

ANALYTICAL REPORT

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Laboratory Job ID: 580-111589-1
Client Project/Site: Red Hill NOI GWCV18F0126
Revision: 1

For:
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Authorized for release by:
4/8/2022 11:43:48 AM

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



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Case Narrative

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

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Laboratory: Eurofins Seattle

Narrative

CASE NARRATIVE

Client: AECOM

Project: Red Hill NOI GW CV18F0126

Report Number: 580-111589-1

REVISION 1: APRIL 8, 2022

The report was revised to add a "B" flag to Diethyl phthalate in the 8270E analysis for samples ERH2790 (OWDFMW08A) (580-111589-1) and ERH2791 (OWDFMW08A FD) (580-111589-2) per client request.

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 3/19/2022 9:25 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 2.0° 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.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples ERH2790 (OWDFMW08A) (580-111589-1) and ERH2791 (OWDFMW08A FD) (580-111589-2) were analyzed for semivolatile organic compounds (GC-MS) in accordance with 8270E. The samples were prepared on 03/24/2022 and analyzed on 03/25/2022.

Diethyl phthalate was detected in method blank MB 580-384957/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and reanalysis of samples was not performed.

The continuing calibration verification (CCV) associated with batch 580-385127 recovered above the upper control limit for Diethyl phthalate. The samples associated with this CCV were below project action limits for the affected analytes; therefore, the data have been reported with client approval.

The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-385127 was outside

Case Narrative

Client: AECOM
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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(s) is considered estimated.

The LCS associated with preparation batch 580-384957 and analytical batch 580-385127 recovered below control limits for analyte Hexachlorobenzene (52%, low limit 53%). The LCSD recovered below limits for Pyridine (15%, low limit 20%). Samples are non-detect for these targets, therefore data has been reported per client approval. Pyridine exceeded the RPD limit.

Compound identification of Diethyl phthalate has been confirmed for sample ERH2790 (OWDFMW08A) (580-111589-1).

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 ERH2790 (OWDFMW08A) (580-111589-1) and ERH2791 (OWDFMW08A FD) (580-111589-2) were analyzed for semivolatile organic compounds (GC-MS - SIM) in accordance with 8270E SIM. The samples were prepared on 03/24/2022 and analyzed on 03/26/2022.

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

Definitions/Glossary

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Blank contamination: The analyte was detected above one-half the reporting limit in an associated blank.
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
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: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

Client Sample ID: ERH2790 (OWDFMW08A)

Lab Sample ID: 580-111589-1

Date Collected: 03/17/22 12:25

Matrix: Water

Date Received: 03/19/22 09:25

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	0.10	0.019	ug/L		03/24/22 09:08	03/26/22 22:36	1
2-Methylnaphthalene	0.080	U	0.20	0.039	ug/L		03/24/22 09:08	03/26/22 22:36	1
Acenaphthene	0.032	U M	0.10	0.014	ug/L		03/24/22 09:08	03/26/22 22:36	1
Acenaphthylene	0.032	U M	0.050	0.0090	ug/L		03/24/22 09:08	03/26/22 22:36	1
Anthracene	0.080	U M	0.10	0.022	ug/L		03/24/22 09:08	03/26/22 22:36	1
Benzo[a]anthracene	0.032	U M	0.050	0.014	ug/L		03/24/22 09:08	03/26/22 22:36	1
Benzo[a]pyrene	0.032	U M	0.10	0.011	ug/L		03/24/22 09:08	03/26/22 22:36	1
Benzo[b]fluoranthene	0.032	U	0.050	0.011	ug/L		03/24/22 09:08	03/26/22 22:36	1
Benzo[g,h,i]perylene	0.032	U M	0.050	0.012	ug/L		03/24/22 09:08	03/26/22 22:36	1
Benzo[k]fluoranthene	0.032	U	0.050	0.012	ug/L		03/24/22 09:08	03/26/22 22:36	1
Chrysene	0.032	U M	0.10	0.016	ug/L		03/24/22 09:08	03/26/22 22:36	1
Dibenz(a,h)anthracene	0.032	U	0.10	0.026	ug/L		03/24/22 09:08	03/26/22 22:36	1
Fluoranthene	0.032	U M	0.20	0.018	ug/L		03/24/22 09:08	03/26/22 22:36	1
Fluorene	0.032	U M	0.10	0.017	ug/L		03/24/22 09:08	03/26/22 22:36	1
Indeno[1,2,3-cd]pyrene	0.032	U	0.050	0.014	ug/L		03/24/22 09:08	03/26/22 22:36	1
Naphthalene	0.080	U M	0.10	0.031	ug/L		03/24/22 09:08	03/26/22 22:36	1
Phenanthrene	0.080	U	0.10	0.031	ug/L		03/24/22 09:08	03/26/22 22:36	1
Pyrene	0.080	U	0.10	0.033	ug/L		03/24/22 09:08	03/26/22 22:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-methylnaphthalene-d10	65		40 - 140	03/24/22 09:08	03/26/22 22:36	1
Fluoranthene-d10 (Surr)	87		40 - 140	03/24/22 09:08	03/26/22 22:36	1
Terphenyl-d14	93		58 - 132	03/24/22 09:08	03/26/22 22:36	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	0.090	ug/L		03/24/22 09:08	03/25/22 21:31	1
1,2-Dichlorobenzene	0.15	U	0.40	0.050	ug/L		03/24/22 09:08	03/25/22 21:31	1
1,3-Dichlorobenzene	0.090	U	0.40	0.040	ug/L		03/24/22 09:08	03/25/22 21:31	1
1,4-Dichlorobenzene	0.090	U	0.40	0.040	ug/L		03/24/22 09:08	03/25/22 21:31	1
2,4,5-Trichlorophenol	0.30	U	0.40	0.10	ug/L		03/24/22 09:08	03/25/22 21:31	1
2,4,6-Trichlorophenol	0.30	U	0.60	0.10	ug/L		03/24/22 09:08	03/25/22 21:31	1
2,4-Dichlorophenol	0.50	U	1.0	0.20	ug/L		03/24/22 09:08	03/25/22 21:31	1
2,4-Dimethylphenol	0.50	U	4.0	0.16	ug/L		03/24/22 09:08	03/25/22 21:31	1
2,4-Dinitrophenol	3.2	U	5.0	1.6	ug/L		03/24/22 09:08	03/25/22 21:31	1
2,4-Dinitrotoluene	0.30	U	1.0	0.10	ug/L		03/24/22 09:08	03/25/22 21:31	1
2,6-Dinitrotoluene	0.30	U M	0.40	0.10	ug/L		03/24/22 09:08	03/25/22 21:31	1
2-Chloronaphthalene	0.15	U	1.0	0.070	ug/L		03/24/22 09:08	03/25/22 21:31	1
2-Chlorophenol	0.15	U	1.0	0.050	ug/L		03/24/22 09:08	03/25/22 21:31	1
2-Nitrophenol	0.15	U	1.0	0.070	ug/L		03/24/22 09:08	03/25/22 21:31	1
3,3'-Dichlorobenzidine	0.60	U M	1.0	0.26	ug/L		03/24/22 09:08	03/25/22 21:31	1
4,6-Dinitro-2-methylphenol	1.2	U	2.0	0.55	ug/L		03/24/22 09:08	03/25/22 21:31	1
4-Bromophenyl phenyl ether	0.15	U	0.60	0.060	ug/L		03/24/22 09:08	03/25/22 21:31	1
4-Chloro-3-methylphenol	0.30	U M	0.60	0.13	ug/L		03/24/22 09:08	03/25/22 21:31	1
4-Chlorophenyl phenyl ether	0.15	U	0.60	0.050	ug/L		03/24/22 09:08	03/25/22 21:31	1
4-Nitrophenol	6.0	U	10	1.7	ug/L		03/24/22 09:08	03/25/22 21:31	1
Azobenzene	0.15	U M	2.0	0.060	ug/L		03/24/22 09:08	03/25/22 21:31	1
bis (2-chloroisopropyl) ether	0.15	U M	0.25	0.060	ug/L		03/24/22 09:08	03/25/22 21:31	1
Bis(2-chloroethoxy)methane	0.15	U	0.60	0.050	ug/L		03/24/22 09:08	03/25/22 21:31	1
Bis(2-chloroethyl)ether	0.090	U	0.10	0.030	ug/L		03/24/22 09:08	03/25/22 21:31	1

Eurofins Seattle

Client Sample Results

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

Client Sample ID: ERH2790 (OWDFMW08A)

Lab Sample ID: 580-111589-1

Date Collected: 03/17/22 12:25

Matrix: Water

Date Received: 03/19/22 09:25

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	1.6	U	3.0	0.74	ug/L		03/24/22 09:08	03/25/22 21:31	1
Butyl benzyl phthalate	0.60	U	4.0	0.27	ug/L		03/24/22 09:08	03/25/22 21:31	1
Diethyl phthalate	0.17	J Q B	1.0	0.15	ug/L		03/24/22 09:08	03/25/22 21:31	1
Dimethyl phthalate	0.15	U	0.60	0.060	ug/L		03/24/22 09:08	03/25/22 21:31	1
Di-n-butyl phthalate	0.50	U	3.0	0.19	ug/L		03/24/22 09:08	03/25/22 21:31	1
Di-n-octyl phthalate	0.30	U M	1.0	0.13	ug/L		03/24/22 09:08	03/25/22 21:31	1
Hexachlorobenzene	0.090	U Q	0.60	0.040	ug/L		03/24/22 09:08	03/25/22 21:31	1
Hexachlorobutadiene	0.15	U	1.0	0.060	ug/L		03/24/22 09:08	03/25/22 21:31	1
Hexachlorocyclopentadiene	0.30	U	1.0	0.14	ug/L		03/24/22 09:08	03/25/22 21:31	1
Hexachloroethane	0.15	U	1.0	0.050	ug/L		03/24/22 09:08	03/25/22 21:31	1
Isophorone	0.30	U	0.40	0.10	ug/L		03/24/22 09:08	03/25/22 21:31	1
m+p-Cresol	0.30	U	0.60	0.10	ug/L		03/24/22 09:08	03/25/22 21:31	1
Nitrobenzene	0.090	U	1.0	0.040	ug/L		03/24/22 09:08	03/25/22 21:31	1
N-Nitrosodimethylamine	0.60	U	2.0	0.26	ug/L		03/24/22 09:08	03/25/22 21:31	1
N-Nitrosodi-n-propylamine	0.090	U	0.40	0.060	ug/L		03/24/22 09:08	03/25/22 21:31	1
N-Nitrosodiphenylamine	0.15	U	1.0	0.070	ug/L		03/24/22 09:08	03/25/22 21:31	1
o-Cresol	0.15	U	0.60	0.050	ug/L		03/24/22 09:08	03/25/22 21:31	1
Pentachlorophenol	1.0	U	10	0.51	ug/L		03/24/22 09:08	03/25/22 21:31	1
Phenol	0.60	U	1.0	0.36	ug/L		03/24/22 09:08	03/25/22 21:31	1
Pyrene	0.090	U	1.0	0.040	ug/L		03/24/22 09:08	03/25/22 21:31	1
Pyridine	3.2	U Q	10	1.1	ug/L		03/24/22 09:08	03/25/22 21:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	78		43 - 140	03/24/22 09:08	03/25/22 21:31	1
2-Fluorobiphenyl	74		44 - 119	03/24/22 09:08	03/25/22 21:31	1
2-Fluorophenol (Surr)	46		19 - 119	03/24/22 09:08	03/25/22 21:31	1
Nitrobenzene-d5 (Surr)	77		44 - 120	03/24/22 09:08	03/25/22 21:31	1
Phenol-d5 (Surr)	27		10 - 120	03/24/22 09:08	03/25/22 21:31	1
Terphenyl-d14	87		50 - 134	03/24/22 09:08	03/25/22 21:31	1

Client Sample Results

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

Client Sample ID: ERH2791 (OWDFMW08A FD)

Lab Sample ID: 580-111589-2

Date Collected: 03/17/22 12:25

Matrix: Water

Date Received: 03/19/22 09:25

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	0.030	U M	0.095	0.018	ug/L		03/24/22 09:08	03/26/22 22:55	1
2-Methylnaphthalene	0.076	U M	0.19	0.037	ug/L		03/24/22 09:08	03/26/22 22:55	1
Acenaphthene	0.030	U M	0.095	0.013	ug/L		03/24/22 09:08	03/26/22 22:55	1
Acenaphthylene	0.030	U	0.048	0.0086	ug/L		03/24/22 09:08	03/26/22 22:55	1
Anthracene	0.076	U	0.095	0.021	ug/L		03/24/22 09:08	03/26/22 22:55	1
Benzo[a]anthracene	0.030	U	0.048	0.013	ug/L		03/24/22 09:08	03/26/22 22:55	1
Benzo[a]pyrene	0.030	U	0.095	0.010	ug/L		03/24/22 09:08	03/26/22 22:55	1
Benzo[b]fluoranthene	0.030	U	0.048	0.010	ug/L		03/24/22 09:08	03/26/22 22:55	1
Benzo[g,h,i]perylene	0.030	U	0.048	0.011	ug/L		03/24/22 09:08	03/26/22 22:55	1
Benzo[k]fluoranthene	0.030	U	0.048	0.011	ug/L		03/24/22 09:08	03/26/22 22:55	1
Chrysene	0.030	U	0.095	0.015	ug/L		03/24/22 09:08	03/26/22 22:55	1
Dibenz(a,h)anthracene	0.030	U	0.095	0.025	ug/L		03/24/22 09:08	03/26/22 22:55	1
Fluoranthene	0.030	U	0.19	0.017	ug/L		03/24/22 09:08	03/26/22 22:55	1
Fluorene	0.030	U	0.095	0.016	ug/L		03/24/22 09:08	03/26/22 22:55	1
Indeno[1,2,3-cd]pyrene	0.030	U	0.048	0.013	ug/L		03/24/22 09:08	03/26/22 22:55	1
Naphthalene	0.076	U M	0.095	0.029	ug/L		03/24/22 09:08	03/26/22 22:55	1
Phenanthrene	0.076	U M	0.095	0.029	ug/L		03/24/22 09:08	03/26/22 22:55	1
Pyrene	0.076	U M	0.095	0.031	ug/L		03/24/22 09:08	03/26/22 22:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-methylnaphthalene-d10	69		40 - 140	03/24/22 09:08	03/26/22 22:55	1
Fluoranthene-d10 (Surr)	92		40 - 140	03/24/22 09:08	03/26/22 22:55	1
Terphenyl-d14	98		58 - 132	03/24/22 09:08	03/26/22 22:55	1

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.29	U	0.38	0.086	ug/L		03/24/22 09:08	03/25/22 21:54	1
1,2-Dichlorobenzene	0.14	U	0.38	0.048	ug/L		03/24/22 09:08	03/25/22 21:54	1
1,3-Dichlorobenzene	0.086	U	0.38	0.038	ug/L		03/24/22 09:08	03/25/22 21:54	1
1,4-Dichlorobenzene	0.086	U	0.38	0.038	ug/L		03/24/22 09:08	03/25/22 21:54	1
2,4,5-Trichlorophenol	0.29	U	0.38	0.095	ug/L		03/24/22 09:08	03/25/22 21:54	1
2,4,6-Trichlorophenol	0.29	U	0.57	0.095	ug/L		03/24/22 09:08	03/25/22 21:54	1
2,4-Dichlorophenol	0.48	U	0.95	0.19	ug/L		03/24/22 09:08	03/25/22 21:54	1
2,4-Dimethylphenol	0.48	U	3.8	0.15	ug/L		03/24/22 09:08	03/25/22 21:54	1
2,4-Dinitrophenol	3.0	U	4.8	1.5	ug/L		03/24/22 09:08	03/25/22 21:54	1
2,4-Dinitrotoluene	0.29	U	0.95	0.095	ug/L		03/24/22 09:08	03/25/22 21:54	1
2,6-Dinitrotoluene	0.29	U	0.38	0.095	ug/L		03/24/22 09:08	03/25/22 21:54	1
2-Chloronaphthalene	0.14	U	0.95	0.067	ug/L		03/24/22 09:08	03/25/22 21:54	1
2-Chlorophenol	0.14	U	0.95	0.048	ug/L		03/24/22 09:08	03/25/22 21:54	1
2-Nitrophenol	0.14	U	0.95	0.067	ug/L		03/24/22 09:08	03/25/22 21:54	1
3,3'-Dichlorobenzidine	0.57	U	0.95	0.25	ug/L		03/24/22 09:08	03/25/22 21:54	1
4,6-Dinitro-2-methylphenol	1.1	U	1.9	0.52	ug/L		03/24/22 09:08	03/25/22 21:54	1
4-Bromophenyl phenyl ether	0.14	U	0.57	0.057	ug/L		03/24/22 09:08	03/25/22 21:54	1
4-Chloro-3-methylphenol	0.29	U	0.57	0.12	ug/L		03/24/22 09:08	03/25/22 21:54	1
4-Chlorophenyl phenyl ether	0.14	U	0.57	0.048	ug/L		03/24/22 09:08	03/25/22 21:54	1
4-Nitrophenol	5.7	U	9.5	1.6	ug/L		03/24/22 09:08	03/25/22 21:54	1
Azobenzene	0.14	U M	1.9	0.057	ug/L		03/24/22 09:08	03/25/22 21:54	1
bis (2-chloroisopropyl) ether	0.14	U M	0.24	0.057	ug/L		03/24/22 09:08	03/25/22 21:54	1
Bis(2-chloroethoxy)methane	0.14	U	0.57	0.048	ug/L		03/24/22 09:08	03/25/22 21:54	1
Bis(2-chloroethyl)ether	0.086	U	0.095	0.029	ug/L		03/24/22 09:08	03/25/22 21:54	1

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Client Sample Results

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

Client Sample ID: ERH2791 (OWDFMW08A FD)

Lab Sample ID: 580-111589-2

Date Collected: 03/17/22 12:25

Matrix: Water

Date Received: 03/19/22 09:25

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	1.5	U	2.9	0.70	ug/L		03/24/22 09:08	03/25/22 21:54	1
Butyl benzyl phthalate	0.57	U	3.8	0.26	ug/L		03/24/22 09:08	03/25/22 21:54	1
Diethyl phthalate	0.29	U Q B	0.95	0.14	ug/L		03/24/22 09:08	03/25/22 21:54	1
Dimethyl phthalate	0.14	U	0.57	0.057	ug/L		03/24/22 09:08	03/25/22 21:54	1
Di-n-butyl phthalate	0.48	U	2.9	0.18	ug/L		03/24/22 09:08	03/25/22 21:54	1
Di-n-octyl phthalate	0.29	U M	0.95	0.12	ug/L		03/24/22 09:08	03/25/22 21:54	1
Hexachlorobenzene	0.086	U Q	0.57	0.038	ug/L		03/24/22 09:08	03/25/22 21:54	1
Hexachlorobutadiene	0.14	U	0.95	0.057	ug/L		03/24/22 09:08	03/25/22 21:54	1
Hexachlorocyclopentadiene	0.29	U	0.95	0.13	ug/L		03/24/22 09:08	03/25/22 21:54	1
Hexachloroethane	0.14	U	0.95	0.048	ug/L		03/24/22 09:08	03/25/22 21:54	1
Isophorone	0.29	U	0.38	0.095	ug/L		03/24/22 09:08	03/25/22 21:54	1
m+p-Cresol	0.29	U	0.57	0.095	ug/L		03/24/22 09:08	03/25/22 21:54	1
Nitrobenzene	0.086	U	0.95	0.038	ug/L		03/24/22 09:08	03/25/22 21:54	1
N-Nitrosodimethylamine	0.57	U	1.9	0.25	ug/L		03/24/22 09:08	03/25/22 21:54	1
N-Nitrosodi-n-propylamine	0.086	U	0.38	0.057	ug/L		03/24/22 09:08	03/25/22 21:54	1
N-Nitrosodiphenylamine	0.14	U	0.95	0.067	ug/L		03/24/22 09:08	03/25/22 21:54	1
o-Cresol	0.14	U	0.57	0.048	ug/L		03/24/22 09:08	03/25/22 21:54	1
Pentachlorophenol	0.95	U	9.5	0.48	ug/L		03/24/22 09:08	03/25/22 21:54	1
Phenol	0.57	U M	0.95	0.34	ug/L		03/24/22 09:08	03/25/22 21:54	1
Pyrene	0.086	U	0.95	0.038	ug/L		03/24/22 09:08	03/25/22 21:54	1
Pyridine	3.0	U Q	9.5	1.0	ug/L		03/24/22 09:08	03/25/22 21:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88		43 - 140	03/24/22 09:08	03/25/22 21:54	1
2-Fluorobiphenyl	78		44 - 119	03/24/22 09:08	03/25/22 21:54	1
2-Fluorophenol (Surr)	49		19 - 119	03/24/22 09:08	03/25/22 21:54	1
Nitrobenzene-d5 (Surr)	89		44 - 120	03/24/22 09:08	03/25/22 21:54	1
Phenol-d5 (Surr)	31		10 - 120	03/24/22 09:08	03/25/22 21:54	1
Terphenyl-d14	103		50 - 134	03/24/22 09:08	03/25/22 21:54	1

QC Sample Results

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

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

Lab Sample ID: MB 580-384957/1-A
Matrix: Water
Analysis Batch: 385127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 384957

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		03/24/22 09:08	03/25/22 15:17	1
1,2-Dichlorobenzene	0.15	U	0.40	0.050	ug/L		03/24/22 09:08	03/25/22 15:17	1
1,3-Dichlorobenzene	0.090	U	0.40	0.040	ug/L		03/24/22 09:08	03/25/22 15:17	1
1,4-Dichlorobenzene	0.090	U	0.40	0.040	ug/L		03/24/22 09:08	03/25/22 15:17	1
2,4,5-Trichlorophenol	0.30	U	0.40	0.10	ug/L		03/24/22 09:08	03/25/22 15:17	1
2,4,6-Trichlorophenol	0.30	U	0.60	0.10	ug/L		03/24/22 09:08	03/25/22 15:17	1
2,4-Dichlorophenol	0.50	U	1.0	0.20	ug/L		03/24/22 09:08	03/25/22 15:17	1
2,4-Dimethylphenol	0.50	U	4.0	0.16	ug/L		03/24/22 09:08	03/25/22 15:17	1
2,4-Dinitrophenol	3.2	U	5.0	1.6	ug/L		03/24/22 09:08	03/25/22 15:17	1
2,4-Dinitrotoluene	0.30	U	1.0	0.10	ug/L		03/24/22 09:08	03/25/22 15:17	1
2,6-Dinitrotoluene	0.30	U	0.40	0.10	ug/L		03/24/22 09:08	03/25/22 15:17	1
2-Chloronaphthalene	0.15	U	1.0	0.070	ug/L		03/24/22 09:08	03/25/22 15:17	1
2-Chlorophenol	0.15	U	1.0	0.050	ug/L		03/24/22 09:08	03/25/22 15:17	1
2-Nitrophenol	0.15	U	1.0	0.070	ug/L		03/24/22 09:08	03/25/22 15:17	1
3,3'-Dichlorobenzidine	0.60	U	1.0	0.26	ug/L		03/24/22 09:08	03/25/22 15:17	1
4,6-Dinitro-2-methylphenol	1.2	U	2.0	0.55	ug/L		03/24/22 09:08	03/25/22 15:17	1
4-Bromophenyl phenyl ether	0.15	U	0.60	0.060	ug/L		03/24/22 09:08	03/25/22 15:17	1
4-Chloro-3-methylphenol	0.30	U	0.60	0.13	ug/L		03/24/22 09:08	03/25/22 15:17	1
4-Chlorophenyl phenyl ether	0.15	U	0.60	0.050	ug/L		03/24/22 09:08	03/25/22 15:17	1
4-Nitrophenol	6.0	U	10	1.7	ug/L		03/24/22 09:08	03/25/22 15:17	1
Azobenzene	0.15	U M	2.0	0.060	ug/L		03/24/22 09:08	03/25/22 15:17	1
bis (2-chloroisopropyl) ether	0.15	U M	0.25	0.060	ug/L		03/24/22 09:08	03/25/22 15:17	1
Bis(2-chloroethoxy)methane	0.15	U	0.60	0.050	ug/L		03/24/22 09:08	03/25/22 15:17	1
Bis(2-chloroethyl)ether	0.090	U	0.10	0.030	ug/L		03/24/22 09:08	03/25/22 15:17	1
Bis(2-ethylhexyl) phthalate	1.6	U	3.0	0.74	ug/L		03/24/22 09:08	03/25/22 15:17	1
Butyl benzyl phthalate	0.60	U	4.0	0.27	ug/L		03/24/22 09:08	03/25/22 15:17	1
Diethyl phthalate	0.277	J B	1.0	0.15	ug/L		03/24/22 09:08	03/25/22 15:17	1
Dimethyl phthalate	0.15	U	0.60	0.060	ug/L		03/24/22 09:08	03/25/22 15:17	1
Di-n-butyl phthalate	0.50	U	3.0	0.19	ug/L		03/24/22 09:08	03/25/22 15:17	1
Di-n-octyl phthalate	0.30	U M	1.0	0.13	ug/L		03/24/22 09:08	03/25/22 15:17	1
Hexachlorobenzene	0.090	U	0.60	0.040	ug/L		03/24/22 09:08	03/25/22 15:17	1
Hexachlorobutadiene	0.15	U	1.0	0.060	ug/L		03/24/22 09:08	03/25/22 15:17	1
Hexachlorocyclopentadiene	0.30	U	1.0	0.14	ug/L		03/24/22 09:08	03/25/22 15:17	1
Hexachloroethane	0.15	U	1.0	0.050	ug/L		03/24/22 09:08	03/25/22 15:17	1
Isophorone	0.30	U	0.40	0.10	ug/L		03/24/22 09:08	03/25/22 15:17	1
m+p-Cresol	0.30	U	0.60	0.10	ug/L		03/24/22 09:08	03/25/22 15:17	1
Nitrobenzene	0.090	U	1.0	0.040	ug/L		03/24/22 09:08	03/25/22 15:17	1
N-Nitrosodimethylamine	0.60	U	2.0	0.26	ug/L		03/24/22 09:08	03/25/22 15:17	1
N-Nitrosodi-n-propylamine	0.090	U	0.40	0.060	ug/L		03/24/22 09:08	03/25/22 15:17	1
N-Nitrosodiphenylamine	0.15	U	1.0	0.070	ug/L		03/24/22 09:08	03/25/22 15:17	1
o-Cresol	0.15	U M	0.60	0.050	ug/L		03/24/22 09:08	03/25/22 15:17	1
Pentachlorophenol	1.0	U	10	0.51	ug/L		03/24/22 09:08	03/25/22 15:17	1
Phenol	0.60	U	1.0	0.36	ug/L		03/24/22 09:08	03/25/22 15:17	1
Pyrene	0.090	U	1.0	0.040	ug/L		03/24/22 09:08	03/25/22 15:17	1
Pyridine	3.2	U	10	1.1	ug/L		03/24/22 09:08	03/25/22 15:17	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2,4,6-Tribromophenol (Surr)	73		43 - 140	03/24/22 09:08	03/25/22 15:17	1

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QC Sample Results

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

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

Lab Sample ID: MB 580-384957/1-A
Matrix: Water
Analysis Batch: 385127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 384957

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	71		44 - 119	03/24/22 09:08	03/25/22 15:17	1
2-Fluorophenol (Surr)	58		19 - 119	03/24/22 09:08	03/25/22 15:17	1
Nitrobenzene-d5 (Surr)	78		44 - 120	03/24/22 09:08	03/25/22 15:17	1
Phenol-d5 (Surr)	35		10 - 120	03/24/22 09:08	03/25/22 15:17	1
Terphenyl-d14	103		50 - 134	03/24/22 09:08	03/25/22 15:17	1

Lab Sample ID: LCS 580-384957/2-A
Matrix: Water
Analysis Batch: 385127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 384957

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	2.00	0.901		ug/L		45	29 - 116
1,2-Dichlorobenzene	2.00	0.830		ug/L		42	32 - 111
1,3-Dichlorobenzene	2.00	0.790		ug/L		40	28 - 110
1,4-Dichlorobenzene	2.00	0.771		ug/L		39	29 - 112
2,4,5-Trichlorophenol	2.00	1.55		ug/L		77	53 - 123
2,4,6-Trichlorophenol	2.00	1.63		ug/L		82	50 - 125
2,4-Dichlorophenol	2.00	1.44		ug/L		72	47 - 121
2,4-Dimethylphenol	2.00	1.41	J	ug/L		70	31 - 124
2,4-Dinitrophenol	4.00	3.81	J M	ug/L		95	23 - 143
2,4-Dinitrotoluene	2.00	1.75	M	ug/L		88	57 - 128
2,6-Dinitrotoluene	2.00	1.69		ug/L		84	57 - 124
2-Chloronaphthalene	2.00	1.21		ug/L		61	40 - 116
2-Chlorophenol	2.00	1.37		ug/L		69	38 - 117
2-Nitrophenol	2.00	1.54		ug/L		77	47 - 123
3,3'-Dichlorobenzidine	4.00	2.72		ug/L		68	27 - 129
4,6-Dinitro-2-methylphenol	4.00	3.22		ug/L		81	44 - 137
4-Bromophenyl phenyl ether	2.00	1.53		ug/L		77	55 - 124
4-Chloro-3-methylphenol	2.00	1.65	M	ug/L		83	52 - 119
4-Chlorophenyl phenyl ether	2.00	1.48		ug/L		74	53 - 121
4-Nitrophenol	4.00	2.43	J	ug/L		61	35 - 145
Azobenzene	2.00	1.56	J	ug/L		78	61 - 116
bis (2-chloroisopropyl) ether	2.00	1.76		ug/L		88	37 - 130
Bis(2-chloroethoxy)methane	2.00	1.54		ug/L		77	48 - 120
Bis(2-chloroethyl)ether	2.00	1.39	M	ug/L		70	43 - 118
Bis(2-ethylhexyl) phthalate	2.00	2.08	J	ug/L		104	55 - 135
Butyl benzyl phthalate	2.00	1.99	J	ug/L		99	53 - 134
Diethyl phthalate	2.00	2.04		ug/L		102	56 - 125
Dimethyl phthalate	2.00	1.84		ug/L		92	45 - 127
Di-n-butyl phthalate	2.00	1.77	J	ug/L		88	59 - 127
Di-n-octyl phthalate	2.00	2.14		ug/L		107	51 - 140
Hexachlorobenzene	2.00	1.05	Q	ug/L		52	53 - 125
Hexachlorobutadiene	2.00	0.659	J	ug/L		33	22 - 124
Hexachlorocyclopentadiene	2.00	0.549	J	ug/L		27	20 - 125
Hexachloroethane	2.00	0.716	J	ug/L		36	21 - 115
Isophorone	2.00	1.45		ug/L		73	42 - 124
m+p-Cresol	2.00	1.20		ug/L		60	29 - 110
Nitrobenzene	2.00	1.35		ug/L		68	45 - 121

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QC Sample Results

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

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

Lab Sample ID: LCS 580-384957/2-A
Matrix: Water
Analysis Batch: 385127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 384957

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-Nitrosodimethylamine	2.00	1.05	J	ug/L		52	45 - 125
N-Nitrosodi-n-propylamine	2.00	1.41		ug/L		70	49 - 119
N-Nitrosodiphenylamine	2.00	1.83		ug/L		91	51 - 123
o-Cresol	2.00	1.40		ug/L		70	30 - 117
Pentachlorophenol	4.00	3.31	J	ug/L		83	35 - 138
Phenol	2.00	0.636	J	ug/L		32	13 - 120
Pyrene	2.00	1.57		ug/L		79	57 - 126
Pyridine	4.00	1.13	J	ug/L		28	20 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	84		43 - 140
2-Fluorobiphenyl	73		44 - 119
2-Fluorophenol (Surr)	48		19 - 119
Nitrobenzene-d5 (Surr)	72		44 - 120
Phenol-d5 (Surr)	31		10 - 120
Terphenyl-d14	95		50 - 134

Lab Sample ID: LCSD 580-384957/3-A
Matrix: Water
Analysis Batch: 385127

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 384957

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	2.00	0.969		ug/L		48	29 - 116	7	20
1,2-Dichlorobenzene	2.00	0.975		ug/L		49	32 - 111	16	20
1,3-Dichlorobenzene	2.00	0.906		ug/L		45	28 - 110	14	20
1,4-Dichlorobenzene	2.00	0.919		ug/L		46	29 - 112	18	20
2,4,5-Trichlorophenol	2.00	1.61		ug/L		81	53 - 123	4	20
2,4,6-Trichlorophenol	2.00	1.73		ug/L		87	50 - 125	6	20
2,4-Dichlorophenol	2.00	1.53		ug/L		76	47 - 121	6	20
2,4-Dimethylphenol	2.00	1.68	J	ug/L		84	31 - 124	18	20
2,4-Dinitrophenol	4.00	4.10	J M	ug/L		103	23 - 143	7	20
2,4-Dinitrotoluene	2.00	2.04		ug/L		102	57 - 128	15	20
2,6-Dinitrotoluene	2.00	1.83		ug/L		92	57 - 124	8	20
2-Chloronaphthalene	2.00	1.39		ug/L		70	40 - 116	14	20
2-Chlorophenol	2.00	1.64		ug/L		82	38 - 117	18	20
2-Nitrophenol	2.00	1.62		ug/L		81	47 - 123	5	20
3,3'-Dichlorobenzidine	4.00	2.91		ug/L		73	27 - 129	7	20
4,6-Dinitro-2-methylphenol	4.00	3.54		ug/L		88	44 - 137	9	20
4-Bromophenyl phenyl ether	2.00	1.43		ug/L		71	55 - 124	7	20
4-Chloro-3-methylphenol	2.00	1.95		ug/L		98	52 - 119	17	20
4-Chlorophenyl phenyl ether	2.00	1.77		ug/L		88	53 - 121	18	20
4-Nitrophenol	4.00	2.58	J M	ug/L		64	35 - 145	6	20
Azobenzene	2.00	1.70	J	ug/L		85	61 - 116	9	20
bis (2-chloroisopropyl) ether	2.00	2.09		ug/L		105	37 - 130	17	20
Bis(2-chloroethoxy)methane	2.00	1.79		ug/L		90	48 - 120	15	20
Bis(2-chloroethyl)ether	2.00	1.64		ug/L		82	43 - 118	17	20
Bis(2-ethylhexyl) phthalate	2.00	2.45	J	ug/L		123	55 - 135	16	20
Butyl benzyl phthalate	2.00	2.25	J	ug/L		113	53 - 134	13	20

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QC Sample Results

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

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

Lab Sample ID: LCSD 580-384957/3-A
Matrix: Water
Analysis Batch: 385127

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 384957

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Diethyl phthalate	2.00	2.32		ug/L		116	56 - 125	13	20	
Dimethyl phthalate	2.00	2.11		ug/L		105	45 - 127	13	20	
Di-n-butyl phthalate	2.00	1.96	J	ug/L		98	59 - 127	10	20	
Di-n-octyl phthalate	2.00	2.28		ug/L		114	51 - 140	6	20	
Hexachlorobenzene	2.00	1.07		ug/L		53	53 - 125	2	20	
Hexachlorobutadiene	2.00	0.735	J	ug/L		37	22 - 124	11	20	
Hexachlorocyclopentadiene	2.00	0.655	J	ug/L		33	20 - 125	18	20	
Hexachloroethane	2.00	0.845	J	ug/L		42	21 - 115	17	20	
Isophorone	2.00	1.72		ug/L		86	42 - 124	17	20	
m+p-Cresol	2.00	1.42		ug/L		71	29 - 110	17	20	
Nitrobenzene	2.00	1.50		ug/L		75	45 - 121	10	20	
N-Nitrosodimethylamine	2.00	1.27	J	ug/L		64	45 - 125	19	20	
N-Nitrosodi-n-propylamine	2.00	1.65		ug/L		82	49 - 119	16	20	
N-Nitrosodiphenylamine	2.00	1.94		ug/L		97	51 - 123	6	20	
o-Cresol	2.00	1.59		ug/L		80	30 - 117	13	20	
Pentachlorophenol	4.00	3.39	J	ug/L		85	35 - 138	2	20	
Phenol	2.00	0.754	J	ug/L		38	13 - 120	17	20	
Pyrene	2.00	1.69		ug/L		85	57 - 126	7	20	
Pyridine	4.00	3.2	U Q	ug/L		15	20 - 125	61	20	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	81		43 - 140
2-Fluorobiphenyl	69		44 - 119
2-Fluorophenol (Surr)	54		19 - 119
Nitrobenzene-d5 (Surr)	77		44 - 120
Phenol-d5 (Surr)	35		10 - 120
Terphenyl-d14	95		50 - 134

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

Lab Sample ID: MB 580-384957/1-A
Matrix: Water
Analysis Batch: 385266

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 384957

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		03/24/22 09:08	03/26/22 16:58	1
2-Methylnaphthalene	0.080	U M	0.20	0.039	ug/L		03/24/22 09:08	03/26/22 16:58	1
Acenaphthene	0.032	U	0.10	0.014	ug/L		03/24/22 09:08	03/26/22 16:58	1
Acenaphthylene	0.032	U M	0.050	0.0090	ug/L		03/24/22 09:08	03/26/22 16:58	1
Anthracene	0.080	U	0.10	0.022	ug/L		03/24/22 09:08	03/26/22 16:58	1
Benzo[a]anthracene	0.032	U	0.050	0.014	ug/L		03/24/22 09:08	03/26/22 16:58	1
Benzo[a]pyrene	0.032	U	0.10	0.011	ug/L		03/24/22 09:08	03/26/22 16:58	1
Benzo[b]fluoranthene	0.032	U	0.050	0.011	ug/L		03/24/22 09:08	03/26/22 16:58	1
Benzo[g,h,i]perylene	0.032	U	0.050	0.012	ug/L		03/24/22 09:08	03/26/22 16:58	1
Benzo[k]fluoranthene	0.032	U	0.050	0.012	ug/L		03/24/22 09:08	03/26/22 16:58	1
Chrysene	0.032	U	0.10	0.016	ug/L		03/24/22 09:08	03/26/22 16:58	1
Dibenz(a,h)anthracene	0.032	U	0.10	0.026	ug/L		03/24/22 09:08	03/26/22 16:58	1
Fluoranthene	0.032	U	0.20	0.018	ug/L		03/24/22 09:08	03/26/22 16:58	1
Fluorene	0.032	U	0.10	0.017	ug/L		03/24/22 09:08	03/26/22 16:58	1

Eurofins Seattle

QC Sample Results

Client: AECOM
Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

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

Lab Sample ID: MB 580-384957/1-A
Matrix: Water
Analysis Batch: 385266

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 384957

Analyte	MB MB		LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Indeno[1,2,3-cd]pyrene	0.032	U	0.050	0.014	ug/L		03/24/22 09:08	03/26/22 16:58	1
Naphthalene	0.080	U M	0.10	0.031	ug/L		03/24/22 09:08	03/26/22 16:58	1
Phenanthrene	0.080	U M	0.10	0.031	ug/L		03/24/22 09:08	03/26/22 16:58	1
Pyrene	0.080	U M	0.10	0.033	ug/L		03/24/22 09:08	03/26/22 16:58	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-methylnaphthalene-d10	62		40 - 140	03/24/22 09:08	03/26/22 16:58	1
Fluoranthene-d10 (Surr)	86		40 - 140	03/24/22 09:08	03/26/22 16:58	1
Terphenyl-d14	94		58 - 132	03/24/22 09:08	03/26/22 16:58	1

Lab Sample ID: LCS 580-384957/2-A
Matrix: Water
Analysis Batch: 385266

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 384957

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec	Limits
		Result	Qualifier					
1-Methylnaphthalene	2.00	1.13		ug/L		57		41 - 115
2-Methylnaphthalene	2.00	1.07		ug/L		53		39 - 114
Acenaphthene	2.00	1.25		ug/L		63		48 - 114
Acenaphthylene	2.00	1.21		ug/L		61		35 - 121
Anthracene	2.00	1.43		ug/L		72		53 - 119
Benzo[a]anthracene	2.00	1.52		ug/L		76		59 - 120
Benzo[a]pyrene	2.00	1.38		ug/L		69		53 - 120
Benzo[b]fluoranthene	2.00	1.49		ug/L		75		53 - 126
Benzo[g,h,i]perylene	2.00	1.41		ug/L		71		44 - 128
Benzo[k]fluoranthene	2.00	1.58		ug/L		79		54 - 125
Chrysene	2.00	1.44		ug/L		72		57 - 120
Dibenz(a,h)anthracene	2.00	1.42	M	ug/L		71		44 - 131
Fluoranthene	2.00	1.61		ug/L		81		58 - 120
Fluorene	2.00	1.39		ug/L		70		50 - 118
Indeno[1,2,3-cd]pyrene	2.00	1.45	M	ug/L		73		48 - 130
Naphthalene	2.00	1.10		ug/L		55		43 - 114
Phenanthrene	2.00	1.43		ug/L		72		53 - 115
Pyrene	2.00	1.58		ug/L		79		53 - 121

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-methylnaphthalene-d10	65		40 - 140
Fluoranthene-d10 (Surr)	84		40 - 140
Terphenyl-d14	91		58 - 132

Lab Sample ID: LCSD 580-384957/3-A
Matrix: Water
Analysis Batch: 385266

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 384957

Analyte	Spike Added	LCSD LCSD		Unit	D	%Rec	%Rec	RPD	Limit
		Result	Qualifier						
1-Methylnaphthalene	2.00	1.14		ug/L		57		0	20
2-Methylnaphthalene	2.00	1.07		ug/L		54		0	20
Acenaphthene	2.00	1.29		ug/L		65		3	20
Acenaphthylene	2.00	1.26		ug/L		63		4	20

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QC Sample Results

Client: AECOM
 Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

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

Lab Sample ID: LCSD 580-384957/3-A
Matrix: Water
Analysis Batch: 385266

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 384957

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Anthracene	2.00	1.56		ug/L		78	53 - 119	8	20	
Benzo[a]anthracene	2.00	1.71		ug/L		85	59 - 120	12	20	
Benzo[a]pyrene	2.00	1.54		ug/L		77	53 - 120	11	20	
Benzo[b]fluoranthene	2.00	1.72		ug/L		86	53 - 126	14	20	
Benzo[g,h,i]perylene	2.00	1.59		ug/L		80	44 - 128	12	20	
Benzo[k]fluoranthene	2.00	1.70		ug/L		85	54 - 125	8	20	
Chrysene	2.00	1.63		ug/L		81	57 - 120	12	20	
Dibenz(a,h)anthracene	2.00	1.60	M	ug/L		80	44 - 131	11	20	
Fluoranthene	2.00	1.78		ug/L		89	58 - 120	10	20	
Fluorene	2.00	1.44		ug/L		72	50 - 118	4	20	
Indeno[1,2,3-cd]pyrene	2.00	1.59	M	ug/L		80	48 - 130	9	20	
Naphthalene	2.00	1.12		ug/L		56	43 - 114	2	20	
Phenanthrene	2.00	1.54		ug/L		77	53 - 115	8	20	
Pyrene	2.00	1.74		ug/L		87	53 - 121	10	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-methylnaphthalene-d10	60		40 - 140
Fluoranthene-d10 (Surr)	88		40 - 140
Terphenyl-d14	96		58 - 132

Lab Chronicle

Client: AECOM
 Project/Site: Red Hill NOI GWCV18F0126

Job ID: 580-111589-1

Client Sample ID: ERH2790 (OWDFMW08A)

Lab Sample ID: 580-111589-1

Date Collected: 03/17/22 12:25

Matrix: Water

Date Received: 03/19/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			384957	03/24/22 09:08	ASL	FGS SEA
Total/NA	Analysis	8270E		1	385127	03/25/22 21:31	TL1	FGS SEA
Total/NA	Prep	3510C			384957	03/24/22 09:08	ASL	FGS SEA
Total/NA	Analysis	8270E SIM		1	385266	03/26/22 22:36	W1T	FGS SEA

Client Sample ID: ERH2791 (OWDFMW08A FD)

Lab Sample ID: 580-111589-2

Date Collected: 03/17/22 12:25

Matrix: Water

Date Received: 03/19/22 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			384957	03/24/22 09:08	ASL	FGS SEA
Total/NA	Analysis	8270E		1	385127	03/25/22 21:54	TL1	FGS SEA
Total/NA	Prep	3510C			384957	03/24/22 09:08	ASL	FGS SEA
Total/NA	Analysis	8270E SIM		1	385266	03/26/22 22:55	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 NOI GWCV18F0126

Job ID: 580-111589-1

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 NOI GWCV18F0126

Job ID: 580-111589-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-111589-1	ERH2790 (OWDFMW08A)	Water	03/17/22 12:25	03/19/22 09:25
580-111589-2	ERH2791 (OWDFMW08A FD)	Water	03/17/22 12:25	03/19/22 09:25

1

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11

Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-111589-1

Login Number: 111589

List Number: 1

Creator: Vallelunga, Diana L

List Source: Eurofins Seattle

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	