

ANALYTICAL REPORT

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Laboratory Job ID: 380-1328-1
Client Project/Site: RED-HILL

For:
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Public Service Bldg. Room 308
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Attn: Mr. Erwin Kawata



Authorized for release by:
10/19/2022 1:48:44 PM

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

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)



Debbie Frank
Project Manager
10/19/2022 1:48:44 PM



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Definitions/Glossary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
F1	MS and/or MSD recovery exceeds control limits.

GC/MS Semi VOA TICs

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

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
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/Site: RED-HILL

Job ID: 380-1328-1

Job ID: 380-1328-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative 380-1328-1

Comments

No additional comments.

Receipt

The samples were received on 5/5/2022 11:30 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 3.7° C.

GC/MS Semi VOA

Method 525.2: The method blank for preparation batch 380-3930 and analytical batch 380-4166 contained Di-n-butyl phthalate above the method detection limit (MDL). Associated samples were not re-analyzed because results were less than the reporting limit (RL) OR practical quantitation limit (PQL).

Method 525.2: The continuing calibration verification (CCV) associated with batch 380-4166 recovered above the upper control limit for Chlorobenzilate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCVIS 380-4166/2).

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

Subcontract non-Sister

See attached subcontract report.

Organic Prep

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

Subcontract Work

Methods 8015 Diesel LL (EAL) and Motor Oil, 8015 Gas (Purgeable) LL (EAL): These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report.

Detection Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-1328-1

No Detections.

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-1328-2

No Detections.

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-1328-3

No Detections.

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-1328-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Monrovia



Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-1328-1

Date Collected: 05/03/22 11:42

Matrix: Drinking Water

Date Received: 05/05/22 11:30

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
2,4'-DDE	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
2,4'-DDT	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
2,4-Dinitrotoluene	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
2,6-Dinitrotoluene	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
4,4'-DDD	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
4,4'-DDE	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
4,4'-DDT	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Acenaphthene	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Acenaphthylene	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Acetochlor	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Alachlor	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
alpha-BHC	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
alpha-Chlordane	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Anthracene	ND		0.019	ug/L		05/10/22 09:04	05/16/22 13:58	1
Atrazine	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Benz(a)anthracene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Benzo[a]pyrene	ND		0.019	ug/L		05/10/22 09:04	05/16/22 13:58	1
Benzo[b]fluoranthene	ND		0.019	ug/L		05/10/22 09:04	05/16/22 13:58	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Benzo[k]fluoranthene	ND		0.019	ug/L		05/10/22 09:04	05/16/22 13:58	1
beta-BHC	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Bromacil	ND	*1	0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Butachlor	ND	*+	0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Butylbenzylphthalate	ND		0.49	ug/L		05/10/22 09:04	05/16/22 13:58	1
Caffeine	ND	*1	0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Chlorobenzilate	ND	*+	0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Chloroneb	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Chlorothalonil (Draconil, Bravo)	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Chlorpyrifos	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Chrysene	ND		0.019	ug/L		05/10/22 09:04	05/16/22 13:58	1
delta-BHC	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Di(2-ethylhexyl)adipate	ND		0.58	ug/L		05/10/22 09:04	05/16/22 13:58	1
Bis(2-ethylhexyl) phthalate	ND		0.58	ug/L		05/10/22 09:04	05/16/22 13:58	1
Diazinon (Qualitative)	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Diclorvos (DDVP)	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Dieldrin	ND		0.19	ug/L		05/10/22 09:04	05/16/22 13:58	1
Diethylphthalate	ND		0.49	ug/L		05/10/22 09:04	05/16/22 13:58	1
Dimethoate	ND	^3+ *+ *1	0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Dimethylphthalate	ND		0.49	ug/L		05/10/22 09:04	05/16/22 13:58	1
Di-n-butyl phthalate	ND		0.97	ug/L		05/10/22 09:04	05/16/22 13:58	1
Di-n-octyl phthalate	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Endosulfan I (Alpha)	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Endosulfan II (Beta)	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Endosulfan sulfate	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Endrin	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Endrin aldehyde	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1

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Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-1328-1

Date Collected: 05/03/22 11:42

Matrix: Drinking Water

Date Received: 05/05/22 11:30

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Fluoranthene	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Fluorene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
gamma-Chlordane	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Heptachlor	ND	^3+	0.039	ug/L		05/10/22 09:04	05/16/22 13:58	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Hexachlorobenzene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Isophorone	ND		0.49	ug/L		05/10/22 09:04	05/16/22 13:58	1
Lindane	ND		0.039	ug/L		05/10/22 09:04	05/16/22 13:58	1
Malathion	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Methoxychlor	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Metolachlor	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Metribuzin	ND	*1	0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Molinate	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Naphthalene	ND		0.29	ug/L		05/10/22 09:04	05/16/22 13:58	1
Parathion	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Pendimethalin (Penoxaline)	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Total Permethrin (mixed isomers)	ND		0.19	ug/L		05/10/22 09:04	05/16/22 13:58	1
Phenanthrene	ND		0.039	ug/L		05/10/22 09:04	05/16/22 13:58	1
Propachlor	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Pyrene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Simazine	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Terbacil	ND	*+ *1	0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Terbutylazine	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1
Thiobencarb	ND		0.19	ug/L		05/10/22 09:04	05/16/22 13:58	1
trans-Nonachlor	ND		0.049	ug/L		05/10/22 09:04	05/16/22 13:58	1
Trifluralin	ND		0.097	ug/L		05/10/22 09:04	05/16/22 13:58	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				05/10/22 09:04	05/16/22 13:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	105		70 - 130	05/10/22 09:04	05/16/22 13:58	1
Triphenylphosphate	106		70 - 130	05/10/22 09:04	05/16/22 13:58	1
Perylene-d12	89		70 - 130	05/10/22 09:04	05/16/22 13:58	1

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.026		mg/L			05/10/22 23:46	1
MOTOR OIL	ND	U	0.052		mg/L			05/10/22 23:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	79		60 - 130		05/10/22 23:46	1
HEXACOSANE	102		60 - 130		05/10/22 23:46	1

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-1328-1

Date Collected: 05/03/22 11:42

Matrix: Drinking Water

Date Received: 05/05/22 11:30

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			05/06/22 18:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	88		60 - 140					05/06/22 18:29	1

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-1328-2

Date Collected: 05/03/22 11:42

Matrix: Water

Date Received: 05/05/22 11:30

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			05/06/22 19:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	89		60 - 140					05/06/22 19:04	1

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-1328-3

Date Collected: 05/03/22 12:06

Matrix: Drinking Water

Date Received: 05/05/22 11:30

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
2,4'-DDE	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
2,4'-DDT	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
2,4-Dinitrotoluene	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
2,6-Dinitrotoluene	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
4,4'-DDD	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
4,4'-DDE	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
4,4'-DDT	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Acenaphthene	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Acenaphthylene	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Acetochlor	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Alachlor	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
alpha-BHC	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
alpha-Chlordane	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Anthracene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 14:18	1
Atrazine	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Benz(a)anthracene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Benzo[a]pyrene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 14:18	1
Benzo[b]fluoranthene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 14:18	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Benzo[k]fluoranthene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 14:18	1
beta-BHC	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Bromacil	ND	*1	0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Butachlor	ND	*+	0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Butylbenzylphthalate	ND		0.49	ug/L		05/10/22 09:04	05/16/22 14:18	1
Caffeine	ND	*1	0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1

Eurofins Eaton Monrovia

Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-1328-3

Date Collected: 05/03/22 12:06

Matrix: Drinking Water

Date Received: 05/05/22 11:30

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzilate	ND	*+	0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Chloroneb	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Chlorothalonil (Draconil, Bravo)	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Chlorpyrifos	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Chrysene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 14:18	1
delta-BHC	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		05/10/22 09:04	05/16/22 14:18	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		05/10/22 09:04	05/16/22 14:18	1
Diazinon (Qualitative)	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Diclorvos (DDVP)	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Dieldrin	ND		0.20	ug/L		05/10/22 09:04	05/16/22 14:18	1
Diethylphthalate	ND		0.49	ug/L		05/10/22 09:04	05/16/22 14:18	1
Dimethoate	ND	^3+ ** *1	0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Dimethylphthalate	ND		0.49	ug/L		05/10/22 09:04	05/16/22 14:18	1
Di-n-butyl phthalate	ND		0.98	ug/L		05/10/22 09:04	05/16/22 14:18	1
Di-n-octyl phthalate	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Endosulfan I (Alpha)	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Endosulfan II (Beta)	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Endosulfan sulfate	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Endrin	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Endrin aldehyde	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
EPTC	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Fluoranthene	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Fluorene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
gamma-Chlordane	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Heptachlor	ND	^3+	0.039	ug/L		05/10/22 09:04	05/16/22 14:18	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Hexachlorobenzene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Isophorone	ND		0.49	ug/L		05/10/22 09:04	05/16/22 14:18	1
Lindane	ND		0.039	ug/L		05/10/22 09:04	05/16/22 14:18	1
Malathion	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Methoxychlor	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Metolachlor	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Metribuzin	ND	*1	0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Molinate	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Naphthalene	ND		0.29	ug/L		05/10/22 09:04	05/16/22 14:18	1
Parathion	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Pendimethalin (Penoxaline)	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		05/10/22 09:04	05/16/22 14:18	1
Phenanthrene	ND		0.039	ug/L		05/10/22 09:04	05/16/22 14:18	1
Propachlor	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Pyrene	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Simazine	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Terbacil	ND	*+ *1	0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1
Terbutylazine	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1

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Client Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-1328-3

Date Collected: 05/03/22 12:06

Matrix: Drinking Water

Date Received: 05/05/22 11:30

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	ND		0.20	ug/L		05/10/22 09:04	05/16/22 14:18	1
trans-Nonachlor	ND		0.049	ug/L		05/10/22 09:04	05/16/22 14:18	1
Trifluralin	ND		0.098	ug/L		05/10/22 09:04	05/16/22 14:18	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L				05/10/22 09:04	05/16/22 14:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	106		70 - 130	05/10/22 09:04	05/16/22 14:18	1
Triphenylphosphate	105		70 - 130	05/10/22 09:04	05/16/22 14:18	1
Perylene-d12	94		70 - 130	05/10/22 09:04	05/16/22 14:18	1

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.024		mg/L			05/11/22 00:04	1
MOTOR OIL	ND	U	0.049		mg/L			05/11/22 00:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	81		60 - 130		05/11/22 00:04	1
HEXACOSANE	104		60 - 130		05/11/22 00:04	1

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			05/06/22 19:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	84		60 - 140		05/06/22 19:38	1

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-1328-4

Date Collected: 05/03/22 12:06

Matrix: Water

Date Received: 05/05/22 11:30

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			05/06/22 20:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	76		60 - 140		05/06/22 20:12	1

Action Limit Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-1328-1

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	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.019	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.58	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.58	525.2	Total/NA
Endrin	ND		ug/L	2	0.097	525.2	Total/NA
Heptachlor	ND	^3+	ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.097	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-1328-3

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	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.098	525.2	Total/NA
Heptachlor	ND	^3+	ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.098	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	TPP (70-130)	PRY (70-130)
380-1328-1	AIEA GULCH WELLS PUMP 1 (105	106	89
380-1328-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	106	105	94

Surrogate Legend
 2NMX = 2-Nitro-m-xylene
 TPP = Triphenylphosphate
 PRY = Perylene-d12

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	TPP (70-130)	PRY (70-130)
380-747-A-1-A MS	Matrix Spike	106	107	93
380-756-B-1-A DU	Duplicate	105	106	97
LCS 380-3930/3-A	Lab Control Sample	107	105	95
LCSD 380-3930/4-A	Lab Control Sample Dup	106	106	95
MB 380-3930/1-A	Method Blank	106	105	94
MRL 380-3930/2-A	Lab Control Sample	106	102	99

Surrogate Legend
 2NMX = 2-Nitro-m-xylene
 TPP = Triphenylphosphate
 PRY = Perylene-d12

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	HEXACOSANE (60-130)
380-1328-1	AIEA GULCH WELLS PUMP 1 (79	102
380-1328-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	81	104

Surrogate Legend
 BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	HEXACOSANE (60-130)
22DSE013WB	Method Blank		

Surrogate Legend
 BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

Surrogate Summary

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XACOSAI (60-130)
22DSE013WL	Lab Control Sample	104	102

Surrogate Legend

BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-1328-1	AIEA GULCH WELLS PUMP 1 (88
380-1328-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	84

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-1328-2	TRAVEL BLANK	89
380-1328-4	TRAVEL BLANK	76

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB
22VGH7E03B	Method Blank	

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)
22VGH7E03C	LCD	116
22VGH7E03L	Lab Control Sample	118

Surrogate Legend

BFB = BROMOFLUOROBENZENE

QC Sample Results

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 380-3930/1-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3930

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
2,4'-DDE	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
2,4'-DDT	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
2,4-Dinitrotoluene	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
2,6-Dinitrotoluene	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
4,4'-DDD	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
4,4'-DDE	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
4,4'-DDT	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Acenaphthene	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Acenaphthylene	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Acetochlor	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Alachlor	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
alpha-BHC	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
alpha-Chlordane	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Anthracene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 11:17	1
Atrazine	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Benz(a)anthracene	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Benzo[a]pyrene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 11:17	1
Benzo[b]fluoranthene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 11:17	1
Benzo[g,h,i]perylene	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Benzo[k]fluoranthene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 11:17	1
beta-BHC	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Bromacil	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Butachlor	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Butylbenzylphthalate	ND		0.50	ug/L		05/10/22 09:04	05/16/22 11:17	1
Caffeine	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Chlorobenzilate	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Chloroneb	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Chlorpyrifos	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Chrysene	ND		0.020	ug/L		05/10/22 09:04	05/16/22 11:17	1
delta-BHC	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		05/10/22 09:04	05/16/22 11:17	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		05/10/22 09:04	05/16/22 11:17	1
Diazinon (Qualitative)	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Dibenz(a,h)anthracene	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Diclorvos (DDVP)	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Dieldrin	ND		0.20	ug/L		05/10/22 09:04	05/16/22 11:17	1
Diethylphthalate	ND		0.50	ug/L		05/10/22 09:04	05/16/22 11:17	1
Dimethoate	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Dimethylphthalate	ND		0.50	ug/L		05/10/22 09:04	05/16/22 11:17	1
Di-n-butyl phthalate	ND		0.99	ug/L		05/10/22 09:04	05/16/22 11:17	1
Di-n-octyl phthalate	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Endosulfan I (Alpha)	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Endosulfan II (Beta)	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Endosulfan sulfate	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Endrin	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Endrin aldehyde	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-3930/1-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 3930

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Fluoranthene	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Fluorene	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
gamma-Chlordane	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Heptachlor	ND		0.040	ug/L		05/10/22 09:04	05/16/22 11:17	1
Heptachlor epoxide (isomer B)	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Hexachlorobenzene	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Hexachlorocyclopentadiene	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Indeno[1,2,3-cd]pyrene	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Isophorone	ND		0.50	ug/L		05/10/22 09:04	05/16/22 11:17	1
Lindane	ND		0.040	ug/L		05/10/22 09:04	05/16/22 11:17	1
Malathion	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Methoxychlor	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Metolachlor	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Metribuzin	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Molinate	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Naphthalene	ND		0.30	ug/L		05/10/22 09:04	05/16/22 11:17	1
Parathion	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		05/10/22 09:04	05/16/22 11:17	1
Phenanthrene	ND		0.040	ug/L		05/10/22 09:04	05/16/22 11:17	1
Propachlor	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Pyrene	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Simazine	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Terbacil	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Terbutylazine	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1
Thiobencarb	ND		0.20	ug/L		05/10/22 09:04	05/16/22 11:17	1
trans-Nonachlor	ND		0.050	ug/L		05/10/22 09:04	05/16/22 11:17	1
Trifluralin	ND		0.099	ug/L		05/10/22 09:04	05/16/22 11:17	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	2.02	T J N	ug/L		2.31	124-18-5	05/10/22 09:04	05/16/22 11:17	1
Unknown	0.692	T J	ug/L		3.11		05/10/22 09:04	05/16/22 11:17	1
Unknown	1.11	T J	ug/L		3.66		05/10/22 09:04	05/16/22 11:17	1
Octadecane	0.743	T J N	ug/L		5.03	593-45-3	05/10/22 09:04	05/16/22 11:17	1
Tetradecanoic acid	1.40	T J N	ug/L		5.65	544-63-8	05/10/22 09:04	05/16/22 11:17	1
Octadecanoic acid	1.15	T J N	ug/L		6.31	57-11-4	05/10/22 09:04	05/16/22 11:17	1
9-Octadecenamamide, (Z)-	1.71	T J N	ug/L		7.21	301-02-0	05/10/22 09:04	05/16/22 11:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	106		70 - 130	05/10/22 09:04	05/16/22 11:17	1
Triphenylphosphate	105		70 - 130	05/10/22 09:04	05/16/22 11:17	1
Perylene-d12	94		70 - 130	05/10/22 09:04	05/16/22 11:17	1

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-3930/3-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.98	2.04		ug/L		103	70 - 130
2,4'-DDE	1.98	1.99		ug/L		100	70 - 130
2,4'-DDT	1.98	2.04		ug/L		103	70 - 130
2,4-Dinitrotoluene	1.98	2.14		ug/L		108	70 - 130
2,6-Dinitrotoluene	1.98	2.08		ug/L		105	70 - 130
4,4'-DDD	1.98	2.21		ug/L		111	70 - 130
4,4'-DDE	1.98	1.95		ug/L		98	70 - 130
4,4'-DDT	1.98	2.10		ug/L		106	70 - 130
Acenaphthene	1.98	1.98		ug/L		100	70 - 130
Acenaphthylene	1.98	2.15		ug/L		109	70 - 130
Acetochlor	1.98	2.29		ug/L		115	70 - 130
Alachlor	1.98	2.21		ug/L		111	70 - 130
alpha-BHC	1.98	2.13		ug/L		108	70 - 130
alpha-Chlordane	1.98	1.87		ug/L		94	70 - 130
Anthracene	1.98	2.02		ug/L		102	70 - 130
Atrazine	1.98	2.26		ug/L		114	70 - 130
Benz(a)anthracene	1.98	2.17		ug/L		110	70 - 130
Benzo[a]pyrene	1.98	2.15		ug/L		109	70 - 130
Benzo[b]fluoranthene	1.98	2.12		ug/L		107	70 - 130
Benzo[g,h,i]perylene	1.98	2.14		ug/L		108	70 - 130
Benzo[k]fluoranthene	1.98	2.14		ug/L		108	70 - 130
beta-BHC	1.98	2.01		ug/L		101	70 - 130
Bromacil	1.98	1.83		ug/L		92	70 - 130
Butachlor	1.98	2.50		ug/L		126	70 - 130
Butylbenzylphthalate	1.98	2.38		ug/L		120	70 - 130
Caffeine	1.98	0.929		ug/L		47	45 - 137
Chlorobenzilate	1.98	2.90	*+	ug/L		147	70 - 130
Chloroneb	1.98	2.07		ug/L		105	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	2.07		ug/L		104	70 - 130
Chlorpyrifos	1.98	2.14		ug/L		108	70 - 130
Chrysene	1.98	2.04		ug/L		103	70 - 130
delta-BHC	1.98	2.01		ug/L		102	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.26		ug/L		114	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	2.00		ug/L		101	70 - 130
Diazinon (Qualitative)	1.98	1.88		ug/L		95	15 - 132
Dibenz(a,h)anthracene	1.98	2.14		ug/L		108	70 - 130
Diclorvos (DDVP)	1.98	2.47		ug/L		125	70 - 130
Dieldrin	1.98	2.03		ug/L		102	70 - 130
Diethylphthalate	1.98	2.26		ug/L		114	70 - 130
Dimethoate	1.98	1.16		ug/L		59	35 - 100
Dimethylphthalate	1.98	2.22		ug/L		112	70 - 130
Di-n-butyl phthalate	3.96	3.98		ug/L		100	70 - 130
Di-n-octyl phthalate	1.98	1.98		ug/L		100	70 - 130
Endosulfan I (Alpha)	1.98	1.98		ug/L		100	70 - 130
Endosulfan II (Beta)	1.98	2.16		ug/L		109	70 - 130
Endosulfan sulfate	1.98	2.27		ug/L		115	70 - 130
Endrin	1.98	2.39		ug/L		121	70 - 130
Endrin aldehyde	1.98	1.98		ug/L		100	70 - 130

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-3930/3-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
EPTC	1.98	2.27		ug/L		115	70 - 130
Fluoranthene	1.98	2.03		ug/L		102	70 - 130
Fluorene	1.98	2.14		ug/L		108	70 - 130
gamma-Chlordane	1.98	1.93		ug/L		97	70 - 130
Heptachlor	1.98	2.31		ug/L		117	70 - 130
Heptachlor epoxide (isomer B)	1.98	1.99		ug/L		100	70 - 130
Hexachlorobenzene	1.98	1.94		ug/L		98	70 - 130
Hexachlorocyclopentadiene	1.98	2.33		ug/L		118	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	2.17		ug/L		109	70 - 130
Isophorone	1.98	2.26		ug/L		114	70 - 130
Lindane	1.98	2.14		ug/L		108	70 - 130
Malathion	1.98	2.25		ug/L		114	70 - 130
Methoxychlor	1.98	2.39		ug/L		121	70 - 130
Metolachlor	1.98	2.35		ug/L		119	70 - 130
Metribuzin	1.98	1.87		ug/L		94	70 - 130
Molinate	1.98	2.38		ug/L		120	70 - 130
Naphthalene	1.98	2.04		ug/L		103	70 - 130
Parathion	1.98	2.55		ug/L		129	70 - 130
Pendimethalin (Penoxaline)	1.98	2.20		ug/L		111	70 - 130
Phenanthrene	1.98	1.99		ug/L		101	70 - 130
Propachlor	1.98	2.52		ug/L		127	70 - 130
Pyrene	1.98	2.08		ug/L		105	70 - 130
Simazine	1.98	2.12		ug/L		107	70 - 130
Terbacil	1.98	2.09		ug/L		106	70 - 130
Terbutylazine	1.98	2.21		ug/L		112	70 - 130
Thiobencarb	1.98	2.30		ug/L		116	70 - 130
trans-Nonachlor	1.98	1.99		ug/L		100	70 - 130
Trifluralin	1.98	2.12		ug/L		107	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	107		70 - 130
Triphenylphosphate	105		70 - 130
Perylene-d12	95		70 - 130

Lab Sample ID: LCSD 380-3930/4-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.98	2.09		ug/L		106	70 - 130	3	20
2,4'-DDE	1.98	2.03		ug/L		102	70 - 130	2	20
2,4'-DDT	1.98	2.15		ug/L		108	70 - 130	5	20
2,4-Dinitrotoluene	1.98	2.32		ug/L		117	70 - 130	8	20
2,6-Dinitrotoluene	1.98	2.30		ug/L		116	70 - 130	10	20
4,4'-DDD	1.98	2.28		ug/L		115	70 - 130	3	20
4,4'-DDE	1.98	2.02		ug/L		102	70 - 130	3	20
4,4'-DDT	1.98	2.20		ug/L		111	70 - 130	5	20
Acenaphthene	1.98	1.98		ug/L		100	70 - 130	0	20

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-3930/4-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthylene	1.98	2.08		ug/L		105	70 - 130	3	20
Acetochlor	1.98	2.27		ug/L		115	70 - 130	1	20
Alachlor	1.98	2.22		ug/L		112	70 - 130	1	20
alpha-BHC	1.98	2.16		ug/L		109	70 - 130	1	20
alpha-Chlordane	1.98	1.99		ug/L		101	70 - 130	6	20
Anthracene	1.98	2.06		ug/L		104	70 - 130	2	20
Atrazine	1.98	2.28		ug/L		115	70 - 130	1	20
Benz(a)anthracene	1.98	2.23		ug/L		113	70 - 130	3	20
Benzo[a]pyrene	1.98	2.16		ug/L		109	70 - 130	0	20
Benzo[b]fluoranthene	1.98	2.19		ug/L		111	70 - 130	3	20
Benzo[g,h,i]perylene	1.98	2.19		ug/L		111	70 - 130	2	20
Benzo[k]fluoranthene	1.98	2.17		ug/L		110	70 - 130	2	20
beta-BHC	1.98	1.98		ug/L		100	70 - 130	2	20
Bromacil	1.98	2.41	*1	ug/L		122	70 - 130	28	20
Butachlor	1.98	2.62	*+	ug/L		132	70 - 130	4	20
Butylbenzylphthalate	1.98	2.40		ug/L		121	70 - 130	1	20
Caffeine	1.98	1.93	*1	ug/L		98	45 - 137	70	20
Chlorobenzilate	1.98	2.92	*+	ug/L		147	70 - 130	1	20
Chloroneb	1.98	2.07		ug/L		104	70 - 130	0	20
Chlorothalonil (Draconil, Bravo)	1.98	2.10		ug/L		106	70 - 130	1	20
Chlorpyrifos	1.98	2.10		ug/L		106	70 - 130	2	20
Chrysene	1.98	2.09		ug/L		105	70 - 130	2	20
delta-BHC	1.98	2.02		ug/L		102	70 - 130	1	20
Di(2-ethylhexyl)adipate	1.98	2.49		ug/L		126	70 - 130	10	20
Bis(2-ethylhexyl) phthalate	1.98	2.24		ug/L		113	70 - 130	12	20
Diazinon (Qualitative)	1.98	1.94		ug/L		98	15 - 132	3	20
Dibenz(a,h)anthracene	1.98	2.27		ug/L		115	70 - 130	6	20
Diclorvos (DDVP)	1.98	2.52		ug/L		127	70 - 130	2	20
Dieldrin	1.98	2.04		ug/L		103	70 - 130	1	20
Diethylphthalate	1.98	2.21		ug/L		112	70 - 130	2	20
Dimethoate	1.98	2.00	*+ *1	ug/L		101	35 - 100	53	20
Dimethylphthalate	1.98	2.19		ug/L		110	70 - 130	1	20
Di-n-butyl phthalate	3.96	3.97		ug/L		100	70 - 130	0	20
Di-n-octyl phthalate	1.98	2.25		ug/L		114	70 - 130	13	20
Endosulfan I (Alpha)	1.98	2.06		ug/L		104	70 - 130	4	20
Endosulfan II (Beta)	1.98	2.21		ug/L		112	70 - 130	2	20
Endosulfan sulfate	1.98	2.29		ug/L		116	70 - 130	1	20
Endrin	1.98	2.50		ug/L		126	70 - 130	4	20
Endrin aldehyde	1.98	2.08		ug/L		105	70 - 130	5	20
EPTC	1.98	2.27		ug/L		115	70 - 130	0	20
Fluoranthene	1.98	2.04		ug/L		103	70 - 130	1	20
Fluorene	1.98	2.13		ug/L		107	70 - 130	0	20
gamma-Chlordane	1.98	2.04		ug/L		103	70 - 130	6	20
Heptachlor	1.98	2.34		ug/L		118	70 - 130	1	20
Heptachlor epoxide (isomer B)	1.98	2.01		ug/L		101	70 - 130	1	20
Hexachlorobenzene	1.98	1.94		ug/L		98	70 - 130	0	20
Hexachlorocyclopentadiene	1.98	2.34		ug/L		118	70 - 130	0	20
Indeno[1,2,3-cd]pyrene	1.98	2.21		ug/L		111	70 - 130	2	20
Isophorone	1.98	2.29		ug/L		116	70 - 130	1	20

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QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-3930/4-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lindane	1.98	2.09		ug/L		105	70 - 130	2	20
Malathion	1.98	2.27		ug/L		115	70 - 130	1	20
Methoxychlor	1.98	2.43		ug/L		122	70 - 130	1	20
Metolachlor	1.98	2.39		ug/L		120	70 - 130	2	20
Metribuzin	1.98	2.30	*1	ug/L		116	70 - 130	21	20
Molinate	1.98	2.32		ug/L		117	70 - 130	2	20
Naphthalene	1.98	2.06		ug/L		104	70 - 130	1	20
Parathion	1.98	2.49		ug/L		126	70 - 130	3	20
Pendimethalin (Penoxaline)	1.98	2.19		ug/L		111	70 - 130	0	20
Phenanthrene	1.98	1.99		ug/L		101	70 - 130	0	20
Propachlor	1.98	2.50		ug/L		126	70 - 130	1	20
Pyrene	1.98	2.12		ug/L		107	70 - 130	2	20
Simazine	1.98	2.28		ug/L		115	70 - 130	7	20
Terbacil	1.98	2.66	*+ *1	ug/L		134	70 - 130	24	20
Terbutylazine	1.98	2.18		ug/L		110	70 - 130	2	20
Thiobencarb	1.98	2.34		ug/L		118	70 - 130	2	20
trans-Nonachlor	1.98	2.07		ug/L		104	70 - 130	4	20
Trifluralin	1.98	2.08		ug/L		105	70 - 130	2	20

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	106		70 - 130
Triphenylphosphate	106		70 - 130
Perylene-d12	95		70 - 130

Lab Sample ID: MRL 380-3930/2-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0994	0.121		ug/L		122	50 - 150
2,4'-DDE	0.0994	0.101		ug/L		101	50 - 150
2,4'-DDT	0.0994	0.111		ug/L		112	50 - 150
2,4-Dinitrotoluene	0.0994	0.132		ug/L		133	50 - 150
2,6-Dinitrotoluene	0.0994	0.104		ug/L		105	50 - 150
4,4'-DDD	0.0994	ND		ug/L		98	50 - 150
4,4'-DDE	0.0994	ND		ug/L		89	50 - 150
4,4'-DDT	0.0994	0.113		ug/L		113	50 - 150
Acenaphthene	0.0994	0.101		ug/L		101	50 - 150
Acenaphthylene	0.0994	ND		ug/L		92	50 - 150
Acetochlor	0.0497	ND		ug/L		101	50 - 150
Alachlor	0.0497	0.0600		ug/L		121	50 - 150
alpha-BHC	0.0994	0.120		ug/L		121	50 - 150
alpha-Chlordane	0.0497	ND		ug/L		92	50 - 150
Anthracene	0.0199	0.0211		ug/L		106	50 - 150
Atrazine	0.0497	ND		ug/L		86	50 - 150
Benz(a)anthracene	0.0497	ND		ug/L		99	50 - 150
Benzo[a]pyrene	0.0199	0.0213		ug/L		107	50 - 150
Benzo[b]fluoranthene	0.0199	0.0205		ug/L		103	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-3930/2-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[g,h,i]perylene	0.0497	ND		ug/L		100	50 - 150
Benzo[k]fluoranthene	0.0199	0.0200		ug/L		101	50 - 150
beta-BHC	0.0994	0.101		ug/L		101	50 - 150
Bromacil	0.0994	0.136		ug/L		137	50 - 150
Butachlor	0.0497	0.0612		ug/L		123	50 - 150
Butylbenzylphthalate	0.149	ND		ug/L		133	50 - 150
Caffeine	0.0497	ND		ug/L		89	50 - 150
Chlorobenzilate	0.0994	0.131		ug/L		132	50 - 150
Chloroneb	0.0994	ND		ug/L		99	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0994	0.121		ug/L		122	50 - 150
Chlorpyrifos	0.0497	0.0505		ug/L		102	50 - 150
Chrysene	0.0199	0.0205		ug/L		103	50 - 150
delta-BHC	0.0994	0.112		ug/L		113	50 - 150
Di(2-ethylhexyl)adipate	0.298	ND		ug/L		124	50 - 150
Bis(2-ethylhexyl) phthalate	0.596	0.699		ug/L		117	50 - 150
Diazinon (Qualitative)	0.0994	ND		ug/L		92	15 - 132
Dibenz(a,h)anthracene	0.0497	ND		ug/L		83	50 - 150
Diclorvos (DDVP)	0.0497	0.0592		ug/L		119	50 - 150
Dieldrin	0.0994	ND		ug/L		115	50 - 150
Diethylphthalate	0.149	ND		ug/L		125	50 - 150
Dimethoate	0.0994	0.113	^3+	ug/L		114	35 - 100
Dimethylphthalate	0.298	ND		ug/L		106	50 - 150
Di-n-butyl phthalate	0.298	ND		ug/L		116	50 - 150
Di-n-octyl phthalate	0.0994	0.123		ug/L		123	50 - 150
Endosulfan I (Alpha)	0.0994	0.118		ug/L		119	50 - 150
Endosulfan II (Beta)	0.0994	0.141		ug/L		142	50 - 150
Endosulfan sulfate	0.0994	ND		ug/L		98	50 - 150
Endrin	0.0994	0.141		ug/L		141	50 - 150
Endrin aldehyde	0.0994	ND		ug/L		75	50 - 150
EPTC	0.0994	0.102		ug/L		103	50 - 150
Fluoranthene	0.0497	ND		ug/L		100	50 - 150
Fluorene	0.0497	0.0538		ug/L		108	50 - 150
gamma-Chlordane	0.0497	ND		ug/L		97	50 - 150
Heptachlor	0.0397	0.0645	^3+	ug/L		162	50 - 150
Heptachlor epoxide (isomer B)	0.0497	ND		ug/L		91	50 - 150
Hexachlorobenzene	0.0497	0.0569		ug/L		114	50 - 150
Hexachlorocyclopentadiene	0.0497	ND		ug/L		99	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	ND		ug/L		85	50 - 150
Isophorone	0.0994	ND		ug/L		103	50 - 150
Lindane	0.0497	0.0458		ug/L		92	50 - 150
Malathion	0.0994	0.106		ug/L		107	50 - 150
Methoxychlor	0.0994	ND		ug/L		96	50 - 150
Metolachlor	0.0497	0.0590		ug/L		119	50 - 150
Metribuzin	0.0497	0.0502		ug/L		101	50 - 150
Molinate	0.0994	0.106		ug/L		107	50 - 150
Naphthalene	0.0994	ND		ug/L		101	50 - 150
Parathion	0.0994	0.143		ug/L		144	50 - 150
Pendimethalin (Penoxaline)	0.0994	0.145		ug/L		146	50 - 150
Phenanthrene	0.0199	ND		ug/L		115	50 - 150

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-3930/2-A
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0497	0.0579		ug/L		117	50 - 150
Pyrene	0.0497	ND		ug/L		98	50 - 150
Simazine	0.0497	0.0570		ug/L		115	50 - 150
Terbacil	0.0994	0.136		ug/L		137	50 - 150
Terbutylazine	0.0994	ND		ug/L		93	50 - 150
Thiobencarb	0.0994	ND		ug/L		130	50 - 150
trans-Nonachlor	0.0497	ND		ug/L		89	50 - 150
Trifluralin	0.0994	0.124		ug/L		125	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	106		70 - 130
Triphenylphosphate	102		70 - 130
Perylene-d12	99		70 - 130

Lab Sample ID: 380-747-A-1-A MS
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND		2.01	2.13		ug/L		106	70 - 130
2,4'-DDE	ND		2.01	2.09		ug/L		104	70 - 130
2,4'-DDT	ND		2.01	2.14		ug/L		106	70 - 130
2,4-Dinitrotoluene	ND		2.01	2.45		ug/L		122	70 - 130
2,6-Dinitrotoluene	ND		2.01	2.38		ug/L		118	70 - 130
4,4'-DDD	ND		2.01	2.33		ug/L		116	70 - 130
4,4'-DDE	ND		2.01	2.06		ug/L		102	70 - 130
4,4'-DDT	ND		2.01	2.20		ug/L		110	70 - 130
Acenaphthene	ND		2.01	2.02		ug/L		100	70 - 130
Acenaphthylene	ND		2.01	2.17		ug/L		108	70 - 130
Acetochlor	ND		2.01	2.40		ug/L		119	70 - 130
Alachlor	ND		2.01	2.34		ug/L		116	70 - 130
alpha-BHC	ND		2.01	2.16		ug/L		107	70 - 130
alpha-Chlordane	ND		2.01	2.02		ug/L		100	70 - 130
Anthracene	ND	F1	2.01	1.35	F1	ug/L		67	70 - 130
Atrazine	ND		2.01	2.08		ug/L		104	70 - 130
Benz(a)anthracene	ND		2.01	2.22		ug/L		111	70 - 130
Benzo[a]pyrene	ND		2.01	1.99		ug/L		99	70 - 130
Benzo[b]fluoranthene	ND		2.01	2.21		ug/L		110	70 - 130
Benzo[g,h,i]perylene	ND		2.01	2.05		ug/L		102	70 - 130
Benzo[k]fluoranthene	ND		2.01	2.12		ug/L		106	70 - 130
beta-BHC	ND		2.01	2.07		ug/L		103	70 - 130
Bromacil	ND	*1	2.01	2.54		ug/L		126	70 - 130
Butachlor	ND	F1 **	2.01	2.69	F1	ug/L		134	70 - 130
Butylbenzylphthalate	ND		2.01	2.48		ug/L		123	70 - 130
Caffeine	ND	*1	2.01	2.29		ug/L		114	46 - 144
Chlorobenzilate	ND	F1 **	2.01	3.03	F1	ug/L		151	70 - 130
Chloroneb	ND		2.01	2.15		ug/L		107	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		2.01	2.12		ug/L		106	70 - 130

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-747-A-1-A MS

Matrix: Water

Analysis Batch: 4166

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 3930

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Chlorpyrifos	ND		2.01	2.25		ug/L		112	70 - 130
Chrysene	ND		2.01	2.11		ug/L		105	70 - 130
delta-BHC	ND		2.01	2.12		ug/L		106	70 - 130
Di(2-ethylhexyl)adipate	ND		2.01	2.36		ug/L		117	70 - 130
Bis(2-ethylhexyl) phthalate	ND		2.01	2.10		ug/L		96	70 - 130
Diazinon (Qualitative)	ND		2.01	2.19		ug/L		109	15 - 132
Dibenz(a,h)anthracene	ND		2.01	2.09		ug/L		104	70 - 130
Diclorvos (DDVP)	ND		2.01	2.58		ug/L		128	70 - 130
Dieldrin	ND		2.01	2.14		ug/L		107	70 - 130
Diethylphthalate	ND		2.01	2.29		ug/L		114	70 - 130
Dimethoate	ND	[^] 3+ F1 *+ *1	2.01	2.48	F1	ug/L		124	34 - 111
Dimethylphthalate	ND		2.01	2.27		ug/L		113	70 - 130
Di-n-butyl phthalate	ND		4.02	4.29		ug/L		104	70 - 130
Di-n-octyl phthalate	ND		2.01	2.05		ug/L		102	70 - 130
Endosulfan I (Alpha)	ND		2.01	2.13		ug/L		106	70 - 130
Endosulfan II (Beta)	ND		2.01	2.30		ug/L		115	70 - 130
Endosulfan sulfate	ND		2.01	2.35		ug/L		117	70 - 130
Endrin	ND		2.01	2.48		ug/L		123	70 - 130
Endrin aldehyde	ND		2.01	2.10		ug/L		105	70 - 130
EPTC	ND		2.01	2.32		ug/L		115	70 - 130
Fluoranthene	ND		2.01	2.17		ug/L		108	70 - 130
Fluorene	ND		2.01	2.19		ug/L		109	70 - 130
gamma-Chlordane	ND		2.01	2.10		ug/L		104	70 - 130
Heptachlor	ND	[^] 3+	2.01	2.37		ug/L		118	70 - 130
Heptachlor epoxide (isomer B)	ND		2.01	2.12		ug/L		106	70 - 130
Hexachlorobenzene	ND		2.01	1.99		ug/L		99	70 - 130
Hexachlorocyclopentadiene	ND		2.01	2.37		ug/L		118	70 - 130
Indeno[1,2,3-cd]pyrene	ND		2.01	2.09		ug/L		104	70 - 130
Isophorone	ND		2.01	2.36		ug/L		118	70 - 130
Lindane	ND		2.01	2.18		ug/L		108	70 - 130
Malathion	ND		2.01	2.32		ug/L		116	70 - 130
Methoxychlor	ND		2.01	2.53		ug/L		126	70 - 130
Metolachlor	ND		2.01	2.51		ug/L		125	70 - 130
Metribuzin	ND	*1	2.01	2.39		ug/L		119	70 - 130
Molinate	ND		2.01	2.40		ug/L		119	70 - 130
Naphthalene	ND		2.01	2.16		ug/L		108	70 - 130
Parathion	ND		2.01	2.62		ug/L		130	70 - 130
Pendimethalin (Penoxaline)	ND		2.01	2.33		ug/L		116	70 - 130
Phenanthrene	ND		2.01	2.06		ug/L		102	70 - 130
Propachlor	ND		2.01	2.57		ug/L		128	70 - 130
Pyrene	ND		2.01	2.22		ug/L		110	70 - 130
Simazine	ND		2.01	2.41		ug/L		120	70 - 130
Terbacil	ND	F1 *+ *1	2.01	2.75	F1	ug/L		137	70 - 130
Terbutylazine	ND		2.01	2.27		ug/L		113	70 - 130
Thiobencarb	ND		2.01	2.44		ug/L		121	70 - 130
trans-Nonachlor	ND		2.01	2.13		ug/L		106	70 - 130
Trifluralin	ND		2.01	2.18		ug/L		109	70 - 130

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-747-A-1-A MS
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 3930

Surrogate	%Recovery	MS MS Qualifier	Limits
2-Nitro-m-xylene	106		70 - 130
Triphenylphosphate	107		70 - 130
Perylene-d12	93		70 - 130

Lab Sample ID: 380-756-B-1-A DU
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
2,4'-DDD	ND		ND		ug/L		NC	20
2,4'-DDE	ND		ND		ug/L		NC	20
2,4'-DDT	ND		ND		ug/L		NC	20
2,4-Dinitrotoluene	ND		ND		ug/L		NC	20
2,6-Dinitrotoluene	ND		ND		ug/L		NC	20
4,4'-DDD	ND		ND		ug/L		NC	20
4,4'-DDE	ND		ND		ug/L		NC	20
4,4'-DDT	ND		ND		ug/L		NC	20
Acenaphthene	ND		ND		ug/L		NC	20
Acenaphthylene	ND		ND		ug/L		NC	20
Acetochlor	ND		ND		ug/L		NC	20
Alachlor	ND		ND		ug/L		NC	20
alpha-BHC	ND		ND		ug/L		NC	20
alpha-Chlordane	ND		ND		ug/L		NC	20
Anthracene	ND		ND		ug/L		NC	20
Atrazine	ND		ND		ug/L		NC	20
Benz(a)anthracene	ND		ND		ug/L		NC	20
Benzo[a]pyrene	ND		ND		ug/L		NC	20
Benzo[b]fluoranthene	ND		ND		ug/L		NC	20
Benzo[g,h,i]perylene	ND		ND		ug/L		NC	20
Benzo[k]fluoranthene	ND		ND		ug/L		NC	20
beta-BHC	ND		ND		ug/L		NC	20
Bromacil	ND	*1	ND	*1	ug/L		NC	20
Butachlor	ND	*+	ND	*+	ug/L		NC	20
Butylbenzylphthalate	ND		ND		ug/L		NC	20
Caffeine	ND	*1	ND	*1	ug/L		NC	20
Chlorobenzilate	ND	*+	ND	*+	ug/L		NC	20
Chloroneb	ND		ND		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	ND		ND		ug/L		NC	20
Chlorpyrifos	ND		ND		ug/L		NC	20
Chrysene	ND		ND		ug/L		NC	20
delta-BHC	ND		ND		ug/L		NC	20
Di(2-ethylhexyl)adipate	ND		ND		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	ND		ND		ug/L		NC	20
Diazinon (Qualitative)	ND		ND		ug/L		NC	20
Dibenz(a,h)anthracene	ND		ND		ug/L		NC	20
Diclorvos (DDVP)	ND		ND		ug/L		NC	20
Dieldrin	ND		ND		ug/L		NC	20
Diethylphthalate	ND		ND		ug/L		NC	20

Eurofins Eaton Monrovia

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-756-B-1-A DU
Matrix: Water
Analysis Batch: 4166

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 3930

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Dimethoate	ND	^3+ *+ *1	ND	*+ *1	ug/L		NC	20
Dimethylphthalate	ND		ND		ug/L		NC	20
Di-n-butyl phthalate	ND		ND		ug/L		NC	20
Di-n-octyl phthalate	ND		ND		ug/L		NC	20
Endosulfan I (Alpha)	ND		ND		ug/L		NC	20
Endosulfan II (Beta)	ND		ND		ug/L		NC	20
Endosulfan sulfate	ND		ND		ug/L		NC	20
Endrin	ND		ND		ug/L		NC	20
Endrin aldehyde	ND		ND		ug/L		NC	20
EPTC	ND		ND		ug/L		NC	20
Fluoranthene	ND		ND		ug/L		NC	20
Fluorene	ND		ND		ug/L		NC	20
gamma-Chlordane	ND		ND		ug/L		NC	20
Heptachlor	ND	^3+	ND		ug/L		NC	20
Heptachlor epoxide (isomer B)	ND		ND		ug/L		NC	20
Hexachlorobenzene	ND		ND		ug/L		NC	20
Hexachlorocyclopentadiene	ND		ND		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	ND		ND		ug/L		NC	20
Isophorone	ND		ND		ug/L		NC	20
Lindane	ND		ND		ug/L		NC	20
Malathion	ND		ND		ug/L		NC	20
Methoxychlor	ND		ND		ug/L		NC	20
Metolachlor	ND		ND		ug/L		NC	20
Metribuzin	ND	*1	ND	*1	ug/L		NC	20
Molinate	ND		ND		ug/L		NC	20
Naphthalene	ND		ND		ug/L		NC	20
Parathion	ND		ND		ug/L		NC	20
Pendimethalin (Penoxaline)	ND		ND		ug/L		NC	20
Total Permethrin (mixed isomers)	ND		ND		ug/L		NC	20
Phenanthrene	ND		ND		ug/L		NC	20
Propachlor	ND		ND		ug/L		NC	20
Pyrene	ND		ND		ug/L		NC	20
Simazine	ND		ND		ug/L		NC	20
Terbacil	ND	*+ *1	ND	*+ *1	ug/L		NC	20
Terbutylazine	ND		ND		ug/L		NC	20
Thiobencarb	ND		ND		ug/L		NC	20
trans-Nonachlor	ND		ND		ug/L		NC	20
Trifluralin	ND		ND		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	105		70 - 130
Triphenylphosphate	106		70 - 130
Perylene-d12	97		70 - 130

QC Sample Results

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Lab Sample ID: 22DSE013WB
Matrix: WATER
Analysis Batch: 22DSE013W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			05/10/22 15:29	1
MOTOR OIL	ND	U	0.05		mg/L			05/10/22 15:29	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE								05/10/22 15:29	1
HEXACOSANE								05/10/22 15:29	1

Lab Sample ID: 22DSE013WL
Matrix: WATER
Analysis Batch: 22DSE013W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DIESEL	2.5	2.45		mg/L		98	50 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
BROMOBENZENE	104		60 - 130				
HEXACOSANE	102		60 - 130				

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Lab Sample ID: 22VGH7E03B
Matrix: WATER
Analysis Batch: 22VGH7E03

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			05/06/22 16:47	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE								05/06/22 16:47	1

Lab Sample ID: 22VGH7E03L
Matrix: WATER
Analysis Batch: 22VGH7E03

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.5	0.486		mg/L		97	60 - 130
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
BROMOFLUOROBENZENE	118		70 - 130				

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

GC/MS Semi VOA

Prep Batch: 3930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-1328-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	525.2	
380-1328-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	
MB 380-3930/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-3930/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-3930/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-3930/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-747-A-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-756-B-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 4166

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-1328-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	525.2	3930
380-1328-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	3930
MB 380-3930/1-A	Method Blank	Total/NA	Water	525.2	3930
LCS 380-3930/3-A	Lab Control Sample	Total/NA	Water	525.2	3930
LCSD 380-3930/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	3930
MRL 380-3930/2-A	Lab Control Sample	Total/NA	Water	525.2	3930
380-747-A-1-A MS	Matrix Spike	Total/NA	Water	525.2	3930
380-756-B-1-A DU	Duplicate	Total/NA	Water	525.2	3930

Subcontract

Analysis Batch: 22DSE013W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-1328-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
380-1328-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
22DSE013WB	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22DSE013WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Analysis Batch: 22VGH7E03

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-1328-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-1328-2	TRAVEL BLANK	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-1328-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-1328-4	TRAVEL BLANK	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VGH7E03B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Eurofins Eaton Monrovia

QC Association Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Subcontract (Continued)

Analysis Batch: 22VGH7E03 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
22VGH7E03L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

Lab Chronicle

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

**Client Sample ID: AIEA GULCH WELLS PUMP 1
(331-201-TP071)**

Lab Sample ID: 380-1328-1

Date Collected: 05/03/22 11:42

Matrix: Drinking Water

Date Received: 05/05/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			3930	OTM3	EA MON	05/10/22 09:04
Total/NA	Analysis	525.2		1	4166	UPAC	EA MON	05/16/22 13:58
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSE013W	SDees		05/10/22 23:46
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7E03	SCerva		05/06/22 18:29

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-1328-2

Date Collected: 05/03/22 11:42

Matrix: Water

Date Received: 05/05/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7E03	SCerva		05/06/22 19:04

**Client Sample ID: AIEA GULCH WELLS PUMP 2
(331-202-TP072)**

Lab Sample ID: 380-1328-3

Date Collected: 05/03/22 12:06

Matrix: Drinking Water

Date Received: 05/05/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			3930	OTM3	EA MON	05/10/22 09:04
Total/NA	Analysis	525.2		1	4166	UPAC	EA MON	05/16/22 14:18
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSE013W	SDees		05/11/22 00:04
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7E03	SCerva		05/06/22 19:38

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-1328-4

Date Collected: 05/03/22 12:06

Matrix: Water

Date Received: 05/05/22 11:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7E03	SCerva		05/06/22 20:12

Laboratory References:

= EMAX Laboratories Inc, 3051 Fujita Street, Torrance, CA 90505

EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100

Accreditation/Certification Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Laboratory: Eurofins Eaton Monrovia

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525.2	525.2	Drinking Water	4,4'-DDT
525.2	525.2	Drinking Water	Acenaphthene
525.2	525.2	Drinking Water	Acenaphthylene
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	Anthracene
525.2	525.2	Drinking Water	Benz(a)anthracene
525.2	525.2	Drinking Water	Benzo[b]fluoranthene
525.2	525.2	Drinking Water	Benzo[g,h,i]perylene
525.2	525.2	Drinking Water	Benzo[k]fluoranthene
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Bromacil
525.2	525.2	Drinking Water	Butylbenzylphthalate
525.2	525.2	Drinking Water	Caffeine
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	Chrysene
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Diazinon (Qualitative)
525.2	525.2	Drinking Water	Dibenz(a,h)anthracene
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Diethylphthalate
525.2	525.2	Drinking Water	Dimethoate
525.2	525.2	Drinking Water	Dimethylphthalate
525.2	525.2	Drinking Water	Di-n-butyl phthalate
525.2	525.2	Drinking Water	Di-n-octyl phthalate
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	Fluoranthene
525.2	525.2	Drinking Water	Fluorene
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Indeno[1,2,3-cd]pyrene

Accreditation/Certification Summary

Client: City & County of Honolulu
 Project/Site: RED-HILL

Job ID: 380-1328-1

Laboratory: Eurofins Eaton Monrovia (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
-----------	---------	-----------------------	-----------------

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	Isophorone
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin



Method Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA MON
8015	8015 - TPH DRO/ORO	EPA	
8015B	SW846 8015B Gasoline Range Organics	SW846	
525.2	Extraction of Semivolatile Compounds	EPA	EA MON

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

= EMAX Laboratories Inc, 3051 Fujita Street, Torrance, CA 90505

EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100

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Sample Summary

Client: City & County of Honolulu
Project/Site: RED-HILL

Job ID: 380-1328-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-1328-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	05/03/22 11:42	05/05/22 11:30
380-1328-2	TRAVEL BLANK	Water	05/03/22 11:42	05/05/22 11:30
380-1328-3	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	05/03/22 12:06	05/05/22 11:30
380-1328-4	TRAVEL BLANK	Water	05/03/22 12:06	05/05/22 11:30

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Date: 05-18-2022
EMAX Batch No.: 22E081

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 38001111

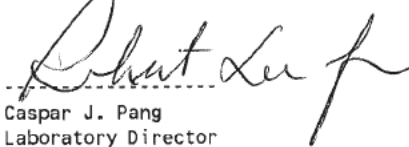
Enclosed is the Laboratory report for samples received on 05/06/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-1328-1	E081-01	05/03/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-1328-2	E081-02	05/03/22	WATER	TPH GASOLINE
380-1328-3	E081-03	05/03/22	WATER	TPH GASOLINE TPH DIESEL & MOTOR OIL
380-1328-4	E081-04	05/03/22	WATER	TPH GASOLINE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,


Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912021-19
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672



Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input checked="" type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery	Airbill / Tracking Number	ECN <u>22E081</u> Recipient <u>Maria Rivera</u> Date <u>05/06/22</u> Time <u>14:00</u>
--	---------------------------	--

COC INSPECTION

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input type="checkbox"/> TAT
Safety Issues (if any) Note: _____	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition <i>* correction factor 10.2</i>	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6°C but not frozen)	<input checked="" type="checkbox"/> Cooler <u>10.9/11.1</u> °C	<input checked="" type="checkbox"/> Cooler <u>20.7/10.9</u> °C	<input type="checkbox"/> Cooler 3 _____ °C
Thermometer: <u>A - S/N 210583479</u>	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 4 _____ °C
			<input type="checkbox"/> Cooler 5 _____ °C
			<input type="checkbox"/> Cooler 8 _____ °C
			<input type="checkbox"/> Cooler 9 _____ °C
			<input type="checkbox"/> Cooler 10 _____ °C
			<input type="checkbox"/> Sufficient
Comments: <input type="checkbox"/> Temperature is out of range. PM was informed IMMEDIATELY.			
Note: _____			

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>1, 20</u> <i>MS 5/6/22</i>	<u>1-11, 20, 23</u>	<u>D10</u>		<u>R 8</u>
<u>1, 3</u>	<u>7, 10, 17-19, 21, 22</u>	<u>D22</u>		<u>R1/R8</u>

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. *MS 5/9/22*

NOTES/OBSERVATIONS:
 SAMPLE MATRIX IS DRINKING WATER? YES NO

- LEGEND:**
- | | | |
|--|--|--|
| <p>Code Description- Sample Management</p> <ul style="list-style-type: none"> D1 Analysis is not indicated in _____ D2 Analysis mismatch COC vs label D3 Sample ID mismatch COC vs label D4 Sample ID is not indicated in _____ D5 Container -[improper] [leaking] [broken] D6 Date/Time is not indicated in _____ D7 Date/Time mismatch COC vs label D8 Sample listed in COC is not received D9 Sample received is not listed in COC <u>D10</u> No initial/date on corrections in COC/label D11 Container count mismatch COC vs received D12 Container size mismatch COC vs received | <p>Code Description-Sample Management</p> <ul style="list-style-type: none"> D13 Out of Holding Time D14 Bubble is >6mm D15 No trip blank in cooler D16 Preservation not indicated in _____ D17 Preservation mismatch COC vs label D18 Insufficient chemical preservative D19 Insufficient Sample D20 No filtration info for dissolved analysis D21 No sample for moisture determination <u>D22</u> Jet fuel 5 analysis not indicated on COC D23 _____ D24 _____ | <p><input type="checkbox"/> Continue to next page.</p> <p>Code Description-Sample Management</p> <ul style="list-style-type: none"> R1 Proceed as indicated in <input checked="" type="checkbox"/> COC <input type="checkbox"/> Label R2 Refer to attached instruction R3 Cancel the analysis R4 Use vial with smallest bubble first R5 Log-in with latest sampling date and time+1 min R6 Adjust pH as necessary R7 Filter and preserved as necessary R8 <u>Informed Client</u> R9 _____ R10 _____ R11 _____ R12 _____ |
|--|--|--|

REVIEWS:

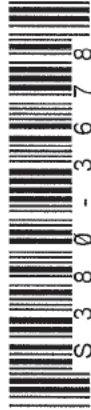
Sample Labeling <u>Maria Rivera</u>	SRF <u>[Signature]</u>	PM <u>RB</u>
Date <u>05/06/22</u>	Date <u>5/6/22</u>	Date <u>5/9/22</u>



Environment Testing
America

Shipping Order Form

Monrovia, CA (Suite 100)
750 Royal Oaks Drive Suite 100
Monrovia, CA 91016
Phone (626) 386-1100



Shipping Order ID: 3678

Due On: 5/6/2022 11:59:00PM

Ship Via: FedEx

Ship to: [Redacted]

Project Manager:

Company Name: EMAX Laboratories Inc

Attention: Shipping/Receiving

Address 1: 3051 Fujita Street

Address 2:

Address 3:

City: Torrance

State: CA

Zip: 90505

Phone #:

Project Ref:

Notes to Bottle/Shipping Department: [Redacted]

Shipping Method: Standard packing

- Ready to Fill
- Preprinted COC
- Number of COC Copies
- Seals on Bottle
- Seals on Coolers
- Priority
- Return Shipment Labels
- Prepaid Return
- Monrovia, CA (Suite 100)
- Short Hold Times
- Temperature Control
- Rush

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.



Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

SHIP ORDER ID: 225081

Page 2 of 3

Printed on 5/6/2022 5:59:34 AM

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Order Completion Information

Creator: Joseph Sanchez
Filled by:
Sent Date:
Sent Via:
Tracking #:

Order Information

Bottle Order:
Bottle Order #: Request From Client: 5/6/2022
Date Order Posted: Ready To Process
Prepared By:
Deliver By Date: 5/6/2022 11:59:00PM
Lab Project Number:
PWSID:

Sats	Bottles/Sat	Qty	Botle Type/Description	Preservative	Method	Matrix	Sample Type	Comments	Lot#
------	-------------	-----	------------------------	--------------	--------	--------	-------------	----------	------

Notes to Field Staff

Health and Safety Notes: Preservative Comment



Scan QR code for field sampler instructions

Relinquished By	Company	Date	Time	Received By	Company	Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.



REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

38001111

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 22E081



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 38001111

SDG : 22E081

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of four(4) water samples were received on 05/06/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7E03B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VGH7E03L/VGH7E03C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Gasoline was within MS QC limits in E079-01M/E079-01S. Refer to Matrix QC summary form for details.

Surrogate

Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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=====
Client      : EUROFINS EATON ANALYTICAL
Project     : 38001111
SDG NO.    : 22E081
Instrument ID : H7
=====

```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
									WATER
MBLK1W	VGH7E03B	1	NA	05/06/2216:47	05/06/2216:47	AE06005A	AE06004A	22VGH7E03	Method Blank
LCS1W	VGH7E03L	1	NA	05/06/2217:21	05/06/2217:21	AE06006A	AE06004A	22VGH7E03	Lab Control Sample (LCS)
LCD1W	VGH7E03C	1	NA	05/06/2217:55	05/06/2217:55	AE06007A	AE06004A	22VGH7E03	LCS Duplicate
380-1328-1	E081-01	1	NA	05/06/2218:29	05/06/2218:29	AE06008A	AE06004A	22VGH7E03	Field Sample
380-1328-2	E081-02	1	NA	05/06/2219:04	05/06/2219:04	AE06009A	AE06004A	22VGH7E03	Field Sample
380-1328-3	E081-03	1	NA	05/06/2219:38	05/06/2219:38	AE06010A	AE06004A	22VGH7E03	Field Sample
380-1328-4	E081-04	1	NA	05/06/2220:12	05/06/2220:12	AE06011A	AE06004A	22VGH7E03	Field Sample

FN - Filename
% Moist - Percent Moisture



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SAMPLE RESULTS

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/03/22 11:42
Project     : 38001111                   Date Received: 05/06/22
Batch No.   : 22E081                     Date Extracted: 05/06/22 18:29
Sample ID   : 380-1328-1                 Date Analyzed: 05/06/22 18:29
Lab Samp ID: E081-01                     Dilution Factor: 1
Lab File ID: AE06008A                    Matrix: WATER
Ext Btch ID: 22VGH7E03                   % Moisture: NA
Calib. Ref.: AE06004A                    Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0350	0.0400	88	60-140

Notes:

Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/03/22 11:42
Project     : 38001111                   Date Received: 05/06/22
Batch No.   : 22E081                     Date Extracted: 05/06/22 19:04
Sample ID   : 380-1328-2                 Date Analyzed: 05/06/22 19:04
Lab Samp ID : E081-02                    Dilution Factor: 1
Lab File ID : AE06009A                   Matrix: WATER
Ext Btch ID : 22VGH7E03                  % Moisture: NA
Calib. Ref.: AE06004A                   Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0358	0.0400	89	60-140

Notes:

Parameter H-C Range
Gasoline C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/03/22 12:06
Project     : 38001111                   Date Received: 05/06/22
Batch No.   : 22E081                     Date Extracted: 05/06/22 19:38
Sample ID   : 380-1328-3                 Date Analyzed: 05/06/22 19:38
Lab Samp ID: E081-03                     Dilution Factor: 1
Lab File ID: AE06010A                    Matrix: WATER
Ext Btch ID: 22VGH7E03                   % Moisture: NA
Calib. Ref.: AE06004A                    Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0335	0.0400	84	60-140

Notes:
Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/03/22 12:06
Project     : 38001111                   Date Received: 05/06/22
Batch No.   : 22E081                     Date Extracted: 05/06/22 20:12
Sample ID   : 380-1328-4                 Date Analyzed: 05/06/22 20:12
Lab Samp ID: E081-04                     Dilution Factor: 1
Lab File ID: AE06011A                    Matrix: WATER
Ext Btch ID: 22VGH7E03                   % Moisture: NA
Calib. Ref.: AE06004A                    Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0303	0.0400	76	60-140

Notes:

Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

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QC SUMMARIES

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/06/22 16:47
Project    : 38001111                    Date Received: 05/06/22
Batch No.  : 22E081                      Date Extracted: 05/06/22 16:47
Sample ID  : MBLK1W                      Date Analyzed: 05/06/22 16:47
Lab Samp ID: VGH7E03B                   Dilution Factor: 1
Lab File ID: AE06005A                   Matrix: WATER
Ext Btch ID: 22VGH7E03                  % Moisture: NA
Calib. Ref.: AE06004A                   Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0399	0.0400	100	60-140

Notes:

Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 38001111
BATCH NO. : 22E081
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID : VGH7E03B	VGH7E03L	VGH7E03C
LAB FILE ID : AE06005A	AE06006A	AE06007A
DATE PREPARED : 05/06/22 16:47	05/06/22 17:21	05/06/22 17:55
DATE ANALYZED : 05/06/22 16:47	05/06/22 17:21	05/06/22 17:55
PREP BATCH : 22VGH7E03	22VGH7E03	22VGH7E03
CALIBRATION REF: AE06004A	AE06004A	AE06004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.486	97	0.500	0.486	97	0	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0473	118	0.0400	0.0465	116	70-130

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 38000861
BATCH NO. : 22E079
METHOD : 50308/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : 380-1269-1	380-1269-1MS	380-1269-1MSD
LAB SAMPLE ID : E079-01	E079-01M	E079-01S
LAB FILE ID : AE06021A	AE06022A	AE06023A
DATE PREPARED : 05/07/22 01:55	05/07/22 02:29	05/07/22 03:03
DATE ANALYZED : 05/07/22 01:55	05/07/22 02:29	05/07/22 03:03
PREP BATCH : 22VGH7E03	22VGH7E03	22VGH7E03
CALIBRATION REF: AE06018A	AE06018A	AE06018A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.462	92	0.500	0.435	87	6	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0429	107	0.0400	0.0430	108	60-140

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

38001111

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22E081



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 38001111

SDG : 22E081

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 05/06/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSE013WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for Diesel was within LCS QC limits in DSE013WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 22E049-05M/22E049-05S. Refer to Matrix QC summary form for details.

Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL
Project     : 38001111
SDG NO.    : 22E081
Instrument ID : D5
=====
  
```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
									WATER
MBLK1W	DSE013WB	1	NA	05/10/2215:29	05/09/2211:30	LE10010A	LE10004A	22DSE013W	Method Blank
LCS1W	DSE013WL	1	NA	05/10/2215:48	05/09/2211:30	LE10011A	LE10004A	22DSE013W	Lab Control Sample (LCS)
380-1328-1	E081-01	1	NA	05/10/2223:46	05/09/2211:30	LE10037A	LE10025A	22DSE013W	Field Sample
380-1328-3	E081-03	1	NA	05/11/2200:04	05/09/2211:30	LE10038A	LE10025A	22DSE013W	Field Sample

```

FN      - Filename
% Moist - Percent Moisture
  
```



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SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/03/22 11:42
Project     : 38001111                   Date Received: 05/06/22
Batch No.   : 22E081                     Date Extracted: 05/09/22 11:30
Sample ID   : 380-1328-1                 Date Analyzed: 05/10/22 23:46
Lab Samp ID: 22E081-01                   Dilution Factor: 1
Lab File ID: LE10037A                     Matrix: WATER
Ext Btch ID: 22DSE013W                    % Moisture: NA
Calib. Ref.: LE10025A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.026	0.013
Motor Oil	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.412	0.520	79	60-130
Hexacosane	0.132	0.130	102	60-130

Notes:
Parameter H-C Range
Diesel C10-C24
Motor Oil C24-C36
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml Final Volume : 5ml
Prepared by : P0reto Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/03/22 12:06
Project     : 38001111                   Date Received: 05/06/22
Batch No.   : 22E081                     Date Extracted: 05/09/22 11:30
Sample ID   : 380-1328-3                 Date Analyzed: 05/11/22 00:04
Lab Samp ID: 22E081-03                   Dilution Factor: 1
Lab File ID: LE10038A                    Matrix: WATER
Ext Btch ID: 22DSE013W                   % Moisture: NA
Calib. Ref.: LE10025A                    Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.024	0.012	
Motor Oil	ND	0.049	0.024	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.392	0.485	81	60-130
Hexacosane	0.127	0.121	104	60-130

Notes:

Parameter H-C Range
Diesel C10-C24
Motor Oil C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1030ml Final Volume : 5ml
Prepared by : POrto Analyzed by : SDeeso

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QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/09/22 11:30
Project     : 38001111                   Date Received: 05/09/22
Batch No.   : 22E081                     Date Extracted: 05/09/22 11:30
Sample ID   : MBLK1W                     Date Analyzed: 05/10/22 15:29
Lab Samp ID: DSE013WB                   Dilution Factor: 1
Lab File ID: LE10010A                   Matrix: WATER
Ext Btch ID: 22DSE013W                 % Moisture: NA
Calib. Ref.: LE10004A                   Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.025	0.012	
Motor Oil	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.487	0.500	97	60-130
Hexacosane	0.123	0.125	99	60-130

Notes:

Parameter H-C Range
Diesel C10-C24
Motor Oil C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml Final Volume : 5ml
Prepared by : POrto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 38001111
BATCH NO. : 22E081
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSE013WB DSE013WL
LAB FILE ID : LE10010A LE10011A
DATE PREPARED : 05/09/22 11:30 05/09/22 11:30
DATE ANALYZED : 05/10/22 15:29 05/10/22 15:48
PREP BATCH : 22DSE013W 22DSE013W
CALIBRATION REF: LE10004A LE10004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.45	98	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.518	104	60-130
Hexacosane	0.125	0.128	102	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 38001111
BATCH NO. : 22E049
METHOD : 3520C/B015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-1130-1	380-1130-1MS	380-1130-1MSD
LAB SAMPLE ID	: 22E049-05	22E049-05M	22E049-05S
LAB FILE ID	: LE10016A	LE10017A	LE10018A
DATE PREPARED	: 05/09/22 11:30	05/09/22 11:30	05/09/22 11:30
DATE ANALYZED	: 05/10/22 17:20	05/10/22 17:39	05/10/22 17:57
PREP BATCH	: 22DSE013W	22DSE013W	22DSE013W
CALIBRATION REF:	LE10004A	LE10004A	LE10004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.40	2.40	100	2.40	2.30	96	4	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.480	0.480	100	0.480	0.486	101	60-130
Hexacosane	0.120	0.120	100	0.120	0.125	104	60-130

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

CHAIN OF CUSTODY RECORD



Eaton Analytical

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629
Phone: 626 386 1100
Fax: 626 386 1101
800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY: CS

SAMPLES LOGGED IN BY: CS

SAMPLES REC'D DAY OF COLLECTION? (check for yes)

SAMPLE TEMP RECEIVED AT: _____ °C (Compliance: 4 ± 2 °C)
 Colton / No. California / Arizona
 Monrovia

CONDITION OF BLUE ICE: Frozen Partially-Frozen _____ Thawed _____ Wet Ice No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER: _____ (check for yes)

COMPLIANCE SAMPLES NON-COMPLIANCE SAMPLES - Requires state forms REGULATION INVOLVED: _____
 Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA, ...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES OR list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX	FIELD DATA	FIELD DATA	TAT requested: rush by adv notice only	STD	1 wk	X	3 day	2 day	1 day	SAMPLER COMMENTS
05/03/22	142	Aiea Gulch Wells Pump 1	H10000331-201	CFW										
05/03/22	1206	Aiea Gulch Wells Pump 2	H10000331-202	CFW										

Temp Blank: _____ °C



* MATRIX TYPES: RSW = Raw Surface Water RGW = Raw Ground Water
 CFW = Chlor(am)inated Finished Water FW = Other Finished Water
 SEAW = Sea Water BW = Bottled Water SO = Soil
 WW = Waste Water SW = Storm Water SL = Sludge

SAMPLED BY: _____ SIGNATURE

RELINQUISHED BY: _____

RECEIVED BY: Cruel Beckler

RELINQUISHED BY: _____

RECEIVED BY: _____

PRINT NAME: L. Bailey

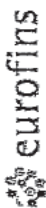
COMPANY/TITLE: Honolulu Board of Water Supply

DATE: May 3, 2022

TIME: 1200

5-5-22

1150



INTERNAL CHAIN OF CUSTODY RECORD

Eaton Analytical

EEA Folder Number: 1778

SAMPLE TEMP RECEIVED:

Notes: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 401 (Observation = 3.9 °C) (Corr. Factor = 0.2 °C) (Final = 3.7 °C)

TYPE OF ICE: Real Synthetic _____ No Ice _____ Condition of Ice: Frozen _____ Partially Frozen _____ Thawed _____ N/A _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

Compliance Acceptance Criteria:

- 1) Chemistry: >0, ≤6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrants

1 = (Observation = _____ °C) (Corr. Factor = _____ °C) (Final = _____ °C)	2 = (Observation = _____ °C) (Corr. Factor = _____ °C) (Final = _____ °C)
3 = (Observation = _____ °C) (Corr. Factor = _____ °C) (Final = _____ °C)	4 = (Observation = _____ °C) (Corr. Factor = _____ °C) (Final = _____ °C)

4) Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

5) pH Check. Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 or _____ Expiration Date: _____ Results: _____

6) Chlorine check. Manufacturer: Sansafe, Lot No.: _____ Expiration Date: _____ Results: _____

7) VOA and Radon: _____

Headspace: _____ Samples with Headspace (see below): _____

Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)

Exempt from headspace concerns: Methods 815.4, HAA(625,552), 605, SPME, @CH, 832LCMS, 566, 636, Anatoxin, LC-MS methods using 40 ml vials, International clients:

Sample ID	Boyle #	None/≤6	>6mm	Test	Sample ID	Boyle #	None/≤6	>6mm	Test

Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): _____

RECEIVED BY: Chris Bach SIGNATURE Chris Bach PRINT NAME
 COMPANY/TITLE Eurofins Eaton Analytical DATE 5.5.22 TIME 1130

SAMPLES CHECKED AGAINST COC BY: _____ SIGNATURE _____ PRINT NAME _____
 COMPANY/TITLE Eurofins Eaton Analytical DATE _____ TIME _____



Kit Order for Honolulu Board of Water Supply

Debbie L Frank is your Eurofins Eaton Analytical, LLC Service Manager

750 Royal Oaks Drive, Suite 100
 Monrovia, California 91016-3629
 (626) 386-1100 FAX (866) 988-3757

Created Date & Time: 12/27/2021 12:07:03AM

Note: Sampler Please return this paper with your samples

Client ID: HONOLULU
 Project Code: RED-HILL Bottle Orders
 Group Name: Red-Hill Expanded List (Albuquerque+)
 PO#/JOB#: C20525101 exp 05312023
 Description: MOANALUA WELLS - Every 1 wee

Kit #: 308898
 Created By: - [AutoGenerated]
 Deliver By: 01/26/2022
 STG: Bottle Orders
 Ice Type: G
 Pre Registered

Ship Sample Kits to
 Honolulu Board of Water Supply
 630 South Beretania Street
 Chemistry Lab
 Honolulu, HI 96843
 Attn: Ron Fenstermacher
 Phone: 808-748-5841
 Fax: 808-550-5572

Send Report to
 Honolulu Board of Water Supply
 630 South Beretania Street
 Public Service Bldg. Room 308
 Honolulu, HI 96843
 Attn: Erwin Kawata
 Phone: 808-748-5091
 Fax: 808-550-5018

Billing Address
 Honolulu Board of Water Supply
 630 South Beretania Street
 Public Service Bldg. Room 308
 Honolulu, HI 96843
 Attn: Erwin Kawata
 Phone: 808-748-5091
 Fax: 808-550-5018

# of Sample Tests	Bottle Qty - Type [preservative information]	Total	UN DOT #
1	TPH 8015 Diesel and Motor Oil_C, TPH 8015 Jet Fuel 5_C, TPH 8015 Jet Fuel 8_C	9	
1	8015 Gas_C	3	
1	8015 Gas_C TB	2	
1	@VOASDWA-G-plus-plus-HCs-TBC	3	JUN1789
Sum Tests: 4		Sum Bottles: 17	

Comments
 Std MSMSD
 SITE ID: MOANALUA-WELLS (334-223-TP202)

SAMPLER:
 Eight 1 LITER AMBER GLASS BOTTLES FOR 625 SERIES AND Nine 1 LITER AMBER GLASS BOTTLES FOR TPH 8015 SERIES. THIS IS A MSMSD SITE for 600 and 8000 series testing

SHIPPING:
 Travel Blanks - TBAMTBE, VOASDWA - Prepare TBs in the VOA LAB.
 Label Cooler on TOP and right below both Handles with Site description of contents (use extra Container Labels)

ASM: Be sure to coordinate Follow-up as needed for any new detections in Field samples.
 Acetone - follow-ups need to use EPA 624

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ORIGIN ID:HIKA (808) 748-5840 SHIP DATE: 04MAY22
 BWS CHEM LAB ACTWGT: 57.00 LB
 HONOLULU BOARD OF WATER SUPPLY CAD: 100205419/INET4490
 630 S. BERETANIA ST.
 CHEMICAL LABORATORY
 HONOLULU, HI 96843
 UNITED STATES US

BILL RECIPIENT

TO

EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016
 (626) 386-1178 REF
 INV

577J5M1BD6FE4A

DEPT



THU - 05 MAY 10:30A
 PRIORITY OVERNIGHT

4 of 5

MPS# 7767 7073 7668

0263

Mstr# 7767 7073 8366

0201

WZ WHPA

91016

CA-US

BUR



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-1328-1

Login Number: 1328

List Number: 1

Creator: Ngo, Theodore

List Source: Eurofins Eaton Monrovia

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").	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	