	1.0	0.20	ug/L		03/09/22 09:33	03/10/22 18:40	1
2,4-Dimethylphenol	0.50	U Q	4.0	0.16	ug/L		03/09/22 09:33	03/10/22 18:40	1
2,4-Dinitrophenol	3.2	U Q	5.0	1.6	ug/L		03/09/22 09:33	03/10/22 18:40	1
2,4-Dinitrotoluene	0.30	U	1.0	0.10	ug/L		03/09/22 09:33	03/10/22 18:40	1
2,6-Dinitrotoluene	0.30	U	0.40	0.10	ug/L		03/09/22 09:33	03/10/22 18:40	1
2-Chloronaphthalene	0.15	U Q	1.0	0.070	ug/L		03/09/22 09:33	03/10/22 18:40	1
2-Chlorophenol	0.15	U Q	1.0	0.050	ug/L		03/09/22 09:33	03/10/22 18:40	1
2-Nitrophenol	0.15	U Q	1.0	0.070	ug/L		03/09/22 09:33	03/10/22 18:40	1
3,3'-Dichlorobenzidine	0.60	U	1.0	0.26	ug/L		03/09/22 09:33	03/10/22 18:40	1
4,6-Dinitro-2-methylphenol	1.2	U Q	2.0	0.55	ug/L		03/09/22 09:33	03/10/22 18:40	1
4-Bromophenyl phenyl ether	0.15	U	0.60	0.060	ug/L		03/09/22 09:33	03/10/22 18:40	1
4-Chloro-3-methylphenol	0.30	U	0.60	0.13	ug/L		03/09/22 09:33	03/10/22 18:40	1
4-Chlorophenyl phenyl ether	0.15	U	0.60	0.050	ug/L		03/09/22 09:33	03/10/22 18:40	1
4-Nitrophenol	6.0	U	10	1.7	ug/L		03/09/22 09:33	03/10/22 18:40	1
Azobenzene	0.15	U M	2.0	0.060	ug/L		03/09/22 09:33	03/10/22 18:40	1
Bis(2-chloroethoxy)methane	0.15	U Q	0.60	0.050	ug/L		03/09/22 09:33	03/10/22 18:40	1
Bis(2-chloroethyl)ether	0.090	U Q	0.10	0.030	ug/L		03/09/22 09:33	03/10/22 18:40	1
Bis(2-ethylhexyl) phthalate	1.6	U	3.0	0.74	ug/L		03/09/22 09:33	03/10/22 18:40	1

Eurofins Seattle

Client Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

Client Sample ID: ERH2680 (HDMW2253-3)

Lab Sample ID: 580-111058-2

Date Collected: 03/02/22 09:45

Matrix: Water

Date Received: 03/05/22 11:30

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
bis (2-chloroisopropyl) ether	0.15	U M Q	0.25	0.060	ug/L		03/09/22 09:33	03/10/22 18:40	1
Butyl benzyl phthalate	0.60	U	4.0	0.27	ug/L		03/09/22 09:33	03/10/22 18:40	1
Diethyl phthalate	0.30	U	1.0	0.15	ug/L		03/09/22 09:33	03/10/22 18:40	1
Dimethyl phthalate	0.15	U	0.60	0.060	ug/L		03/09/22 09:33	03/10/22 18:40	1
Di-n-butyl phthalate	0.50	U	3.0	0.19	ug/L		03/09/22 09:33	03/10/22 18:40	1
Di-n-octyl phthalate	0.30	U M	1.0	0.13	ug/L		03/09/22 09:33	03/10/22 18:40	1
Hexachlorobenzene	0.090	U	0.60	0.040	ug/L		03/09/22 09:33	03/10/22 18:40	1
Hexachlorobutadiene	0.15	U Q	1.0	0.060	ug/L		03/09/22 09:33	03/10/22 18:40	1
Hexachlorocyclopentadiene	0.30	U Q	1.0	0.14	ug/L		03/09/22 09:33	03/10/22 18:40	1
Hexachloroethane	0.15	U Q	1.0	0.050	ug/L		03/09/22 09:33	03/10/22 18:40	1
Isophorone	0.30	U M Q	0.40	0.10	ug/L		03/09/22 09:33	03/10/22 18:40	1
m+p-Cresol	0.30	U Q	0.60	0.10	ug/L		03/09/22 09:33	03/10/22 18:40	1
Nitrobenzene	0.090	U Q	1.0	0.040	ug/L		03/09/22 09:33	03/10/22 18:40	1
N-Nitrosodimethylamine	0.60	U	2.0	0.26	ug/L		03/09/22 09:33	03/10/22 18:40	1
N-Nitrosodi-n-propylamine	0.090	U Q	0.40	0.060	ug/L		03/09/22 09:33	03/10/22 18:40	1
N-Nitrosodiphenylamine	0.15	U	1.0	0.070	ug/L		03/09/22 09:33	03/10/22 18:40	1
o-Cresol	0.15	U Q	0.60	0.050	ug/L		03/09/22 09:33	03/10/22 18:40	1
Pentachlorophenol	1.0	U Q	10	0.51	ug/L		03/09/22 09:33	03/10/22 18:40	1
Phenol	0.60	U M Q	1.0	0.36	ug/L		03/09/22 09:33	03/10/22 18:40	1
Pyrene	0.090	U M	1.0	0.040	ug/L		03/09/22 09:33	03/10/22 18:40	1
Pyridine	3.2	U	10	1.1	ug/L		03/09/22 09:33	03/10/22 18:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		43 - 140	03/09/22 09:33	03/10/22 18:40	1
2-Fluorobiphenyl	72		44 - 119	03/09/22 09:33	03/10/22 18:40	1
2-Fluorophenol (Surr)	59		19 - 119	03/09/22 09:33	03/10/22 18:40	1
Nitrobenzene-d5 (Surr)	81		44 - 120	03/09/22 09:33	03/10/22 18:40	1
Phenol-d5 (Surr)	37		10 - 120	03/09/22 09:33	03/10/22 18:40	1
Terphenyl-d14	103		50 - 134	03/09/22 09:33	03/10/22 18:40	1

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: MB 580-383282/1-A
Matrix: Water
Analysis Batch: 383442

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383282

Analyte	MB	MB	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	0.30	U	0.40	0.090	ug/L		03/09/22 09:28	03/10/22 11:53	1
1,2-Dichlorobenzene	0.15	U	0.40	0.050	ug/L		03/09/22 09:28	03/10/22 11:53	1
1,3-Dichlorobenzene	0.090	U	0.40	0.040	ug/L		03/09/22 09:28	03/10/22 11:53	1
1,4-Dichlorobenzene	0.090	U	0.40	0.040	ug/L		03/09/22 09:28	03/10/22 11:53	1
2,4,5-Trichlorophenol	0.30	U	0.40	0.10	ug/L		03/09/22 09:28	03/10/22 11:53	1
2,4,6-Trichlorophenol	0.30	U	0.60	0.10	ug/L		03/09/22 09:28	03/10/22 11:53	1
2,4-Dichlorophenol	0.50	U	1.0	0.20	ug/L		03/09/22 09:28	03/10/22 11:53	1
2,4-Dimethylphenol	0.50	U	4.0	0.16	ug/L		03/09/22 09:28	03/10/22 11:53	1
2,4-Dinitrophenol	3.2	U	5.0	1.6	ug/L		03/09/22 09:28	03/10/22 11:53	1
2,4-Dinitrotoluene	0.30	U	1.0	0.10	ug/L		03/09/22 09:28	03/10/22 11:53	1
2,6-Dinitrotoluene	0.30	U	0.40	0.10	ug/L		03/09/22 09:28	03/10/22 11:53	1
2-Chloronaphthalene	0.15	U	1.0	0.070	ug/L		03/09/22 09:28	03/10/22 11:53	1
2-Chlorophenol	0.15	U	1.0	0.050	ug/L		03/09/22 09:28	03/10/22 11:53	1
2-Nitrophenol	0.15	U	1.0	0.070	ug/L		03/09/22 09:28	03/10/22 11:53	1
3,3'-Dichlorobenzidine	0.60	U	1.0	0.26	ug/L		03/09/22 09:28	03/10/22 11:53	1
4,6-Dinitro-2-methylphenol	1.2	U	2.0	0.55	ug/L		03/09/22 09:28	03/10/22 11:53	1
4-Bromophenyl phenyl ether	0.15	U	0.60	0.060	ug/L		03/09/22 09:28	03/10/22 11:53	1
4-Chloro-3-methylphenol	0.30	U	0.60	0.13	ug/L		03/09/22 09:28	03/10/22 11:53	1
4-Chlorophenyl phenyl ether	0.15	U	0.60	0.050	ug/L		03/09/22 09:28	03/10/22 11:53	1
4-Nitrophenol	6.0	U	10	1.7	ug/L		03/09/22 09:28	03/10/22 11:53	1
Azobenzene	0.15	U M	2.0	0.060	ug/L		03/09/22 09:28	03/10/22 11:53	1
Bis(2-chloroethoxy)methane	0.15	U	0.60	0.050	ug/L		03/09/22 09:28	03/10/22 11:53	1
Bis(2-chloroethyl)ether	0.090	U	0.10	0.030	ug/L		03/09/22 09:28	03/10/22 11:53	1
Bis(2-ethylhexyl) phthalate	1.6	U	3.0	0.74	ug/L		03/09/22 09:28	03/10/22 11:53	1
bis (2-chloroisopropyl) ether	0.15	U	0.25	0.060	ug/L		03/09/22 09:28	03/10/22 11:53	1
Butyl benzyl phthalate	0.60	U	4.0	0.27	ug/L		03/09/22 09:28	03/10/22 11:53	1
Diethyl phthalate	0.30	U	1.0	0.15	ug/L		03/09/22 09:28	03/10/22 11:53	1
Dimethyl phthalate	0.15	U	0.60	0.060	ug/L		03/09/22 09:28	03/10/22 11:53	1
Di-n-butyl phthalate	0.50	U	3.0	0.19	ug/L		03/09/22 09:28	03/10/22 11:53	1
Di-n-octyl phthalate	0.30	U M	1.0	0.13	ug/L		03/09/22 09:28	03/10/22 11:53	1
Hexachlorobenzene	0.090	U	0.60	0.040	ug/L		03/09/22 09:28	03/10/22 11:53	1
Hexachlorobutadiene	0.15	U	1.0	0.060	ug/L		03/09/22 09:28	03/10/22 11:53	1
Hexachlorocyclopentadiene	0.30	U	1.0	0.14	ug/L		03/09/22 09:28	03/10/22 11:53	1
Hexachloroethane	0.15	U	1.0	0.050	ug/L		03/09/22 09:28	03/10/22 11:53	1
Isophorone	0.30	U	0.40	0.10	ug/L		03/09/22 09:28	03/10/22 11:53	1
m+p-Cresol	0.30	U	0.60	0.10	ug/L		03/09/22 09:28	03/10/22 11:53	1
Nitrobenzene	0.090	U	1.0	0.040	ug/L		03/09/22 09:28	03/10/22 11:53	1
N-Nitrosodimethylamine	0.60	U	2.0	0.26	ug/L		03/09/22 09:28	03/10/22 11:53	1
N-Nitrosodi-n-propylamine	0.090	U	0.40	0.060	ug/L		03/09/22 09:28	03/10/22 11:53	1
N-Nitrosodiphenylamine	0.15	U	1.0	0.070	ug/L		03/09/22 09:28	03/10/22 11:53	1
o-Cresol	0.15	U	0.60	0.050	ug/L		03/09/22 09:28	03/10/22 11:53	1
Pentachlorophenol	1.0	U	10	0.51	ug/L		03/09/22 09:28	03/10/22 11:53	1
Phenol	0.60	U M	1.0	0.36	ug/L		03/09/22 09:28	03/10/22 11:53	1
Pyrene	0.090	U	1.0	0.040	ug/L		03/09/22 09:28	03/10/22 11:53	1
Pyridine	3.2	U	10	1.1	ug/L		03/09/22 09:28	03/10/22 11:53	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	70		43 - 140	03/09/22 09:28	03/10/22 11:53	1

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: MB 580-383282/1-A
Matrix: Water
Analysis Batch: 383442

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383282

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	73		44 - 119	03/09/22 09:28	03/10/22 11:53	1
2-Fluorophenol (Surr)	51	M	19 - 119	03/09/22 09:28	03/10/22 11:53	1
Nitrobenzene-d5 (Surr)	79		44 - 120	03/09/22 09:28	03/10/22 11:53	1
Phenol-d5 (Surr)	31	M	10 - 120	03/09/22 09:28	03/10/22 11:53	1
Terphenyl-d14	105		50 - 134	03/09/22 09:28	03/10/22 11:53	1

Lab Sample ID: LCS 580-383282/2-A
Matrix: Water
Analysis Batch: 383442

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	2.00	1.57		ug/L		79	29 - 116
1,2-Dichlorobenzene	2.00	1.63		ug/L		81	32 - 111
1,3-Dichlorobenzene	2.00	1.59		ug/L		79	28 - 110
1,4-Dichlorobenzene	2.00	1.58		ug/L		79	29 - 112
2,4,5-Trichlorophenol	2.00	1.52		ug/L		76	53 - 123
2,4,6-Trichlorophenol	2.00	1.48		ug/L		74	50 - 125
2,4-Dichlorophenol	2.00	1.62		ug/L		81	47 - 121
2,4-Dimethylphenol	2.00	1.53	J	ug/L		77	31 - 124
2,4-Dinitrophenol	4.00	2.18	J M	ug/L		55	23 - 143
2,4-Dinitrotoluene	2.00	1.69		ug/L		84	57 - 128
2,6-Dinitrotoluene	2.00	1.63		ug/L		81	57 - 124
2-Chloronaphthalene	2.00	1.59		ug/L		79	40 - 116
2-Chlorophenol	2.00	1.67		ug/L		83	38 - 117
2-Nitrophenol	2.00	1.71		ug/L		86	47 - 123
3,3'-Dichlorobenzidine	4.00	4.19		ug/L		105	27 - 129
4,6-Dinitro-2-methylphenol	4.00	3.28		ug/L		82	44 - 137
4-Bromophenyl phenyl ether	2.00	1.68		ug/L		84	55 - 124
4-Chloro-3-methylphenol	2.00	1.58		ug/L		79	52 - 119
4-Chlorophenyl phenyl ether	2.00	1.54		ug/L		77	53 - 121
4-Nitrophenol	4.00	6.0	U	ug/L		38	35 - 145
Azobenzene	2.00	1.59	J	ug/L		80	61 - 116
Bis(2-chloroethoxy)methane	2.00	1.65		ug/L		83	48 - 120
Bis(2-chloroethyl)ether	2.00	1.63		ug/L		82	43 - 118
Bis(2-ethylhexyl) phthalate	2.00	2.18	J	ug/L		109	55 - 135
bis (2-chloroisopropyl) ether	2.00	1.60		ug/L		80	37 - 130
Butyl benzyl phthalate	2.00	2.06	J	ug/L		103	53 - 134
Diethyl phthalate	2.00	1.71		ug/L		86	56 - 125
Dimethyl phthalate	2.00	1.71		ug/L		86	45 - 127
Di-n-butyl phthalate	2.00	1.98	J	ug/L		99	59 - 127
Di-n-octyl phthalate	2.00	1.90		ug/L		95	51 - 140
Hexachlorobenzene	2.00	1.63		ug/L		81	53 - 125
Hexachlorobutadiene	2.00	1.55		ug/L		77	22 - 124
Hexachlorocyclopentadiene	2.00	1.44		ug/L		72	20 - 125
Hexachloroethane	2.00	1.49		ug/L		74	21 - 115
Isophorone	2.00	1.60		ug/L		80	42 - 124
m+p-Cresol	2.00	1.38		ug/L		69	29 - 110
Nitrobenzene	2.00	1.61		ug/L		80	45 - 121

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: LCS 580-383282/2-A
Matrix: Water
Analysis Batch: 383442

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383282

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
N-Nitrosodimethylamine	2.00	1.22	J	ug/L		61	45 - 125
N-Nitrosodi-n-propylamine	2.00	1.63		ug/L		82	49 - 119
N-Nitrosodiphenylamine	2.00	1.71		ug/L		86	51 - 123
o-Cresol	2.00	1.42		ug/L		71	30 - 117
Pentachlorophenol	4.00	2.20	J	ug/L		55	35 - 138
Phenol	2.00	0.847	J M	ug/L		42	13 - 120
Pyrene	2.00	1.91		ug/L		95	57 - 126
Pyridine	4.00	1.89	J	ug/L		47	20 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	77		43 - 140
2-Fluorobiphenyl	65		44 - 119
2-Fluorophenol (Surr)	53	M	19 - 119
Nitrobenzene-d5 (Surr)	75		44 - 120
Phenol-d5 (Surr)	35		10 - 120
Terphenyl-d14	91		50 - 134

Lab Sample ID: LCSD 580-383282/3-A
Matrix: Water
Analysis Batch: 383442

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 383282

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	1.20	Q	ug/L		60	29 - 116	26	20
1,2-Dichlorobenzene	2.00	1.20	Q	ug/L		60	32 - 111	30	20
1,3-Dichlorobenzene	2.00	1.15	Q	ug/L		58	28 - 110	32	20
1,4-Dichlorobenzene	2.00	1.20	Q	ug/L		60	29 - 112	27	20
2,4,5-Trichlorophenol	2.00	1.40		ug/L		70	53 - 123	8	20
2,4,6-Trichlorophenol	2.00	1.19	Q	ug/L		60	50 - 125	21	20
2,4-Dichlorophenol	2.00	1.20	Q	ug/L		60	47 - 121	30	20
2,4-Dimethylphenol	2.00	1.15	J Q	ug/L		58	31 - 124	28	20
2,4-Dinitrophenol	4.00	2.43	J M	ug/L		61	23 - 143	10	20
2,4-Dinitrotoluene	2.00	1.57		ug/L		78	57 - 128	8	20
2,6-Dinitrotoluene	2.00	1.40		ug/L		70	57 - 124	15	20
2-Chloronaphthalene	2.00	1.25	Q	ug/L		62	40 - 116	24	20
2-Chlorophenol	2.00	1.23	Q	ug/L		62	38 - 117	30	20
2-Nitrophenol	2.00	1.29	Q	ug/L		64	47 - 123	28	20
3,3'-Dichlorobenzidine	4.00	3.93		ug/L		98	27 - 129	6	20
4,6-Dinitro-2-methylphenol	4.00	3.10		ug/L		78	44 - 137	5	20
4-Bromophenyl phenyl ether	2.00	1.42		ug/L		71	55 - 124	17	20
4-Chloro-3-methylphenol	2.00	1.37		ug/L		68	52 - 119	14	20
4-Chlorophenyl phenyl ether	2.00	1.29		ug/L		64	53 - 121	17	20
4-Nitrophenol	4.00	6.0	U	ug/L		42	35 - 145	10	20
Azobenzene	2.00	1.34	J	ug/L		67	61 - 116	17	20
Bis(2-chloroethoxy)methane	2.00	1.20	Q	ug/L		60	48 - 120	31	20
Bis(2-chloroethyl)ether	2.00	1.20	Q	ug/L		60	43 - 118	30	20
Bis(2-ethylhexyl) phthalate	2.00	2.20	J	ug/L		110	55 - 135	1	20
bis (2-chloroisopropyl) ether	2.00	1.14	Q	ug/L		57	37 - 130	34	20
Butyl benzyl phthalate	2.00	2.02	J	ug/L		101	53 - 134	2	20

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: LCSD 580-383282/3-A
Matrix: Water
Analysis Batch: 383442

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 383282

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	RPD Limit
							Limits	RPD		
Diethyl phthalate	2.00	1.67		ug/L		83	56 - 125	3	20	
Dimethyl phthalate	2.00	1.53		ug/L		76	45 - 127	11	20	
Di-n-butyl phthalate	2.00	1.91	J	ug/L		96	59 - 127	3	20	
Di-n-octyl phthalate	2.00	1.92		ug/L		96	51 - 140	1	20	
Hexachlorobenzene	2.00	1.42		ug/L		71	53 - 125	14	20	
Hexachlorobutadiene	2.00	1.16	Q	ug/L		58	22 - 124	29	20	
Hexachlorocyclopentadiene	2.00	1.09	Q	ug/L		55	20 - 125	27	20	
Hexachloroethane	2.00	1.09	Q	ug/L		54	21 - 115	31	20	
Isophorone	2.00	1.23	Q	ug/L		61	42 - 124	27	20	
m+p-Cresol	2.00	1.08	M Q	ug/L		54	29 - 110	24	20	
Nitrobenzene	2.00	1.25	Q	ug/L		62	45 - 121	25	20	
N-Nitrosodimethylamine	2.00	0.998	J	ug/L		50	45 - 125	20	20	
N-Nitrosodi-n-propylamine	2.00	1.26	Q	ug/L		63	49 - 119	26	20	
N-Nitrosodiphenylamine	2.00	1.59		ug/L		80	51 - 123	7	20	
o-Cresol	2.00	1.08	Q	ug/L		54	30 - 117	27	20	
Pentachlorophenol	4.00	2.76	J Q	ug/L		69	35 - 138	23	20	
Phenol	2.00	0.662	J Q	ug/L		33	13 - 120	25	20	
Pyrene	2.00	1.81		ug/L		90	57 - 126	5	20	
Pyridine	4.00	1.65	J	ug/L		41	20 - 125	13	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	70		43 - 140
2-Fluorobiphenyl	55		44 - 119
2-Fluorophenol (Surr)	44	M	19 - 119
Nitrobenzene-d5 (Surr)	59		44 - 120
Phenol-d5 (Surr)	27		10 - 120
Terphenyl-d14	91		50 - 134

Lab Sample ID: MB 580-383558/1-A
Matrix: Water
Analysis Batch: 383728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383558

Analyte	MB MB		LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	0.30	U	0.40	0.090	ug/L		03/11/22 09:25	03/14/22 13:36	1
1,2-Dichlorobenzene	0.15	U	0.40	0.050	ug/L		03/11/22 09:25	03/14/22 13:36	1
1,3-Dichlorobenzene	0.090	U	0.40	0.040	ug/L		03/11/22 09:25	03/14/22 13:36	1
1,4-Dichlorobenzene	0.090	U	0.40	0.040	ug/L		03/11/22 09:25	03/14/22 13:36	1
2,4,5-Trichlorophenol	0.30	U	0.40	0.10	ug/L		03/11/22 09:25	03/14/22 13:36	1
2,4,6-Trichlorophenol	0.30	U	0.60	0.10	ug/L		03/11/22 09:25	03/14/22 13:36	1
2,4-Dichlorophenol	0.50	U	1.0	0.20	ug/L		03/11/22 09:25	03/14/22 13:36	1
2,4-Dimethylphenol	0.50	U	4.0	0.16	ug/L		03/11/22 09:25	03/14/22 13:36	1
2,4-Dinitrophenol	3.2	U	5.0	1.6	ug/L		03/11/22 09:25	03/14/22 13:36	1
2,4-Dinitrotoluene	0.30	U	1.0	0.10	ug/L		03/11/22 09:25	03/14/22 13:36	1
2,6-Dinitrotoluene	0.30	U	0.40	0.10	ug/L		03/11/22 09:25	03/14/22 13:36	1
2-Chloronaphthalene	0.15	U M	1.0	0.070	ug/L		03/11/22 09:25	03/14/22 13:36	1
2-Chlorophenol	0.15	U	1.0	0.050	ug/L		03/11/22 09:25	03/14/22 13:36	1
2-Nitrophenol	0.15	U	1.0	0.070	ug/L		03/11/22 09:25	03/14/22 13:36	1
3,3'-Dichlorobenzidine	0.60	U	1.0	0.26	ug/L		03/11/22 09:25	03/14/22 13:36	1

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: MB 580-383558/1-A
Matrix: Water
Analysis Batch: 383728

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383558

Analyte	MB	MB	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
4,6-Dinitro-2-methylphenol	1.2	U	2.0	0.55	ug/L		03/11/22 09:25	03/14/22 13:36	1
4-Bromophenyl phenyl ether	0.15	U	0.60	0.060	ug/L		03/11/22 09:25	03/14/22 13:36	1
4-Chloro-3-methylphenol	0.30	U	0.60	0.13	ug/L		03/11/22 09:25	03/14/22 13:36	1
4-Chlorophenyl phenyl ether	0.15	U	0.60	0.050	ug/L		03/11/22 09:25	03/14/22 13:36	1
4-Nitrophenol	6.0	U	10	1.7	ug/L		03/11/22 09:25	03/14/22 13:36	1
Azobenzene	0.15	U M	2.0	0.060	ug/L		03/11/22 09:25	03/14/22 13:36	1
Bis(2-chloroethoxy)methane	0.15	U	0.60	0.050	ug/L		03/11/22 09:25	03/14/22 13:36	1
Bis(2-chloroethyl)ether	0.090	U	0.10	0.030	ug/L		03/11/22 09:25	03/14/22 13:36	1
Bis(2-ethylhexyl) phthalate	1.6	U	3.0	0.74	ug/L		03/11/22 09:25	03/14/22 13:36	1
bis (2-chloroisopropyl) ether	0.15	U	0.25	0.060	ug/L		03/11/22 09:25	03/14/22 13:36	1
Butyl benzyl phthalate	0.60	U	4.0	0.27	ug/L		03/11/22 09:25	03/14/22 13:36	1
Diethyl phthalate	0.177	J	1.0	0.15	ug/L		03/11/22 09:25	03/14/22 13:36	1
Dimethyl phthalate	0.15	U	0.60	0.060	ug/L		03/11/22 09:25	03/14/22 13:36	1
Di-n-butyl phthalate	0.50	U	3.0	0.19	ug/L		03/11/22 09:25	03/14/22 13:36	1
Di-n-octyl phthalate	0.30	U M	1.0	0.13	ug/L		03/11/22 09:25	03/14/22 13:36	1
Hexachlorobenzene	0.090	U	0.60	0.040	ug/L		03/11/22 09:25	03/14/22 13:36	1
Hexachlorobutadiene	0.15	U	1.0	0.060	ug/L		03/11/22 09:25	03/14/22 13:36	1
Hexachlorocyclopentadiene	0.30	U	1.0	0.14	ug/L		03/11/22 09:25	03/14/22 13:36	1
Hexachloroethane	0.15	U	1.0	0.050	ug/L		03/11/22 09:25	03/14/22 13:36	1
Isophorone	0.30	U	0.40	0.10	ug/L		03/11/22 09:25	03/14/22 13:36	1
m+p-Cresol	0.30	U M	0.60	0.10	ug/L		03/11/22 09:25	03/14/22 13:36	1
Nitrobenzene	0.090	U	1.0	0.040	ug/L		03/11/22 09:25	03/14/22 13:36	1
N-Nitrosodimethylamine	0.60	U	2.0	0.26	ug/L		03/11/22 09:25	03/14/22 13:36	1
N-Nitrosodi-n-propylamine	0.090	U	0.40	0.060	ug/L		03/11/22 09:25	03/14/22 13:36	1
N-Nitrosodiphenylamine	0.15	U M	1.0	0.070	ug/L		03/11/22 09:25	03/14/22 13:36	1
o-Cresol	0.15	U	0.60	0.050	ug/L		03/11/22 09:25	03/14/22 13:36	1
Pentachlorophenol	1.0	U	10	0.51	ug/L		03/11/22 09:25	03/14/22 13:36	1
Phenol	0.60	U M	1.0	0.36	ug/L		03/11/22 09:25	03/14/22 13:36	1
Pyrene	0.090	U	1.0	0.040	ug/L		03/11/22 09:25	03/14/22 13:36	1
Pyridine	3.2	U	10	1.1	ug/L		03/11/22 09:25	03/14/22 13:36	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	54		43 - 140	03/11/22 09:25	03/14/22 13:36	1
2-Fluorobiphenyl	83		44 - 119	03/11/22 09:25	03/14/22 13:36	1
2-Fluorophenol (Surr)	43		19 - 119	03/11/22 09:25	03/14/22 13:36	1
Nitrobenzene-d5 (Surr)	69		44 - 120	03/11/22 09:25	03/14/22 13:36	1
Phenol-d5 (Surr)	26		10 - 120	03/11/22 09:25	03/14/22 13:36	1
Terphenyl-d14	97		50 - 134	03/11/22 09:25	03/14/22 13:36	1

Lab Sample ID: LCS 580-383558/2-A
Matrix: Water
Analysis Batch: 383728

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383558

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	2.00	1.15		ug/L		57	32 - 111
1,3-Dichlorobenzene	2.00	1.07		ug/L		53	28 - 110
1,4-Dichlorobenzene	2.00	1.08		ug/L		54	29 - 112

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: LCS 580-383558/2-A
Matrix: Water
Analysis Batch: 383728

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383558

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4,5-Trichlorophenol	2.00	1.46		ug/L		73	53 - 123
2,4,6-Trichlorophenol	2.00	1.24		ug/L		62	50 - 125
2,4-Dichlorophenol	2.00	1.34		ug/L		67	47 - 121
2,4-Dimethylphenol	2.00	1.21	J	ug/L		60	31 - 124
2,4-Dinitrophenol	4.00	2.30	J M	ug/L		57	23 - 143
2,4-Dinitrotoluene	2.00	1.49		ug/L		75	57 - 128
2,6-Dinitrotoluene	2.00	1.35		ug/L		67	57 - 124
2-Chloronaphthalene	2.00	1.27		ug/L		63	40 - 116
2-Chlorophenol	2.00	1.45		ug/L		73	38 - 117
2-Nitrophenol	2.00	1.52		ug/L		76	47 - 123
3,3'-Dichlorobenzidine	4.00	3.68		ug/L		92	27 - 129
4,6-Dinitro-2-methylphenol	4.00	3.17		ug/L		79	44 - 137
4-Bromophenyl phenyl ether	2.00	1.40		ug/L		70	55 - 124
4-Chloro-3-methylphenol	2.00	1.36		ug/L		68	52 - 119
4-Chlorophenyl phenyl ether	2.00	1.30		ug/L		65	53 - 121
4-Nitrophenol	4.00	6.0	U Q	ug/L		27	35 - 145
Azobenzene	2.00	1.44	J	ug/L		72	61 - 116
Bis(2-chloroethoxy)methane	2.00	1.35		ug/L		67	48 - 120
Bis(2-chloroethyl)ether	2.00	1.49		ug/L		74	43 - 118
Bis(2-ethylhexyl) phthalate	2.00	2.03	J	ug/L		101	55 - 135
bis (2-chloroisopropyl) ether	2.00	1.33		ug/L		67	37 - 130
Butyl benzyl phthalate	2.00	1.84	J	ug/L		92	53 - 134
Diethyl phthalate	2.00	1.71		ug/L		85	56 - 125
Dimethyl phthalate	2.00	1.47		ug/L		74	45 - 127
Di-n-butyl phthalate	2.00	1.74	J	ug/L		87	59 - 127
Di-n-octyl phthalate	2.00	1.72		ug/L		86	51 - 140
Hexachlorobenzene	2.00	1.39		ug/L		69	53 - 125
Hexachlorobutadiene	2.00	0.893	J	ug/L		45	22 - 124
Hexachlorocyclopentadiene	2.00	0.876	J	ug/L		44	20 - 125
Hexachloroethane	2.00	0.936	J	ug/L		47	21 - 115
Isophorone	2.00	1.33		ug/L		66	42 - 124
m+p-Cresol	2.00	1.21		ug/L		60	29 - 110
Nitrobenzene	2.00	1.36		ug/L		68	45 - 121
N-Nitrosodimethylamine	2.00	1.12	J	ug/L		56	45 - 125
N-Nitrosodi-n-propylamine	2.00	1.38		ug/L		69	49 - 119
N-Nitrosodiphenylamine	2.00	1.51		ug/L		75	51 - 123
o-Cresol	2.00	1.25		ug/L		62	30 - 117
Pentachlorophenol	4.00	1.86	J	ug/L		47	35 - 138
Phenol	2.00	0.693	J	ug/L		35	13 - 120
Pyrene	2.00	1.73		ug/L		87	57 - 126
Pyridine	4.00	1.42	J	ug/L		35	20 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	70		43 - 140
2-Fluorobiphenyl	62		44 - 119
2-Fluorophenol (Surr)	50		19 - 119
Nitrobenzene-d5 (Surr)	69		44 - 120
Phenol-d5 (Surr)	31		10 - 120

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: LCS 580-383558/2-A
Matrix: Water
Analysis Batch: 383728

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383558

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14	88		50 - 134

Lab Sample ID: LCSD 580-383558/3-A
Matrix: Water
Analysis Batch: 383728

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 383558

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,2,4-Trichlorobenzene	2.00	1.16		ug/L		58	29 - 116	4	20
1,2-Dichlorobenzene	2.00	1.11		ug/L		56	32 - 111	3	20
1,3-Dichlorobenzene	2.00	1.01		ug/L		51	28 - 110	5	20
1,4-Dichlorobenzene	2.00	1.06		ug/L		53	29 - 112	2	20
2,4,5-Trichlorophenol	2.00	1.55		ug/L		78	53 - 123	6	20
2,4,6-Trichlorophenol	2.00	1.42		ug/L		71	50 - 125	14	20
2,4-Dichlorophenol	2.00	1.49		ug/L		74	47 - 121	10	20
2,4-Dimethylphenol	2.00	1.31	J	ug/L		65	31 - 124	8	20
2,4-Dinitrophenol	4.00	2.72	J M	ug/L		68	23 - 143	17	20
2,4-Dinitrotoluene	2.00	1.63		ug/L		81	57 - 128	9	20
2,6-Dinitrotoluene	2.00	1.56		ug/L		78	57 - 124	15	20
2-Chloronaphthalene	2.00	1.40		ug/L		70	40 - 116	10	20
2-Chlorophenol	2.00	1.43		ug/L		71	38 - 117	2	20
2-Nitrophenol	2.00	1.50		ug/L		75	47 - 123	1	20
3,3'-Dichlorobenzidine	4.00	3.80		ug/L		95	27 - 129	3	20
4,6-Dinitro-2-methylphenol	4.00	3.23		ug/L		81	44 - 137	2	20
4-Bromophenyl phenyl ether	2.00	1.50		ug/L		75	55 - 124	7	20
4-Chloro-3-methylphenol	2.00	1.51		ug/L		76	52 - 119	10	20
4-Chlorophenyl phenyl ether	2.00	1.46		ug/L		73	53 - 121	11	20
4-Nitrophenol	4.00	6.0	U Q	ug/L		38	35 - 145	35	20
Azobenzene	2.00	1.52	J	ug/L		76	61 - 116	5	20
Bis(2-chloroethoxy)methane	2.00	1.43		ug/L		71	48 - 120	6	20
Bis(2-chloroethyl)ether	2.00	1.47		ug/L		73	43 - 118	1	20
Bis(2-ethylhexyl) phthalate	2.00	2.14	J	ug/L		107	55 - 135	6	20
bis (2-chloroisopropyl) ether	2.00	1.38		ug/L		69	37 - 130	4	20
Butyl benzyl phthalate	2.00	2.06	J	ug/L		103	53 - 134	12	20
Diethyl phthalate	2.00	1.93		ug/L		96	56 - 125	12	20
Dimethyl phthalate	2.00	1.70		ug/L		85	45 - 127	14	20
Di-n-butyl phthalate	2.00	1.83	J	ug/L		92	59 - 127	5	20
Di-n-octyl phthalate	2.00	1.95		ug/L		97	51 - 140	12	20
Hexachlorobenzene	2.00	1.44		ug/L		72	53 - 125	4	20
Hexachlorobutadiene	2.00	0.854	J	ug/L		43	22 - 124	4	20
Hexachlorocyclopentadiene	2.00	0.865	J	ug/L		43	20 - 125	1	20
Hexachloroethane	2.00	0.860	J	ug/L		43	21 - 115	9	20
Isophorone	2.00	1.40		ug/L		70	42 - 124	6	20
m+p-Cresol	2.00	1.16		ug/L		58	29 - 110	4	20
Nitrobenzene	2.00	1.46		ug/L		73	45 - 121	6	20
N-Nitrosodimethylamine	2.00	1.09	J	ug/L		55	45 - 125	3	20
N-Nitrosodi-n-propylamine	2.00	1.45		ug/L		72	49 - 119	5	20
N-Nitrosodiphenylamine	2.00	1.58		ug/L		79	51 - 123	5	20
o-Cresol	2.00	1.21		ug/L		61	30 - 117	3	20

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: LCSD 580-383558/3-A
Matrix: Water
Analysis Batch: 383728

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 383558

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pentachlorophenol	4.00	1.79	J	ug/L		45	35 - 138	4	20
Phenol	2.00	0.683	J	ug/L		34	13 - 120	1	20
Pyrene	2.00	1.88		ug/L		94	57 - 126	8	20
Pyridine	4.00	3.2	U Q	ug/L		13	20 - 125	95	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2,4,6-Tribromophenol (Surr)	74		43 - 140
2-Fluorobiphenyl	70		44 - 119
2-Fluorophenol (Surr)	51		19 - 119
Nitrobenzene-d5 (Surr)	75		44 - 120
Phenol-d5 (Surr)	30		10 - 120
Terphenyl-d14	92		50 - 134

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

Lab Sample ID: MB 580-383282/1-A
Matrix: Water
Analysis Batch: 383445

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383282

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.032	U	0.10	0.019	ug/L		03/09/22 09:28	03/10/22 11:27	1
2-Methylnaphthalene	0.080	U	0.20	0.039	ug/L		03/09/22 09:28	03/10/22 11:27	1
Acenaphthene	0.032	U	0.10	0.014	ug/L		03/09/22 09:28	03/10/22 11:27	1
Acenaphthylene	0.032	U	0.050	0.0090	ug/L		03/09/22 09:28	03/10/22 11:27	1
Anthracene	0.080	U	0.10	0.022	ug/L		03/09/22 09:28	03/10/22 11:27	1
Benzo[a]anthracene	0.032	U	0.050	0.014	ug/L		03/09/22 09:28	03/10/22 11:27	1
Benzo[a]pyrene	0.032	U	0.10	0.011	ug/L		03/09/22 09:28	03/10/22 11:27	1
Benzo[b]fluoranthene	0.032	U	0.050	0.011	ug/L		03/09/22 09:28	03/10/22 11:27	1
Benzo[g,h,i]perylene	0.032	U	0.050	0.012	ug/L		03/09/22 09:28	03/10/22 11:27	1
Benzo[k]fluoranthene	0.032	U	0.050	0.012	ug/L		03/09/22 09:28	03/10/22 11:27	1
Chrysene	0.032	U	0.10	0.016	ug/L		03/09/22 09:28	03/10/22 11:27	1
Dibenz(a,h)anthracene	0.032	U	0.10	0.026	ug/L		03/09/22 09:28	03/10/22 11:27	1
Fluoranthene	0.032	U	0.20	0.018	ug/L		03/09/22 09:28	03/10/22 11:27	1
Fluorene	0.032	U	0.10	0.017	ug/L		03/09/22 09:28	03/10/22 11:27	1
Indeno[1,2,3-cd]pyrene	0.032	U	0.050	0.014	ug/L		03/09/22 09:28	03/10/22 11:27	1
Naphthalene	0.080	U M	0.10	0.031	ug/L		03/09/22 09:28	03/10/22 11:27	1
Phenanthrene	0.080	U M	0.10	0.031	ug/L		03/09/22 09:28	03/10/22 11:27	1
Pyrene	0.080	U M	0.10	0.033	ug/L		03/09/22 09:28	03/10/22 11:27	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
2-methylnaphthalene-d10	57		40 - 140	03/09/22 09:28	03/10/22 11:27	1
Fluoranthene-d10 (Surr)	96		40 - 140	03/09/22 09:28	03/10/22 11:27	1
Terphenyl-d14	105		58 - 132	03/09/22 09:28	03/10/22 11:27	1

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: LCS 580-383282/2-A
Matrix: Water
Analysis Batch: 383445

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383282
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1-Methylnaphthalene	2.00	1.37		ug/L		69	41 - 115
2-Methylnaphthalene	2.00	1.33		ug/L		66	39 - 114
Acenaphthene	2.00	1.47		ug/L		74	48 - 114
Acenaphthylene	2.00	1.37		ug/L		69	35 - 121
Anthracene	2.00	1.61		ug/L		81	53 - 119
Benzo[a]anthracene	2.00	1.64		ug/L		82	59 - 120
Benzo[a]pyrene	2.00	1.47		ug/L		74	53 - 120
Benzo[b]fluoranthene	2.00	1.53		ug/L		76	53 - 126
Benzo[g,h,i]perylene	2.00	1.75		ug/L		88	44 - 128
Benzo[k]fluoranthene	2.00	1.73		ug/L		86	54 - 125
Chrysene	2.00	1.67		ug/L		83	57 - 120
Dibenz(a,h)anthracene	2.00	1.77	M	ug/L		88	44 - 131
Fluoranthene	2.00	1.70		ug/L		85	58 - 120
Fluorene	2.00	1.58		ug/L		79	50 - 118
Indeno[1,2,3-cd]pyrene	2.00	1.61	M	ug/L		81	48 - 130
Naphthalene	2.00	1.41		ug/L		70	43 - 114
Phenanthrene	2.00	1.49		ug/L		75	53 - 115
Pyrene	2.00	1.69		ug/L		85	53 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-methylnaphthalene-d10	58		40 - 140
Fluoranthene-d10 (Surr)	81		40 - 140
Terphenyl-d14	91		58 - 132

Lab Sample ID: LCSD 580-383282/3-A
Matrix: Water
Analysis Batch: 383445

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 383282
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1-Methylnaphthalene	2.00	1.01	Q	ug/L		50	41 - 115	31	20
2-Methylnaphthalene	2.00	0.985	Q	ug/L		49	39 - 114	29	20
Acenaphthene	2.00	1.14	Q	ug/L		57	48 - 114	26	20
Acenaphthylene	2.00	1.07	Q	ug/L		53	35 - 121	25	20
Anthracene	2.00	1.50		ug/L		75	53 - 119	7	20
Benzo[a]anthracene	2.00	1.53		ug/L		76	59 - 120	7	20
Benzo[a]pyrene	2.00	1.45		ug/L		72	53 - 120	2	20
Benzo[b]fluoranthene	2.00	1.45		ug/L		72	53 - 126	5	20
Benzo[g,h,i]perylene	2.00	1.69		ug/L		84	44 - 128	4	20
Benzo[k]fluoranthene	2.00	1.69		ug/L		85	54 - 125	2	20
Chrysene	2.00	1.62		ug/L		81	57 - 120	3	20
Dibenz(a,h)anthracene	2.00	1.70	M	ug/L		85	44 - 131	4	20
Fluoranthene	2.00	1.62		ug/L		81	58 - 120	5	20
Fluorene	2.00	1.31		ug/L		65	50 - 118	19	20
Indeno[1,2,3-cd]pyrene	2.00	1.53	M	ug/L		76	48 - 130	5	20
Naphthalene	2.00	1.07	Q	ug/L		54	43 - 114	27	20
Phenanthrene	2.00	1.38		ug/L		69	53 - 115	7	20
Pyrene	2.00	1.62		ug/L		81	53 - 121	4	20

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: LCSD 580-383282/3-A
Matrix: Water
Analysis Batch: 383445

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 383282

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2-methylnaphthalene-d10	46		40 - 140
Fluoranthene-d10 (Surr)	80		40 - 140
Terphenyl-d14	89		58 - 132

Lab Sample ID: MB 580-383558/1-A
Matrix: Water
Analysis Batch: 383722

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383558

Analyte	MB MB		LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1-Methylnaphthalene	0.032	U M	0.10	0.019	ug/L		03/11/22 09:25	03/14/22 15:17	1
2-Methylnaphthalene	0.080	U M	0.20	0.039	ug/L		03/11/22 09:25	03/14/22 15:17	1
Acenaphthene	0.032	U M	0.10	0.014	ug/L		03/11/22 09:25	03/14/22 15:17	1
Acenaphthylene	0.032	U M	0.050	0.0090	ug/L		03/11/22 09:25	03/14/22 15:17	1
Anthracene	0.080	U M	0.10	0.022	ug/L		03/11/22 09:25	03/14/22 15:17	1
Benzo[a]anthracene	0.032	U	0.050	0.014	ug/L		03/11/22 09:25	03/14/22 15:17	1
Benzo[a]pyrene	0.032	U	0.10	0.011	ug/L		03/11/22 09:25	03/14/22 15:17	1
Benzo[b]fluoranthene	0.032	U M	0.050	0.011	ug/L		03/11/22 09:25	03/14/22 15:17	1
Benzo[g,h,i]perylene	0.032	U	0.050	0.012	ug/L		03/11/22 09:25	03/14/22 15:17	1
Benzo[k]fluoranthene	0.032	U	0.050	0.012	ug/L		03/11/22 09:25	03/14/22 15:17	1
Chrysene	0.032	U	0.10	0.016	ug/L		03/11/22 09:25	03/14/22 15:17	1
Dibenz(a,h)anthracene	0.032	U	0.10	0.026	ug/L		03/11/22 09:25	03/14/22 15:17	1
Fluoranthene	0.032	U M	0.20	0.018	ug/L		03/11/22 09:25	03/14/22 15:17	1
Fluorene	0.032	U M	0.10	0.017	ug/L		03/11/22 09:25	03/14/22 15:17	1
Indeno[1,2,3-cd]pyrene	0.032	U	0.050	0.014	ug/L		03/11/22 09:25	03/14/22 15:17	1
Naphthalene	0.080	U M	0.10	0.031	ug/L		03/11/22 09:25	03/14/22 15:17	1
Phenanthrene	0.0445	J	0.10	0.031	ug/L		03/11/22 09:25	03/14/22 15:17	1
Pyrene	0.080	U M	0.10	0.033	ug/L		03/11/22 09:25	03/14/22 15:17	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-methylnaphthalene-d10	59		40 - 140	03/11/22 09:25	03/14/22 15:17	1
Fluoranthene-d10 (Surr)	74		40 - 140	03/11/22 09:25	03/14/22 15:17	1
Terphenyl-d14	82		58 - 132	03/11/22 09:25	03/14/22 15:17	1

Lab Sample ID: LCS 580-383558/2-A
Matrix: Water
Analysis Batch: 383722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383558

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
1-Methylnaphthalene	2.00	1.20		ug/L		60	41 - 115
2-Methylnaphthalene	2.00	1.31		ug/L		66	39 - 114
Acenaphthene	2.00	1.23		ug/L		61	48 - 114
Acenaphthylene	2.00	1.34		ug/L		67	35 - 121
Anthracene	2.00	1.35		ug/L		68	53 - 119
Benzo[a]anthracene	2.00	1.69		ug/L		85	59 - 120
Benzo[a]pyrene	2.00	1.33		ug/L		66	53 - 120
Benzo[b]fluoranthene	2.00	1.56		ug/L		78	53 - 126
Benzo[g,h,i]perylene	2.00	1.46		ug/L		73	44 - 128
Benzo[k]fluoranthene	2.00	1.38		ug/L		69	54 - 125

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

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

Lab Sample ID: LCS 580-383558/2-A
Matrix: Water
Analysis Batch: 383722

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383558

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chrysene	2.00	1.36		ug/L		68	57 - 120
Dibenz(a,h)anthracene	2.00	1.51	M	ug/L		76	44 - 131
Fluoranthene	2.00	1.49		ug/L		75	58 - 120
Fluorene	2.00	1.32		ug/L		66	50 - 118
Indeno[1,2,3-cd]pyrene	2.00	2.23		ug/L		112	48 - 130
Naphthalene	2.00	1.30		ug/L		65	43 - 114
Phenanthrene	2.00	1.52		ug/L		76	53 - 115
Pyrene	2.00	1.46		ug/L		73	53 - 121

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-methylnaphthalene-d10	57		40 - 140
Fluoranthene-d10 (Surr)	69		40 - 140
Terphenyl-d14	78		58 - 132

Lab Sample ID: LCSD 580-383558/3-A
Matrix: Water
Analysis Batch: 383722

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 383558

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1-Methylnaphthalene	2.00	1.24		ug/L		62	41 - 115	4	20
2-Methylnaphthalene	2.00	1.36		ug/L		68	39 - 114	4	20
Acenaphthene	2.00	1.37		ug/L		68	48 - 114	11	20
Acenaphthylene	2.00	1.47		ug/L		74	35 - 121	10	20
Anthracene	2.00	1.49		ug/L		74	53 - 119	10	20
Benzo[a]anthracene	2.00	1.77		ug/L		89	59 - 120	5	20
Benzo[a]pyrene	2.00	1.38		ug/L		69	53 - 120	4	20
Benzo[b]fluoranthene	2.00	1.65		ug/L		82	53 - 126	5	20
Benzo[g,h,i]perylene	2.00	1.47		ug/L		73	44 - 128	0	20
Benzo[k]fluoranthene	2.00	1.43		ug/L		71	54 - 125	3	20
Chrysene	2.00	1.41		ug/L		71	57 - 120	4	20
Dibenz(a,h)anthracene	2.00	1.55	M	ug/L		78	44 - 131	3	20
Fluoranthene	2.00	1.69		ug/L		84	58 - 120	12	20
Fluorene	2.00	1.47		ug/L		73	50 - 118	10	20
Indeno[1,2,3-cd]pyrene	2.00	2.31		ug/L		116	48 - 130	4	20
Naphthalene	2.00	1.36		ug/L		68	43 - 114	5	20
Phenanthrene	2.00	1.70		ug/L		85	53 - 115	11	20
Pyrene	2.00	1.67		ug/L		84	53 - 121	13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-methylnaphthalene-d10	59		40 - 140
Fluoranthene-d10 (Surr)	74		40 - 140
Terphenyl-d14	82		58 - 132

Lab Chronicle

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

Client Sample ID: ERH2671 (RHMW15-5)

Lab Sample ID: 580-111058-1

Date Collected: 03/04/22 08:45

Matrix: Water

Date Received: 03/05/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			383558	03/11/22 09:25	JJY	FGS SEA
Total/NA	Analysis	8270E		1	383728	03/14/22 16:19	E1L	FGS SEA
Total/NA	Prep	3510C			383558	03/11/22 09:25	JJY	FGS SEA
Total/NA	Analysis	8270E SIM		1	383722	03/14/22 21:22	CJ	FGS SEA

Client Sample ID: ERH2680 (HDMW2253-3)

Lab Sample ID: 580-111058-2

Date Collected: 03/02/22 09:45

Matrix: Water

Date Received: 03/05/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			383282	03/09/22 09:33	JJY	FGS SEA
Total/NA	Analysis	8270E		1	383442	03/10/22 18:40	W1T	FGS SEA
Total/NA	Prep	3510C			383282	03/09/22 09:33	JJY	FGS SEA
Total/NA	Analysis	8270E SIM		1	383445	03/10/22 16:33	W1T	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: Red Hill GW

Job ID: 580-111058-1

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2236	01-19-25

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Sample Summary

Client: AECOM
Project/Site: Red Hill GW

Job ID: 580-111058-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-111058-1	ERH2671 (RHMW15-5)	Water	03/04/22 08:45	03/05/22 11:30
580-111058-2	ERH2680 (HDMW2253-3)	Water	03/02/22 09:45	03/05/22 11:30

1

2

3

4

5

6

7

8

9

10

11

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-111058-1

Login Number: 111058

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 <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	