

 **ANALYTICAL REPORT****PREPARED FOR**

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JOB DESCRIPTION

INTERA - Red-Hill-Incident

JOB NUMBER

380-89313-1

Eurofins Eaton Analytical Pomona

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Eaton Analytical, LLC Project Manager.

Compliance Statement

1. Laboratory is accredited in accordance with TNI 2016 Standards and ISO/IEC 17025:2017.
2. Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis
3. Test results relate only to the sample(s) tested.
4. This report shall not be reproduced except in full, without the written approval of the laboratory.
5. Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below. (DW, Water matrices)

Authorization



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Definitions/Glossary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

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

Case Narrative

Client: City & County of Honolulu
Project: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

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Eurofins Eaton Analytical Pomona

Job Narrative 380-89313-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 4/2/2024 9:19 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 time was 4.3°C.

GC/MS VOA

Method 8260B: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-428945. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8260B: The following analyte(s) recovered outside control limits for the LCS associated with analytical batch 570-428945: Bromoform. This is not indicative of a systematic control problem because this was random marginal exceedances. Qualified results have been reported.

Method 8260B: The following analyte(s) recovered outside control limits for the LCSD associated with analytical batch 570-428945: Carbon tetrachloride and trans-1,3-Dichloropropene. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

Gasoline Range Organics

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

GC Semi VOA

Method 8015B_DRO_LL_CS: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-427019.

Method 8015B_DRO_LL_CS: Surrogate recovery for the following sample was outside the upper control limit: BWS2253-J1-AQ (380-89313-1). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B_DAI: The following sample was improperly preserved in the field: BWS2253-J1-AQ (380-89313-1). Therefore sample(s) was diluted at 5X. Elevated reporting limits (RLs) are provided.

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

Eurofins Eaton Analytical Pomona

Detection Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-89313-1

No Detections.

Client Sample ID: BWS2253-J1-TB

Lab Sample ID: 380-89313-2

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-89313-1

Date Collected: 04/01/24 11:00

Matrix: Water

Date Received: 04/02/24 09:19

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<2.0		2.0	ug/L			04/10/24 02:16	1
1,1,1-Trichloroethane	<1.0		1.0	ug/L			04/10/24 02:16	1
1,1,2,2-Tetrachloroethane	<1.0		1.0	ug/L			04/10/24 02:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<10		10	ug/L			04/10/24 02:16	1
1,1,2-Trichloroethane	<1.0		1.0	ug/L			04/10/24 02:16	1
1,1-Dichloroethane	<1.0		1.0	ug/L			04/10/24 02:16	1
1,1-Dichloroethene	<1.0		1.0	ug/L			04/10/24 02:16	1
1,1-Dichloropropene	<1.0		1.0	ug/L			04/10/24 02:16	1
1,2,3-Trichlorobenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
1,2,3-Trichloropropane	<5.0		5.0	ug/L			04/10/24 02:16	1
1,2,4-Trichlorobenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
1,2,4-Trimethylbenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
1,2-Dibromo-3-Chloropropane	<10		10	ug/L			04/10/24 02:16	1
1,2-Dichlorobenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
1,2-Dichloroethane	<0.50		0.50	ug/L			04/10/24 02:16	1
1,2-Dichloropropane	<1.0		1.0	ug/L			04/10/24 02:16	1
1,3,5-Trimethylbenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
1,3-Dichlorobenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
1,3-Dichloropropane	<1.0		1.0	ug/L			04/10/24 02:16	1
1,4-Dichlorobenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
2,2-Dichloropropane	<1.0		1.0	ug/L			04/10/24 02:16	1
2-Butanone	<10		10	ug/L			04/10/24 02:16	1
2-Chlorotoluene	<1.0		1.0	ug/L			04/10/24 02:16	1
2-Hexanone	<10		10	ug/L			04/10/24 02:16	1
4-Chlorotoluene	<1.0		1.0	ug/L			04/10/24 02:16	1
Acetone	<10		10	ug/L			04/10/24 02:16	1
Benzene	<0.50		0.50	ug/L			04/10/24 02:16	1
Bromobenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
Bromochloromethane	<2.0		2.0	ug/L			04/10/24 02:16	1
Bromodichloromethane	<1.0		1.0	ug/L			04/10/24 02:16	1
Bromoform	<5.0	*+	5.0	ug/L			04/10/24 02:16	1
Bromomethane	<25		25	ug/L			04/10/24 02:16	1
Carbon disulfide	<10		10	ug/L			04/10/24 02:16	1
Carbon tetrachloride	<0.50	*+	0.50	ug/L			04/10/24 02:16	1
Chlorobenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
Chloroethane	<5.0		5.0	ug/L			04/10/24 02:16	1
Chloroform	<1.0		1.0	ug/L			04/10/24 02:16	1
Chloromethane	<10		10	ug/L			04/10/24 02:16	1
cis-1,2-Dichloroethene	<1.0		1.0	ug/L			04/10/24 02:16	1
cis-1,3-Dichloropropane	<0.50		0.50	ug/L			04/10/24 02:16	1
Dibromochloromethane	<2.0		2.0	ug/L			04/10/24 02:16	1
Dibromomethane	<1.0		1.0	ug/L			04/10/24 02:16	1
Dichlorodifluoromethane	<5.0		5.0	ug/L			04/10/24 02:16	1
Diethyl ether	<10		10	ug/L			04/10/24 02:16	1
Di-isopropyl ether (DIPE)	<2.0		2.0	ug/L			04/10/24 02:16	1
Ethanol	<100		100	ug/L			04/10/24 02:16	1
Ethylbenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
Ethylene Dibromide	<1.0		1.0	ug/L			04/10/24 02:16	1
Ethyl-t-butyl ether (ETBE)	<2.0		2.0	ug/L			04/10/24 02:16	1

Client Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-89313-1

Date Collected: 04/01/24 11:00

Matrix: Water

Date Received: 04/02/24 09:19

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloro-1,3-butadiene	<10		10	ug/L			04/10/24 02:16	1
Hexane	<5.0		5.0	ug/L			04/10/24 02:16	1
Isobutyl alcohol	<75		75	ug/L			04/10/24 02:16	1
Isopropanol	<75		75	ug/L			04/10/24 02:16	1
Isopropylbenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
m,p-Xylene	<2.0		2.0	ug/L			04/10/24 02:16	1
Methylene Chloride	<10		10	ug/L			04/10/24 02:16	1
Methyl-t-Butyl Ether (MTBE)	<1.0		1.0	ug/L			04/10/24 02:16	1
MIBK	<10		10	ug/L			04/10/24 02:16	1
Naphthalene	<10		10	ug/L			04/10/24 02:16	1
n-Butylbenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
N-Propylbenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
o-Xylene	<1.0		1.0	ug/L			04/10/24 02:16	1
p-Isopropyltoluene	<1.0		1.0	ug/L			04/10/24 02:16	1
sec-Butylbenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
Styrene	<1.0		1.0	ug/L			04/10/24 02:16	1
tert-Amyl alcohol	<50		50	ug/L			04/10/24 02:16	1
Tert-amyl-methyl ether (TAME)	<2.0		2.0	ug/L			04/10/24 02:16	1
tert-Butyl alcohol (TBA)	<10		10	ug/L			04/10/24 02:16	1
tert-Butylbenzene	<1.0		1.0	ug/L			04/10/24 02:16	1
Tetrachloroethene	<1.0		1.0	ug/L			04/10/24 02:16	1
Toluene	<1.0		1.0	ug/L			04/10/24 02:16	1
trans-1,2-Dichloroethene	<1.0		1.0	ug/L			04/10/24 02:16	1
trans-1,3-Dichloropropene	<0.50	*+	0.50	ug/L			04/10/24 02:16	1
Trichloroethene	<1.0		1.0	ug/L			04/10/24 02:16	1
Trichlorofluoromethane	<10		10	ug/L			04/10/24 02:16	1
Vinyl acetate	<10		10	ug/L			04/10/24 02:16	1
Vinyl chloride	<0.50		0.50	ug/L			04/10/24 02:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 123		04/10/24 02:16	1
4-Bromofluorobenzene (Surr)	92		80 - 120		04/10/24 02:16	1
Dibromofluoromethane (Surr)	99		78 - 120		04/10/24 02:16	1
Toluene-d8 (Surr)	97		80 - 120		04/10/24 02:16	1

Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			04/10/24 17:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		38 - 134		04/10/24 17:26	1

Method: SW846 8015B - Diesel Range Organics (DRO) (GC) Low Level

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		04/03/24 14:57	04/10/24 13:22	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		04/03/24 14:57	04/10/24 13:22	1
C8-C18	<26		26	ug/L		04/03/24 14:57	04/10/24 13:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	134	S1+	60 - 130	04/03/24 14:57	04/10/24 13:22	1

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Client Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-89313-1

Date Collected: 04/01/24 11:00

Matrix: Water

Date Received: 04/02/24 09:19

Method: SW846 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<0.50		0.50	mg/L			04/09/24 20:12	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Hexafluoro-2-propanol (Surr)	111		54 - 120				04/09/24 20:12	5

Client Sample ID: BWS2253-J1-TB

Lab Sample ID: 380-89313-2

Date Collected: 04/01/24 11:00

Matrix: Water

Date Received: 04/02/24 09:19

Method: SW846 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<2.0		2.0	ug/L			04/09/24 21:48	1
1,1,1-Trichloroethane	<1.0		1.0	ug/L			04/09/24 21:48	1
1,1,2,2-Tetrachloroethane	<1.0		1.0	ug/L			04/09/24 21:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<10		10	ug/L			04/09/24 21:48	1
1,1,2-Trichloroethane	<1.0		1.0	ug/L			04/09/24 21:48	1
1,1-Dichloroethane	<1.0		1.0	ug/L			04/09/24 21:48	1
1,1-Dichloroethene	<1.0		1.0	ug/L			04/09/24 21:48	1
1,1-Dichloropropene	<1.0		1.0	ug/L			04/09/24 21:48	1
1,2,3-Trichlorobenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
1,2,3-Trichloropropane	<5.0		5.0	ug/L			04/09/24 21:48	1
1,2,4-Trichlorobenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
1,2,4-Trimethylbenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
1,2-Dibromo-3-Chloropropane	<10		10	ug/L			04/09/24 21:48	1
1,2-Dichlorobenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
1,2-Dichloroethane	<0.50		0.50	ug/L			04/09/24 21:48	1
1,2-Dichloropropane	<1.0		1.0	ug/L			04/09/24 21:48	1
1,3,5-Trimethylbenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
1,3-Dichlorobenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
1,3-Dichloropropane	<1.0		1.0	ug/L			04/09/24 21:48	1
1,4-Dichlorobenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
2,2-Dichloropropane	<1.0		1.0	ug/L			04/09/24 21:48	1
2-Butanone	<10		10	ug/L			04/09/24 21:48	1
2-Chlorotoluene	<1.0		1.0	ug/L			04/09/24 21:48	1
2-Hexanone	<10		10	ug/L			04/09/24 21:48	1
4-Chlorotoluene	<1.0		1.0	ug/L			04/09/24 21:48	1
Acetone	<10		10	ug/L			04/09/24 21:48	1
Benzene	<0.50		0.50	ug/L			04/09/24 21:48	1
Bromobenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
Bromochloromethane	<2.0		2.0	ug/L			04/09/24 21:48	1
Bromodichloromethane	<1.0		1.0	ug/L			04/09/24 21:48	1
Bromoform	<5.0	+	5.0	ug/L			04/09/24 21:48	1
Bromomethane	<25		25	ug/L			04/09/24 21:48	1
Carbon disulfide	<10		10	ug/L			04/09/24 21:48	1
Carbon tetrachloride	<0.50	+	0.50	ug/L			04/09/24 21:48	1
Chlorobenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
Chloroethane	<5.0		5.0	ug/L			04/09/24 21:48	1
Chloroform	<1.0		1.0	ug/L			04/09/24 21:48	1
Chloromethane	<10		10	ug/L			04/09/24 21:48	1
cis-1,2-Dichloroethene	<1.0		1.0	ug/L			04/09/24 21:48	1

Eurofins Eaton Analytical Pomona

Client Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-TB

Lab Sample ID: 380-89313-2

Date Collected: 04/01/24 11:00

Matrix: Water

Date Received: 04/02/24 09:19

Method: SW846 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			04/09/24 21:48	1
Dibromochloromethane	<2.0		2.0	ug/L			04/09/24 21:48	1
Dibromomethane	<1.0		1.0	ug/L			04/09/24 21:48	1
Dichlorodifluoromethane	<5.0		5.0	ug/L			04/09/24 21:48	1
Diethyl ether	<10		10	ug/L			04/09/24 21:48	1
Di-isopropyl ether (DIPE)	<2.0		2.0	ug/L			04/09/24 21:48	1
Ethanol	<100		100	ug/L			04/09/24 21:48	1
Ethylbenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
Ethylene Dibromide	<1.0		1.0	ug/L			04/09/24 21:48	1
Ethyl-t-butyl ether (ETBE)	<2.0		2.0	ug/L			04/09/24 21:48	1
Hexachloro-1,3-butadiene	<10		10	ug/L			04/09/24 21:48	1
Hexane	<5.0		5.0	ug/L			04/09/24 21:48	1
Isobutyl alcohol	<75		75	ug/L			04/09/24 21:48	1
Isopropanol	<75		75	ug/L			04/09/24 21:48	1
Isopropylbenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
m,p-Xylene	<2.0		2.0	ug/L			04/09/24 21:48	1
Methylene Chloride	<10		10	ug/L			04/09/24 21:48	1
Methyl-t-Butyl Ether (MTBE)	<1.0		1.0	ug/L			04/09/24 21:48	1
MIBK	<10		10	ug/L			04/09/24 21:48	1
Naphthalene	<10		10	ug/L			04/09/24 21:48	1
n-Butylbenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
N-Propylbenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
o-Xylene	<1.0		1.0	ug/L			04/09/24 21:48	1
p-Isopropyltoluene	<1.0		1.0	ug/L			04/09/24 21:48	1
sec-Butylbenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
Styrene	<1.0		1.0	ug/L			04/09/24 21:48	1
tert-Amyl alcohol	<50		50	ug/L			04/09/24 21:48	1
Tert-amyl-methyl ether (TAME)	<2.0		2.0	ug/L			04/09/24 21:48	1
tert-Butyl alcohol (TBA)	<10		10	ug/L			04/09/24 21:48	1
tert-Butylbenzene	<1.0		1.0	ug/L			04/09/24 21:48	1
Tetrachloroethene	<1.0		1.0	ug/L			04/09/24 21:48	1
Toluene	<1.0		1.0	ug/L			04/09/24 21:48	1
trans-1,2-Dichloroethene	<1.0		1.0	ug/L			04/09/24 21:48	1
trans-1,3-Dichloropropene	<0.50	+	0.50	ug/L			04/09/24 21:48	1
Trichloroethene	<1.0		1.0	ug/L			04/09/24 21:48	1
Trichlorofluoromethane	<10		10	ug/L			04/09/24 21:48	1
Vinyl acetate	<10		10	ug/L			04/09/24 21:48	1
Vinyl chloride	<0.50		0.50	ug/L			04/09/24 21:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 123		04/09/24 21:48	1
4-Bromofluorobenzene (Surr)	89		80 - 120		04/09/24 21:48	1
Dibromofluoromethane (Surr)	98		78 - 120		04/09/24 21:48	1
Toluene-d8 (Surr)	98		80 - 120		04/09/24 21:48	1

Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			04/10/24 14:23	1

Client Sample Results

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-TB

Lab Sample ID: 380-89313-2

Date Collected: 04/01/24 11:00

Matrix: Water

Date Received: 04/02/24 09:19

<u>Surrogate</u>	<u>%Recovery</u>	<u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
4-Bromofluorobenzene (Surr)	96		38 - 134		04/10/24 14:23	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

Action Limit Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-89313-1

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	HI DW	RL	Method	Prep Type
				Limit			
1,1,1-Trichloroethane	<1.0		ug/L	200.0	1.0	8260B	Total/NA
1,1,2-Trichloroethane	<1.0		ug/L	5.000	1.0	8260B	Total/NA
1,1-Dichloroethene	<1.0		ug/L	7.000	1.0	8260B	Total/NA
1,2,3-Trichloropropane	<5.0		ug/L	0.6000	5.0	8260B	Total/NA
1,2,4-Trichlorobenzene	<1.0		ug/L	70.00	1.0	8260B	Total/NA
1,2-Dichlorobenzene	<1.0		ug/L	600.0	1.0	8260B	Total/NA
1,2-Dichloroethane	<0.50		ug/L	5.000	0.50	8260B	Total/NA
1,2-Dichloropropane	<1.0		ug/L	5.000	1.0	8260B	Total/NA
1,4-Dichlorobenzene	<1.0		ug/L	75.000	1.0	8260B	Total/NA
Benzene	<0.50		ug/L	5.000	0.50	8260B	Total/NA
Carbon tetrachloride	<0.50	*+	ug/L	5.000	0.50	8260B	Total/NA
Chlorobenzene	<1.0		ug/L	100.0	1.0	8260B	Total/NA
cis-1,2-Dichloroethene	<1.0		ug/L	70.00	1.0	8260B	Total/NA
Ethylbenzene	<1.0		ug/L	700.0	1.0	8260B	Total/NA
Methylene Chloride	<10		ug/L	5.000	10	8260B	Total/NA
Styrene	<1.0		ug/L	100.0	1.0	8260B	Total/NA
Tetrachloroethene	<1.0		ug/L	5.000	1.0	8260B	Total/NA
Toluene	<1.0		ug/L	1000	1.0	8260B	Total/NA
trans-1,2-Dichloroethene	<1.0		ug/L	100.0	1.0	8260B	Total/NA
Trichloroethene	<1.0		ug/L	5.000	1.0	8260B	Total/NA
Vinyl chloride	<0.50		ug/L	2.000	0.50	8260B	Total/NA

Client Sample ID: BWS2253-J1-TB

Lab Sample ID: 380-89313-2

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	HI DW	RL	Method	Prep Type
				Limit			
1,1,1-Trichloroethane	<1.0		ug/L	200.0	1.0	8260B	Total/NA
1,1,2-Trichloroethane	<1.0		ug/L	5.000	1.0	8260B	Total/NA
1,1-Dichloroethene	<1.0		ug/L	7.000	1.0	8260B	Total/NA
1,2,3-Trichloropropane	<5.0		ug/L	0.6000	5.0	8260B	Total/NA
1,2,4-Trichlorobenzene	<1.0		ug/L	70.00	1.0	8260B	Total/NA
1,2-Dichlorobenzene	<1.0		ug/L	600.0	1.0	8260B	Total/NA
1,2-Dichloroethane	<0.50		ug/L	5.000	0.50	8260B	Total/NA
1,2-Dichloropropane	<1.0		ug/L	5.000	1.0	8260B	Total/NA
1,4-Dichlorobenzene	<1.0		ug/L	75.000	1.0	8260B	Total/NA
Benzene	<0.50		ug/L	5.000	0.50	8260B	Total/NA
Carbon tetrachloride	<0.50	*+	ug/L	5.000	0.50	8260B	Total/NA
Chlorobenzene	<1.0		ug/L	100.0	1.0	8260B	Total/NA
cis-1,2-Dichloroethene	<1.0		ug/L	70.00	1.0	8260B	Total/NA
Ethylbenzene	<1.0		ug/L	700.0	1.0	8260B	Total/NA
Methylene Chloride	<10		ug/L	5.000	10	8260B	Total/NA
Styrene	<1.0		ug/L	100.0	1.0	8260B	Total/NA
Tetrachloroethene	<1.0		ug/L	5.000	1.0	8260B	Total/NA
Toluene	<1.0		ug/L	1000	1.0	8260B	Total/NA

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Action Limit Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-TB (Continued)

Lab Sample ID: 380-89313-2

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits have been highlighted for your convenience.

Analyte	Result	Qualifier	Unit	HI DW	RL	Method	Prep Type
				Limit			
trans-1,2-Dichloroethene	<1.0		ug/L	100.0	1.0	8260B	Total/NA
Trichloroethene	<1.0		ug/L	5.000	1.0	8260B	Total/NA
Vinyl chloride	<0.50		ug/L	2.000	0.50	8260B	Total/NA

Surrogate Summary

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-123)	BFB (80-120)	DBFM (78-120)	TOL (80-120)
380-89313-1	BWS2253-J1-AQ	104	92	99	97
380-89313-2	BWS2253-J1-TB	102	89	98	98
LCS 570-428945/1003	Lab Control Sample	99	95	96	99
LCSD 570-428945/4	Lab Control Sample Dup	100	99	98	100
MB 570-428945/7	Method Blank	104	91	97	97

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

Method: 8015B GRO LL - Gasoline Range Organics - (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB1 (38-134)
380-89313-1	BWS2253-J1-AQ	105
380-89313-1 MS	BWS2253-J1-AQ	112
380-89313-1 MSD	BWS2253-J1-AQ	111
380-89313-2	BWS2253-J1-TB	96
LCS 570-429208/4	Lab Control Sample	123
LCSD 570-429208/5	Lab Control Sample Dup	114
MB 570-429208/6	Method Blank	114
MRL 570-429208/3	Lab Control Sample	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		OTCSN1 (60-130)
380-89313-1	BWS2253-J1-AQ	134 S1+
LCS 570-427019/2-A	Lab Control Sample	117
LCSD 570-427019/3-A	Lab Control Sample Dup	126
MB 570-427019/1-A	Method Blank	131 S1+

Surrogate Legend

OTCSN = n-Octacosane (Surr)

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		HF2PP1 (54-120)
380-89313-1	BWS2253-J1-AQ	111
570-179435-B-1 MS	Matrix Spike	102

Surrogate Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) (Continued)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HF2PP1 (54-120)
570-179435-B-1 MSD	Matrix Spike Duplicate	98
LCS 570-428892/4	Lab Control Sample	104
LCSD 570-428892/5	Lab Control Sample Dup	97
MRL 570-428892/6	Lab Control Sample	19

Surrogate Legend

HF2PP = Hexafluoro-2-propanol (Surr)

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HF2PP2 (54-120)
MB 570-428892/3	Method Blank	97

Surrogate Legend

HF2PP = Hexafluoro-2-propanol (Surr)

QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

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

Lab Sample ID: MB 570-428945/7
Matrix: Water
Analysis Batch: 428945

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<2.0		2.0	ug/L			04/09/24 20:41	1
1,1,1-Trichloroethane	<1.0		1.0	ug/L			04/09/24 20:41	1
1,1,2,2-Tetrachloroethane	<1.0		1.0	ug/L			04/09/24 20:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	<10		10	ug/L			04/09/24 20:41	1
1,1,2-Trichloroethane	<1.0		1.0	ug/L			04/09/24 20:41	1
1,1-Dichloroethane	<1.0		1.0	ug/L			04/09/24 20:41	1
1,1-Dichloroethene	<1.0		1.0	ug/L			04/09/24 20:41	1
1,1-Dichloropropene	<1.0		1.0	ug/L			04/09/24 20:41	1
1,2,3-Trichlorobenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
1,2,3-Trichloropropane	<5.0		5.0	ug/L			04/09/24 20:41	1
1,2,4-Trichlorobenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
1,2,4-Trimethylbenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
1,2-Dibromo-3-Chloropropane	<10		10	ug/L			04/09/24 20:41	1
1,2-Dichlorobenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
1,2-Dichloroethane	<0.50		0.50	ug/L			04/09/24 20:41	1
1,2-Dichloropropane	<1.0		1.0	ug/L			04/09/24 20:41	1
1,3,5-Trimethylbenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
1,3-Dichlorobenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
1,3-Dichloropropane	<1.0		1.0	ug/L			04/09/24 20:41	1
1,4-Dichlorobenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
2,2-Dichloropropane	<1.0		1.0	ug/L			04/09/24 20:41	1
2-Butanone	<10		10	ug/L			04/09/24 20:41	1
2-Chlorotoluene	<1.0		1.0	ug/L			04/09/24 20:41	1
2-Hexanone	<10		10	ug/L			04/09/24 20:41	1
4-Chlorotoluene	<1.0		1.0	ug/L			04/09/24 20:41	1
Acetone	<10		10	ug/L			04/09/24 20:41	1
Benzene	<0.50		0.50	ug/L			04/09/24 20:41	1
Bromobenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
Bromochloromethane	<2.0		2.0	ug/L			04/09/24 20:41	1
Bromodichloromethane	<1.0		1.0	ug/L			04/09/24 20:41	1
Bromoform	<5.0		5.0	ug/L			04/09/24 20:41	1
Bromomethane	<25		25	ug/L			04/09/24 20:41	1
Carbon disulfide	<10		10	ug/L			04/09/24 20:41	1
Carbon tetrachloride	<0.50		0.50	ug/L			04/09/24 20:41	1
Chlorobenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
Chloroethane	<5.0		5.0	ug/L			04/09/24 20:41	1
Chloroform	<1.0		1.0	ug/L			04/09/24 20:41	1
Chloromethane	<10		10	ug/L			04/09/24 20:41	1
cis-1,2-Dichloroethene	<1.0		1.0	ug/L			04/09/24 20:41	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			04/09/24 20:41	1
Dibromochloromethane	<2.0		2.0	ug/L			04/09/24 20:41	1
Dibromomethane	<1.0		1.0	ug/L			04/09/24 20:41	1
Dichlorodifluoromethane	<5.0		5.0	ug/L			04/09/24 20:41	1
Diethyl ether	<10		10	ug/L			04/09/24 20:41	1
Di-isopropyl ether (DIPE)	<2.0		2.0	ug/L			04/09/24 20:41	1
Ethanol	<100		100	ug/L			04/09/24 20:41	1
Ethylbenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
Ethylene Dibromide	<1.0		1.0	ug/L			04/09/24 20:41	1

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

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

Lab Sample ID: MB 570-428945/7
Matrix: Water
Analysis Batch: 428945

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl-t-butyl ether (ETBE)	<2.0		2.0	ug/L			04/09/24 20:41	1
Hexachloro-1,3-butadiene	<10		10	ug/L			04/09/24 20:41	1
Hexane	<5.0		5.0	ug/L			04/09/24 20:41	1
Isobutyl alcohol	<75		75	ug/L			04/09/24 20:41	1
Isopropanol	<75		75	ug/L			04/09/24 20:41	1
Isopropylbenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
m,p-Xylene	<2.0		2.0	ug/L			04/09/24 20:41	1
Methylene Chloride	<10		10	ug/L			04/09/24 20:41	1
Methyl-t-Butyl Ether (MTBE)	<1.0		1.0	ug/L			04/09/24 20:41	1
MIBK	<10		10	ug/L			04/09/24 20:41	1
Naphthalene	<10		10	ug/L			04/09/24 20:41	1
n-Butylbenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
N-Propylbenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
o-Xylene	<1.0		1.0	ug/L			04/09/24 20:41	1
p-Isopropyltoluene	<1.0		1.0	ug/L			04/09/24 20:41	1
sec-Butylbenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
Styrene	<1.0		1.0	ug/L			04/09/24 20:41	1
tert-Amyl alcohol	<50		50	ug/L			04/09/24 20:41	1
Tert-amyl-methyl ether (TAME)	<2.0		2.0	ug/L			04/09/24 20:41	1
tert-Butyl alcohol (TBA)	<10		10	ug/L			04/09/24 20:41	1
tert-Butylbenzene	<1.0		1.0	ug/L			04/09/24 20:41	1
Tetrachloroethene	<1.0		1.0	ug/L			04/09/24 20:41	1
Toluene	<1.0		1.0	ug/L			04/09/24 20:41	1
trans-1,2-Dichloroethene	<1.0		1.0	ug/L			04/09/24 20:41	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			04/09/24 20:41	1
Trichloroethene	<1.0		1.0	ug/L			04/09/24 20:41	1
Trichlorofluoromethane	<10		10	ug/L			04/09/24 20:41	1
Vinyl acetate	<10		10	ug/L			04/09/24 20:41	1
Vinyl chloride	<0.50		0.50	ug/L			04/09/24 20:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		70 - 123		04/09/24 20:41	1
4-Bromofluorobenzene (Surr)	91		80 - 120		04/09/24 20:41	1
Dibromofluoromethane (Surr)	97		78 - 120		04/09/24 20:41	1
Toluene-d8 (Surr)	97		80 - 120		04/09/24 20:41	1

Lab Sample ID: LCS 570-428945/1003
Matrix: Water
Analysis Batch: 428945

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	20.0	23.9		ug/L		120	80 - 122
1,1,1-Trichloroethane	20.0	23.7		ug/L		118	78 - 125
1,1,2,2-Tetrachloroethane	20.0	23.7		ug/L		118	79 - 127
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	24.7		ug/L		124	72 - 138
1,1,2-Trichloroethane	20.0	22.9		ug/L		115	80 - 124
1,1-Dichloroethane	20.0	21.7		ug/L		109	80 - 127
1,1-Dichloroethene	20.0	23.6		ug/L		118	80 - 133

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QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

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

Lab Sample ID: LCS 570-428945/1003
Matrix: Water
Analysis Batch: 428945

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	20.0	23.1		ug/L		115	79 - 126
1,2,3-Trichlorobenzene	20.0	19.8		ug/L		99	79 - 128
1,2,3-Trichloropropane	20.0	22.4		ug/L		112	71 - 128
1,2,4-Trichlorobenzene	20.0	18.8		ug/L		94	77 - 126
1,2,4-Trimethylbenzene	20.0	22.8		ug/L		114	80 - 121
1,2-Dibromo-3-Chloropropane	20.0	23.6		ug/L		118	66 - 122
1,2-Dichlorobenzene	20.0	23.6		ug/L		118	80 - 121
1,2-Dichloroethane	20.0	22.7		ug/L		113	77 - 122
1,2-Dichloropropane	20.0	21.8		ug/L		109	80 - 122
1,3,5-Trimethylbenzene	20.0	22.1		ug/L		110	80 - 123
1,3-Dichlorobenzene	20.0	23.2		ug/L		116	80 - 120
1,3-Dichloropropane	20.0	22.1		ug/L		111	80 - 121
1,4-Dichlorobenzene	20.0	23.2		ug/L		116	80 - 120
2,2-Dichloropropane	20.0	27.5		ug/L		138	68 - 143
2-Butanone	20.0	23.2		ug/L		116	61 - 139
2-Chlorotoluene	20.0	22.2		ug/L		111	80 - 121
2-Hexanone	20.0	21.9		ug/L		110	63 - 134
4-Chlorotoluene	20.0	23.6		ug/L		118	80 - 121
Acetone	20.0	24.2		ug/L		121	45 - 150
Benzene	20.0	22.1		ug/L		110	80 - 121
Bromobenzene	20.0	21.7		ug/L		109	80 - 120
Bromochloromethane	20.0	21.4		ug/L		107	80 - 121
Bromodichloromethane	20.0	22.8		ug/L		114	80 - 121
Bromoform	20.0	25.2	*+	ug/L		126	78 - 124
Bromomethane	20.0	28.3		ug/L		142	48 - 156
Carbon disulfide	20.0	22.7		ug/L		114	76 - 129
Carbon tetrachloride	20.0	26.8		ug/L		134	71 - 137
Chlorobenzene	20.0	22.1		ug/L		111	80 - 120
Chloroethane	20.0	19.8		ug/L		99	73 - 138
Chloroform	20.0	22.0		ug/L		110	80 - 121
Chloromethane	20.0	21.8		ug/L		109	57 - 138
cis-1,2-Dichloroethene	20.0	21.7		ug/L		108	80 - 125
cis-1,3-Dichloropropane	20.0	22.8		ug/L		114	80 - 120
Dibromochloromethane	20.0	23.1		ug/L		116	80 - 126
Dibromomethane	20.0	23.2		ug/L		116	80 - 120
Dichlorodifluoromethane	20.0	25.6		ug/L		128	44 - 148
Diethyl ether	20.0	22.3		ug/L		111	71 - 132
Di-isopropyl ether (DIPE)	20.0	22.3		ug/L		111	75 - 134
Ethanol	200	285		ug/L		142	50 - 168
Ethylbenzene	20.0	22.2		ug/L		111	80 - 121
Ethylene Dibromide	20.0	22.4		ug/L		112	80 - 120
Ethyl-t-butyl ether (ETBE)	20.0	21.6		ug/L		108	80 - 124
Isopropylbenzene	20.0	22.8		ug/L		114	80 - 121
m,p-Xylene	40.0	44.9		ug/L		112	80 - 123
Methylene Chloride	20.0	21.8		ug/L		109	80 - 121
Methyl-t-Butyl Ether (MTBE)	20.0	21.8		ug/L		109	78 - 123
MIBK	20.0	21.0		ug/L		105	67 - 125
Naphthalene	20.0	18.4		ug/L		92	65 - 133
n-Butylbenzene	20.0	23.1		ug/L		116	80 - 125

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

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

Lab Sample ID: LCS 570-428945/1003
Matrix: Water
Analysis Batch: 428945

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-Propylbenzene	20.0	22.7		ug/L		113	80 - 125
o-Xylene	20.0	22.9		ug/L		114	80 - 122
p-Isopropyltoluene	20.0	23.8		ug/L		119	80 - 124
sec-Butylbenzene	20.0	24.1		ug/L		121	80 - 122
Styrene	20.0	22.2		ug/L		111	80 - 120
tert-Amyl alcohol	100	106		ug/L		106	51 - 148
Tert-amyl-methyl ether (TAME)	20.0	21.4		ug/L		107	74 - 125
tert-Butyl alcohol (TBA)	100	128		ug/L		128	70 - 141
tert-Butylbenzene	20.0	24.4		ug/L		122	80 - 122
Tetrachloroethene	20.0	22.6		ug/L		113	80 - 122
Toluene	20.0	21.9		ug/L		110	80 - 120
trans-1,2-Dichloroethene	20.0	22.3		ug/L		111	80 - 122
trans-1,3-Dichloropropene	20.0	25.1		ug/L		125	80 - 125
Trichloroethene	20.0	22.5		ug/L		113	80 - 120
Trichlorofluoromethane	20.0	23.1		ug/L		115	67 - 142
Vinyl acetate	20.0	23.0		ug/L		115	62 - 140
Vinyl chloride	20.0	23.0		ug/L		115	66 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 123
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	96		78 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 570-428945/4
Matrix: Water
Analysis Batch: 428945

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	20.0	23.4		ug/L		117	80 - 122	2	20
1,1,1-Trichloroethane	20.0	24.8		ug/L		124	78 - 125	5	20
1,1,2,2-Tetrachloroethane	20.0	23.0		ug/L		115	79 - 127	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	26.3		ug/L		131	72 - 138	6	20
1,1,2-Trichloroethane	20.0	22.7		ug/L		114	80 - 124	1	20
1,1-Dichloroethane	20.0	22.4		ug/L		112	80 - 127	3	20
1,1-Dichloroethene	20.0	24.4		ug/L		122	80 - 133	3	20
1,1-Dichloropropene	20.0	23.7		ug/L		118	79 - 126	2	20
1,2,3-Trichlorobenzene	20.0	19.4		ug/L		97	79 - 128	2	20
1,2,3-Trichloropropane	20.0	22.0		ug/L		110	71 - 128	1	20
1,2,4-Trichlorobenzene	20.0	18.3		ug/L		92	77 - 126	3	20
1,2,4-Trimethylbenzene	20.0	22.4		ug/L		112	80 - 121	2	20
1,2-Dibromo-3-Chloropropane	20.0	23.3		ug/L		116	66 - 122	1	20
1,2-Dichlorobenzene	20.0	22.9		ug/L		114	80 - 121	3	20
1,2-Dichloroethane	20.0	22.8		ug/L		114	77 - 122	1	20
1,2-Dichloropropane	20.0	22.1		ug/L		111	80 - 122	1	20
1,3,5-Trimethylbenzene	20.0	22.9		ug/L		114	80 - 123	4	20
1,3-Dichlorobenzene	20.0	22.2		ug/L		111	80 - 120	4	20
1,3-Dichloropropane	20.0	22.1		ug/L		110	80 - 121	0	20

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

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

Lab Sample ID: LCSD 570-428945/4
Matrix: Water
Analysis Batch: 428945

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dichlorobenzene	20.0	22.5		ug/L		113	80 - 120	3	20
2,2-Dichloropropane	20.0	28.5		ug/L		142	68 - 143	4	20
2-Butanone	20.0	23.1		ug/L		115	61 - 139	1	25
2-Chlorotoluene	20.0	22.5		ug/L		113	80 - 121	2	20
2-Hexanone	20.0	21.5		ug/L		107	63 - 134	2	21
4-Chlorotoluene	20.0	22.7		ug/L		113	80 - 121	4	20
Acetone	20.0	23.2		ug/L		116	45 - 150	4	23
Benzene	20.0	22.6		ug/L		113	80 - 121	2	20
Bromobenzene	20.0	22.3		ug/L		111	80 - 120	3	20
Bromochloromethane	20.0	22.0		ug/L		110	80 - 121	3	20
Bromodichloromethane	20.0	23.3		ug/L		117	80 - 121	2	20
Bromoform	20.0	24.5		ug/L		122	78 - 124	3	20
Bromomethane	20.0	27.9		ug/L		139	48 - 156	2	21
Carbon disulfide	20.0	23.7		ug/L		119	76 - 129	4	20
Carbon tetrachloride	20.0	28.2	*+	ug/L		141	71 - 137	5	20
Chlorobenzene	20.0	22.2		ug/L		111	80 - 120	1	20
Chloroethane	20.0	21.0		ug/L		105	73 - 138	6	20
Chloroform	20.0	22.3		ug/L		111	80 - 121	1	20
Chloromethane	20.0	22.6		ug/L		113	57 - 138	3	20
cis-1,2-Dichloroethene	20.0	22.6		ug/L		113	80 - 125	4	20
cis-1,3-Dichloropropene	20.0	23.0		ug/L		115	80 - 120	1	20
Dibromochloromethane	20.0	22.8		ug/L		114	80 - 126	2	20
Dibromomethane	20.0	23.1		ug/L		116	80 - 120	1	20
Dichlorodifluoromethane	20.0	26.9		ug/L		135	44 - 148	5	28
Diethyl ether	20.0	22.3		ug/L		112	71 - 132	0	20
Di-isopropyl ether (DIPE)	20.0	22.6		ug/L		113	75 - 134	1	20
Ethanol	200	264		ug/L		132	50 - 168	7	29
Ethylbenzene	20.0	22.6		ug/L		113	80 - 121	2	20
Ethylene Dibromide	20.0	22.4		ug/L		112	80 - 120	0	20
Ethyl-t-butyl ether (ETBE)	20.0	21.7		ug/L		109	80 - 124	1	20
Isopropylbenzene	20.0	23.3		ug/L		116	80 - 121	2	20
m,p-Xylene	40.0	45.2		ug/L		113	80 - 123	1	20
Methylene Chloride	20.0	21.8		ug/L		109	80 - 121	0	20
Methyl-t-Butyl Ether (MTBE)	20.0	22.4		ug/L		112	78 - 123	3	20
MIBK	20.0	21.5		ug/L		107	67 - 125	2	20
Naphthalene	20.0	18.0		ug/L		90	65 - 133	2	20
n-Butylbenzene	20.0	22.9		ug/L		115	80 - 125	1	20
N-Propylbenzene	20.0	23.1		ug/L		116	80 - 125	2	20
o-Xylene	20.0	22.9		ug/L		114	80 - 122	0	20
p-Isopropyltoluene	20.0	23.3		ug/L		116	80 - 124	2	20
sec-Butylbenzene	20.0	23.6		ug/L		118	80 - 122	2	20
Styrene	20.0	22.5		ug/L		113	80 - 120	1	20
tert-Amyl alcohol	100	87.5		ug/L		87	51 - 148	19	29
Tert-amyl-methyl ether (TAME)	20.0	20.8		ug/L		104	74 - 125	3	20
tert-Butyl alcohol (TBA)	100	125		ug/L		125	70 - 141	2	20
tert-Butylbenzene	20.0	23.7		ug/L		118	80 - 122	3	20
Tetrachloroethene	20.0	22.9		ug/L		115	80 - 122	2	20
Toluene	20.0	22.6		ug/L		113	80 - 120	3	20
trans-1,2-Dichloroethene	20.0	23.2		ug/L		116	80 - 122	4	20

Eurofins Eaton Analytical Pomona

QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

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

Lab Sample ID: LCSD 570-428945/4
Matrix: Water
Analysis Batch: 428945

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,3-Dichloropropene	20.0	25.2	*+	ug/L		126	80 - 125	0	20
Trichloroethene	20.0	22.8		ug/L		114	80 - 120	1	20
Trichlorofluoromethane	20.0	24.3		ug/L		121	67 - 142	5	20
Vinyl acetate	20.0	22.9		ug/L		114	62 - 140	1	21
Vinyl chloride	20.0	23.6		ug/L		118	66 - 136	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 123
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	98		78 - 120
Toluene-d8 (Surr)	100		80 - 120

Method: 8015B GRO LL - Gasoline Range Organics - (GC)

Lab Sample ID: MB 570-429208/6
Matrix: Water
Analysis Batch: 429208

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			04/10/24 13:43	1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	114		38 - 134		04/10/24 13:43	1

Lab Sample ID: LCS 570-429208/4
Matrix: Water
Analysis Batch: 429208

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	389		ug/L		97	78 - 120

Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits
4-Bromofluorobenzene (Surr)	123		38 - 134

Lab Sample ID: LCSD 570-429208/5
Matrix: Water
Analysis Batch: 429208

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	400	385		ug/L		96	78 - 120	1	10

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
4-Bromofluorobenzene (Surr)	114		38 - 134

QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Method: 8015B GRO LL - Gasoline Range Organics - (GC) (Continued)

Lab Sample ID: MRL 570-429208/3
Matrix: Water
Analysis Batch: 429208

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	10.0	12.5		ug/L		125	50 - 150
Surrogate		MRL %Recovery	MRL Qualifier				Limits
4-Bromofluorobenzene (Surr)		101					38 - 134

Lab Sample ID: 380-89313-1 MS
Matrix: Water
Analysis Batch: 429208

Client Sample ID: BWS2253-J1-AQ
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	<10		400	363		ug/L		91	68 - 122
Surrogate		MS %Recovery		MS Qualifier					Limits
4-Bromofluorobenzene (Surr)		112							38 - 134

Lab Sample ID: 380-89313-1 MSD
Matrix: Water
Analysis Batch: 429208

Client Sample ID: BWS2253-J1-AQ
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	346		ug/L		87	68 - 122	5	18
Surrogate		MSD %Recovery		MSD Qualifier					Limits		
4-Bromofluorobenzene (Surr)		111							38 - 134		

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level

Lab Sample ID: MB 570-427019/1-A
Matrix: Water
Analysis Batch: 427142

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 427019

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25	ug/L		04/03/24 14:57	04/04/24 08:27	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		04/03/24 14:57	04/04/24 08:27	1
C8-C18	<25		25	ug/L		04/03/24 14:57	04/04/24 08:27	1
Surrogate		MB %Recovery				Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)		131 S1+				04/03/24 14:57	04/04/24 08:27	1

Lab Sample ID: LCS 570-427019/2-A
Matrix: Water
Analysis Batch: 427142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 427019

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1680		ug/L		105	56 - 127

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QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level (Continued)

Lab Sample ID: LCS 570-427019/2-A
 Matrix: Water
 Analysis Batch: 427142

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 427019

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>n</i> -Octacosane (Surr)	117		60 - 130

Lab Sample ID: LCSD 570-427019/3-A
 Matrix: Water
 Analysis Batch: 427142

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA
 Prep Batch: 427019

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28	1600	1780		ug/L		111	56 - 127	5	23

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
<i>n</i> -Octacosane (Surr)	126		60 - 130

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC)

Lab Sample ID: MB 570-428892/3
 Matrix: Water
 Analysis Batch: 428892

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	<0.10		0.10	mg/L			04/09/24 18:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Hexafluoro-2-propanol (Surr)	97		54 - 120		04/09/24 18:45	1

Lab Sample ID: LCS 570-428892/4
 Matrix: Water
 Analysis Batch: 428892

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethanol	2.00	1.91		mg/L		95	78 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Hexafluoro-2-propanol (Surr)	104		54 - 120

Lab Sample ID: LCSD 570-428892/5
 Matrix: Water
 Analysis Batch: 428892

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethanol	2.00	2.15		mg/L		107	78 - 131	12	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Hexafluoro-2-propanol (Surr)	97		54 - 120

QC Sample Results

Client: City & County of Honolulu
 Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Method: 8015B - Nonhalogenated Organic Compounds - Direct Injection (GC) (Continued)

Lab Sample ID: MRL 570-428892/6
Matrix: Water
Analysis Batch: 428892

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Ethanol	0.100	0.125		mg/L		125	50 - 150
Surrogate		MRL %Recovery	MRL Qualifier				Limits
Hexafluoro-2-propanol (Surr)		19					54 - 120

Lab Sample ID: 570-179435-B-1 MS
Matrix: Water
Analysis Batch: 428892

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Ethanol	<0.10		2.00	1.81		mg/L		90	20 - 173
Surrogate		MS %Recovery		MS Qualifier					Limits
Hexafluoro-2-propanol (Surr)		102							54 - 120

Lab Sample ID: 570-179435-B-1 MSD
Matrix: Water
Analysis Batch: 428892

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ethanol	<0.10		2.00	1.96		mg/L		98	20 - 173	8	21
Surrogate		MSD %Recovery		MSD Qualifier					Limits		
Hexafluoro-2-propanol (Surr)		98							54 - 120		

QC Association Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

GC/MS VOA

Analysis Batch: 428945

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-89313-1	BWS2253-J1-AQ	Total/NA	Water	8260B	
380-89313-2	BWS2253-J1-TB	Total/NA	Water	8260B	
MB 570-428945/7	Method Blank	Total/NA	Water	8260B	
LCS 570-428945/1003	Lab Control Sample	Total/NA	Water	8260B	
LCSD 570-428945/4	Lab Control Sample Dup	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 429208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-89313-1	BWS2253-J1-AQ	Total/NA	Water	8015B GRO LL	
380-89313-2	BWS2253-J1-TB	Total/NA	Water	8015B GRO LL	
MB 570-429208/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-429208/4	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-429208/5	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-429208/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-89313-1 MS	BWS2253-J1-AQ	Total/NA	Water	8015B GRO LL	
380-89313-1 MSD	BWS2253-J1-AQ	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 427019

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-89313-1	BWS2253-J1-AQ	Total/NA	Water	3510C	
MB 570-427019/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-427019/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-427019/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 427142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 570-427019/1-A	Method Blank	Total/NA	Water	8015B	427019
LCS 570-427019/2-A	Lab Control Sample	Total/NA	Water	8015B	427019
LCSD 570-427019/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	427019

Analysis Batch: 428892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-89313-1	BWS2253-J1-AQ	Total/NA	Water	8015B	
MB 570-428892/3	Method Blank	Total/NA	Water	8015B	
LCS 570-428892/4	Lab Control Sample	Total/NA	Water	8015B	
LCSD 570-428892/5	Lab Control Sample Dup	Total/NA	Water	8015B	
MRL 570-428892/6	Lab Control Sample	Total/NA	Water	8015B	
570-179435-B-1 MS	Matrix Spike	Total/NA	Water	8015B	
570-179435-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	

Analysis Batch: 429052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-89313-1	BWS2253-J1-AQ	Total/NA	Water	8015B	427019

Lab Chronicle

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-89313-1

Date Collected: 04/01/24 11:00

Matrix: Water

Date Received: 04/02/24 09:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	428945	CG	EET CAL 4	04/10/24 02:16
Total/NA	Analysis	8015B GRO LL		1	429208	A9VE	EET CAL 4	04/10/24 17:26
Total/NA	Prep	3510C			427019	UFLU	EET CAL 4	04/03/24 14:57
Total/NA	Analysis	8015B		1	429052	SP9M	EET CAL 4	04/10/24 13:22
Total/NA	Analysis	8015B		5	428892	UJ3K	EET CAL 4	04/09/24 20:12

Client Sample ID: BWS2253-J1-TB

Lab Sample ID: 380-89313-2

Date Collected: 04/01/24 11:00

Matrix: Water

Date Received: 04/02/24 09:19

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B		1	428945	CG	EET CAL 4	04/09/24 21:48
Total/NA	Analysis	8015B GRO LL		1	429208	A9VE	EET CAL 4	04/10/24 14:23

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-16-24
California	Los Angeles County Sanitation Districts	10109	08-01-24
California	State	3082	04-19-24
Kansas	NELAP	E-10420	08-01-24
Nevada	State	CA00111	07-31-24
Oregon	NELAP	4175	02-03-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24

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Method Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	EET CAL 4
8015B GRO LL	Gasoline Range Organics - (GC)	SW846	EET CAL 4
8015B	Diesel Range Organics (DRO) (GC) Low Level	SW846	EET CAL 4
8015B	Nonhalogenated Organic Compounds - Direct Injection (GC)	SW846	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494



Sample Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-89313-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
380-89313-1	BWS2253-J1-AQ	Water	04/01/24 11:00	04/02/24 09:19
380-89313-2	BWS2253-J1-TB	Water	04/01/24 11:00	04/02/24 09:19

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Chain of Custody Record

Client Information Client Contact: Mr. Erwin Kawata Phone: (958)205-0730 City & County of Honolulu Address: 630 South Beretania Street City: Honolulu State, Zip: HI, 96843 Phone: 808-748-5066(Tel) Email: ekawata@hbws.org Project Name: HRS-340E - RED-HILL - INTERA Site: Site J		Lab PM: Arada, Rachelle E-Mail: Rachelle.Arada@et.eurofins.com State of Origin: Hawaii Camer Tracking No(s): Page: Page 1 of 1 Job #:		Due Date Requested: TAT Requested (days): Standard Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: C20525101 exp 05312023 WO #: Project #: 38002227 SSOW#: Due Date Requested:		Analysis Requested SUBCONTRACT - TPH 8015 Diesel and Motor Oil SUBCONTRACT - TPH 8015 Jet Fuels SUBCONTRACT - TPH 8015 Jet Fuels SUBCONTRACT - All Analytes SUBCONTRACT - 8015 Gas PFAS 537.1_DW_PREG-697.4-Full-List PFAS 1633_DDS_1633 Std-List 8260B - (MOD) Super Volatiles List SUBCONTRACT - 8015C SUBCONTRACT - PREG-(2-Butoxyethanol)		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Arsenic H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsHClO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP, Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)		Special Instructions/Notes: x = testing comes from another container. Total Number of containers: 4 Subcontract Notes: 625 PAH - Physis 8015 TPH D+M, 8015 C, 8015 Gas - EEA POM 8015 Gas - EEA POM 8260B - EEA POM 625.1 - EEA POM PFAS 537.1 & 533 - EEA POM PFAS 1633 - EEA SAC Btl and Rep rt in EE 7410							
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overstabil, etc.)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 825-PAT Only + TICs	SUBCONTRACT - TPH 8015 Jet Fuels	SUBCONTRACT - TPH 8015 Jet Fuels	SUBCONTRACT - All Analytes	PFAS 537.1_DW_PREG-697.4-Full-List	PFAS 1633_DDS_1633 Std-List	8260B - (MOD) Super Volatiles List	SUBCONTRACT - 8015C	SUBCONTRACT - PREG-(2-Butoxyethanol)	Total Number of containers	Special Instructions/Notes
BWS2253-J1-AQ	4/1/24	11:00	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	15	
BWS2253-J1-TB	4/1/24	11:00	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4	
BWS2253-J1-FB			G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	4	



Eurofins Eaton Analytical Pomona

941 Corporate Center Drive
Pomona, CA 91768-2642
Phone: 626-386-1100

Chain of Custody Record



eurofins Env

Loc: 380
89313

Client Information (Sub Contract Lab)	Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact:	Phone:	E-Mail:	State of Origin:	Page:
Shipping/Receiving		Rachelle.Arada@et.eurofinsus.com	Hawaii	Page 1 of 1
Company:	Accreditations Required (See note):			Job #:
Eurofins Environment Testing Southwest,	State - Hawaii			380-89313-1

Address:	Due Date Requested:	Analysis Requested				Preservation Codes:
2841 Dow Avenue, Suite 100,	4/22/2024					
City:	TAT Requested (days):					
Tustin						
State, Zip:	PO #:					M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)
CA, 92780	WO #:					
Phone:	Project #:					
714-895-5494(Tel)	38002227					
Email:	SSOW#:					Other:
Project Name:						
HRS-340E - RED-HILL - INTERA						
Site:						

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/sol, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested										Total Number of containers	Special Instructions/Note:	
							8250B/5030C (MOD) Super Volatiles List	8015B_GRO_LL/5030C (MOD) GRO	8015B_DAI/Ethanol	8015B_DRO_LL_CS/510C_LL_HNL Ranges: C10-C24/C24-C36/C8-C18									
BWS2253-J1-AQ (380-89313-1)	4/1/24	11:00 Hawaiian		Water	X	X	X	X											
BWS2253-J1-TB (380-89313-2)	4/1/24	11:00 Hawaiian		Water	X	X													



380-89313 Chain of Custody

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:
Primary Deliverable Rank: 2	

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <i>[Signature]</i>	4/12/24 15:12	Company: <i>[Signature]</i>	Received by: <i>[Signature]</i>
Relinquished by: <i>[Signature]</i>	4/12/24 16:27	Company: <i>[Signature]</i>	Received by: <i>[Signature]</i>
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:	4/12/24 16:30 1.7/1.7 SC12

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-89313-1

Login Number: 89313
List Number: 1
Creator: Segura, Ryan

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
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	
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	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-89313-1

Login Number: 89313
List Number: 2
Creator: Khana, Piyush

List Source: Eurofins Calscience
List Creation: 04/02/24 05:39 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
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	1.7
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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

