

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
Weekly: Ka'amilo Wells Pump 1/Pump 2

JOB NUMBER

380-160908-1

Eurofins Eaton Analytical Pomona

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Compliance Statement

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

Authorization



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Definitions/Glossary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
*3	ISTD response or retention time outside acceptable limits.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

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.

GC VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

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

Job ID: 380-160908-1

Job ID: 380-160908-1

Eurofins Eaton Analytical Pomona

Job Narrative 380-160908-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt

The samples were received on 7/16/2025 9:17 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.5°C.

GC/MS Semi VOA

Method 625.1_SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-598833 and analytical batch 570-601009 recovered outside control limits for the following analytes: 1-Methylnaphthalene and 2-Methylnaphthalene.

Method 525.2_PREC: Internal standards (Acenaphthene-d10 and Phenanthrene-d10) and surrogate (2-Nitro-m-Xylene) recoveries are below acceptance limits for MS. LCS/LCSD recoveries and RPD are within limits. These results have been qualified and reported.

Ka'amilo Wells Pump 1 (380-160908-1) and (380-160908-B-1-A MS)

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

Gasoline Range Organics

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

Diesel Range Organics

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

Eurofins Eaton Analytical Pomona

Detection Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.066		0.0097	ug/L	1		525.2	Total/NA
Heptachlor epoxide (isomer B)	0.011		0.0097	ug/L	1		525.2	Total/NA

Client Sample ID: TB: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-2

No Detections.

Client Sample ID: Ka'amilo Wells Pump 2

Lab Sample ID: 380-160908-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.073		0.0096	ug/L	1		525.2	Total/NA
Heptachlor epoxide (isomer B)	0.013		0.0096	ug/L	1		525.2	Total/NA

Client Sample ID: TB: Ka'amilo Wells Pump 2

Lab Sample ID: 380-160908-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-1

Date Collected: 07/14/25 11:36

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
2,4'-DDD	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
2,4'-DDE	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
2,4'-DDT	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
2,4-Dinitrotoluene	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
2,6-Dinitrotoluene	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
2-Methylnaphthalene	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
4,4'-DDD	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
4,4'-DDE	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
4,4'-DDT	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Acenaphthene	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Acenaphthylene	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Acetochlor	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Alachlor	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
alpha-BHC	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
alpha-Chlordane	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Anthracene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 14:02	1
Atrazine	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Benz(a)anthracene	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Benzo[a]pyrene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 14:02	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 14:02	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 14:02	1
beta-BHC	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		07/17/25 08:08	07/18/25 14:02	1
Bromacil	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Butachlor	<0.049		0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Butylbenzylphthalate	<0.49	F1	0.49	ug/L		07/17/25 08:08	07/18/25 14:02	1
Chlorobenzilate	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Chloroneb	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Chlorothalonil (Draconil, Bravo)	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Chlorpyrifos	<0.049		0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Chrysene	<0.019	F1	0.019	ug/L		07/17/25 08:08	07/18/25 14:02	1
delta-BHC	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Di(2-ethylhexyl)adipate	<0.58	F1	0.58	ug/L		07/17/25 08:08	07/18/25 14:02	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Diclorvos (DDVP)	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Dieldrin	0.066		0.0097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Diethylphthalate	<0.49	F1	0.49	ug/L		07/17/25 08:08	07/18/25 14:02	1
Dimethylphthalate	<0.49	F1	0.49	ug/L		07/17/25 08:08	07/18/25 14:02	1
Di-n-butyl phthalate	<0.97	F1	0.97	ug/L		07/17/25 08:08	07/18/25 14:02	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Endosulfan sulfate	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Endrin	<0.0097		0.0097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Endrin aldehyde	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
EPTC	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Fluoranthene	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1

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Client Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-1

Date Collected: 07/14/25 11:36

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
gamma-Chlordane	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Heptachlor	<0.0097	F1	0.0097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Heptachlor epoxide (isomer B)	0.011		0.0097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Hexachlorobenzene	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Hexachlorocyclopentadiene	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Isophorone	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Lindane	<0.0097	F1	0.0097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Malathion	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Methoxychlor	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Metolachlor	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Molinate	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Naphthalene	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Parathion	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Phenanthrene	<0.039		0.039	ug/L		07/17/25 08:08	07/18/25 14:02	1
Propachlor	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Pyrene	<0.049		0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Simazine	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Terbacil	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Terbutylazine	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Thiobencarb	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		07/17/25 08:08	07/18/25 14:02	1
trans-Nonachlor	<0.049	F1	0.049	ug/L		07/17/25 08:08	07/18/25 14:02	1
Trifluralin	<0.097	F1	0.097	ug/L		07/17/25 08:08	07/18/25 14:02	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/17/25 08:08	07/18/25 14:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	07/17/25 08:08	07/18/25 14:02	1
Perylene-d12	84		70 - 130	07/17/25 08:08	07/18/25 14:02	1
Triphenylphosphate	99		70 - 130	07/17/25 08:08	07/18/25 14:02	1

Method: EPA 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19	*1	0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
2-Methylnaphthalene	<0.19	*1	0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Acenaphthene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Acenaphthylene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Anthracene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Benzo[a]anthracene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Benzo[a]pyrene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Chrysene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Fluoranthene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-1

Date Collected: 07/14/25 11:36

Matrix: Water

Date Received: 07/16/25 09:17

Method: EPA 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Naphthalene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Phenanthrene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1
Pyrene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	104		28 - 127	07/18/25 05:26	07/23/25 13:49	1
2-Fluorobiphenyl (Surr)	92		31 - 120	07/18/25 05:26	07/23/25 13:49	1
2-Fluorophenol (Surr)	47		17 - 120	07/18/25 05:26	07/23/25 13:49	1
Nitrobenzene-d5 (Surr)	93		27 - 120	07/18/25 05:26	07/23/25 13:49	1
Phenol-d6 (Surr)	29		10 - 120	07/18/25 05:26	07/23/25 13:49	1
p-Terphenyl-d14 (Surr)	101		45 - 120	07/18/25 05:26	07/23/25 13:49	1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/18/25 05:26	07/29/25 11:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	72		33 - 139	07/18/25 05:26	07/29/25 11:44	1
2-Fluorobiphenyl (Surr)	87		33 - 126	07/18/25 05:26	07/29/25 11:44	1
2-Fluorophenol (Surr)	43		12 - 120	07/18/25 05:26	07/29/25 11:44	1
Nitrobenzene-d5 (Surr)	98		36 - 120	07/18/25 05:26	07/29/25 11:44	1
Phenol-d6 (Surr)	26		10 - 120	07/18/25 05:26	07/29/25 11:44	1
p-Terphenyl-d14 (Surr)	90		47 - 131	07/18/25 05:26	07/29/25 11:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			07/20/25 20:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		38 - 134		07/20/25 20:14	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		07/20/25 12:47	07/27/25 05:45	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		07/20/25 12:47	07/27/25 05:45	1
C8-C18	<26		26	ug/L		07/20/25 12:47	07/27/25 05:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	99		60 - 130	07/20/25 12:47	07/27/25 05:45	1

Client Sample ID: TB: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-2

Date Collected: 07/14/25 11:36

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			07/21/25 00:15	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: TB: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-2

Date Collected: 07/14/25 11:36

Matrix: Water

Date Received: 07/16/25 09:17

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	77		38 - 134		07/21/25 00:15	1

Client Sample ID: Ka'amilo Wells Pump 2

Lab Sample ID: 380-160908-3

Date Collected: 07/14/25 12:17

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
2,4'-DDD	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
2,4'-DDE	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
2,4'-DDT	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
2,4-Dinitrotoluene	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
2,6-Dinitrotoluene	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
2-Methylnaphthalene	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
4,4'-DDD	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
4,4'-DDE	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
4,4'-DDT	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Acenaphthene	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Acenaphthylene	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Acetochlor	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Alachlor	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
alpha-BHC	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
alpha-Chlordane	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Anthracene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 15:23	1
Atrazine	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Benz(a)anthracene	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Benzo[a]pyrene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 15:23	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 15:23	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 15:23	1
beta-BHC	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		07/17/25 08:08	07/18/25 15:23	1
Bromacil	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Butachlor	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Butylbenzylphthalate	<0.48		0.48	ug/L		07/17/25 08:08	07/18/25 15:23	1
Chlorobenzilate	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Chloroneb	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Chlorothalonil (Draconil, Bravo)	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Chlorpyrifos	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Chrysene	<0.019		0.019	ug/L		07/17/25 08:08	07/18/25 15:23	1
delta-BHC	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		07/17/25 08:08	07/18/25 15:23	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Dieldrin	0.073		0.0096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Diethylphthalate	<0.48		0.48	ug/L		07/17/25 08:08	07/18/25 15:23	1
Dimethylphthalate	<0.48		0.48	ug/L		07/17/25 08:08	07/18/25 15:23	1
Di-n-butyl phthalate	<0.96		0.96	ug/L		07/17/25 08:08	07/18/25 15:23	1
Di-n-octyl phthalate	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: Ka'amilo Wells Pump 2

Lab Sample ID: 380-160908-3

Date Collected: 07/14/25 12:17

Matrix: Water

Date Received: 07/16/25 09:17

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan I (Alpha)	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Endosulfan II (Beta)	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Endosulfan sulfate	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Endrin	<0.0096		0.0096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Endrin aldehyde	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
EPTC	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Fluoranthene	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Fluorene	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
gamma-Chlordane	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Heptachlor	<0.0096		0.0096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Heptachlor epoxide (isomer B)	0.013		0.0096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Hexachlorobenzene	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Isophorone	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Lindane	<0.0096		0.0096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Malathion	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Methoxychlor	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Metolachlor	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Molinate	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Naphthalene	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Parathion	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Pendimethalin (Penoxaline)	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Phenanthrene	<0.039		0.039	ug/L		07/17/25 08:08	07/18/25 15:23	1
Propachlor	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Pyrene	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Simazine	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Terbacil	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Terbutylazine	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Thiobencarb	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		07/17/25 08:08	07/18/25 15:23	1
trans-Nonachlor	<0.048		0.048	ug/L		07/17/25 08:08	07/18/25 15:23	1
Trifluralin	<0.096		0.096	ug/L		07/17/25 08:08	07/18/25 15:23	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/17/25 08:08	07/18/25 15:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	96		70 - 130	07/17/25 08:08	07/18/25 15:23	1
Perylene-d12	90		70 - 130	07/17/25 08:08	07/18/25 15:23	1
Triphenylphosphate	100		70 - 130	07/17/25 08:08	07/18/25 15:23	1

Method: EPA 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.19	*1	0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
2-Methylnaphthalene	<0.19	*1	0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Acenaphthene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Acenaphthylene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Anthracene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Benzo[a]anthracene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1

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Client Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: Ka'amilo Wells Pump 2

Lab Sample ID: 380-160908-3

Date Collected: 07/14/25 12:17

Matrix: Water

Date Received: 07/16/25 09:17

Method: EPA 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Chrysene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Fluoranthene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Fluorene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Naphthalene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Phenanthrene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1
Pyrene	<0.19		0.19	ug/L		07/18/25 05:26	07/23/25 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	98		28 - 127	07/18/25 05:26	07/23/25 14:11	1
2-Fluorobiphenyl (Surr)	89		31 - 120	07/18/25 05:26	07/23/25 14:11	1
2-Fluorophenol (Surr)	47		17 - 120	07/18/25 05:26	07/23/25 14:11	1
Nitrobenzene-d5 (Surr)	92		27 - 120	07/18/25 05:26	07/23/25 14:11	1
Phenol-d6 (Surr)	28		10 - 120	07/18/25 05:26	07/23/25 14:11	1
p-Terphenyl-d14 (Surr)	97		45 - 120	07/18/25 05:26	07/23/25 14:11	1

Method: EPA 625.1 - Semivolatile Organic Compounds (GC/MS)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/18/25 05:26	07/29/25 12:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	61		33 - 139	07/18/25 05:26	07/29/25 12:09	1
2-Fluorobiphenyl (Surr)	83		33 - 126	07/18/25 05:26	07/29/25 12:09	1
2-Fluorophenol (Surr)	42		12 - 120	07/18/25 05:26	07/29/25 12:09	1
Nitrobenzene-d5 (Surr)	93		36 - 120	07/18/25 05:26	07/29/25 12:09	1
Phenol-d6 (Surr)	17		10 - 120	07/18/25 05:26	07/29/25 12:09	1
p-Terphenyl-d14 (Surr)	81		47 - 131	07/18/25 05:26	07/29/25 12:09	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			07/20/25 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		38 - 134		07/20/25 20:36	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<26		26	ug/L		07/20/25 12:47	07/27/25 06:07	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		07/20/25 12:47	07/27/25 06:07	1
C8-C18	<26		26	ug/L		07/20/25 12:47	07/27/25 06:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	100		60 - 130	07/20/25 12:47	07/27/25 06:07	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: TB: Ka'amilo Wells Pump 2 Lab Sample ID: 380-160908-4
Date Collected: 07/14/25 12:17 Matrix: Water
Date Received: 07/16/25 09:17

Method: SW846 8015B GRO LL - Gasoline Range Organics - (GC)									
Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac	
GRO (C6-C10)	<10		10	ug/L			07/21/25 00:37	1	
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
4-Bromofluorobenzene (Surr)	82		38 - 134				07/21/25 00:37	1	

Action Limit Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-1

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	<0.049	F1	ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049	F1	ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58	F1	ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097	F1	ug/L	0.4	0.0097	525.2	Total/NA
Heptachlor epoxide (isomer B)	0.011		ug/L	0.2	0.0097	525.2	Total/NA
Hexachlorobenzene	<0.049	F1	ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049	F1	ug/L	50	0.049	525.2	Total/NA
Lindane	<0.0097	F1	ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.049	F1	ug/L	40	0.049	525.2	Total/NA
Simazine	<0.049	F1	ug/L	4	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2	0.19	625.1 SIM	Total/NA

Client Sample ID: Ka'amilo Wells Pump 2

Lab Sample ID: 380-160908-3

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	<0.048		ug/L	2	0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.0096		ug/L	2	0.0096	525.2	Total/NA
Heptachlor	<0.0096		ug/L	0.4	0.0096	525.2	Total/NA
Heptachlor epoxide (isomer B)	0.013		ug/L	0.2	0.0096	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50	0.048	525.2	Total/NA
Lindane	<0.0096		ug/L	0.2	0.0096	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40	0.048	525.2	Total/NA
Simazine	<0.048		ug/L	4	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.19		ug/L	0.2	0.19	625.1 SIM	Total/NA

Surrogate Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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)	PRY (70-130)	TPP (70-130)
380-160908-1	Ka'amilo Wells Pump 1	96	84	99
380-160908-1 MS	Ka'amilo Wells Pump 1	43 S1- *3	99	120 *3
380-160908-3	Ka'amilo Wells Pump 2	96	90	100
380-160926-AC-1-A DU	Duplicate	47 S1- *3	101	136 *3
LCS 380-163343/23-A	Lab Control Sample	95	98	103
LCSD 380-163343/24-A	Lab Control Sample Dup	98	96	105
MB 380-163343/21-A	Method Blank	93	93	102
MRL 380-163343/22-A	Lab Control Sample	93	89	104

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

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (33-139)	FBP (33-126)	2FP (12-120)	NBZ (36-120)	PHL6 (10-120)	TPHd14 (47-131)
380-160908-1	Ka'amilo Wells Pump 1	72	87	43	98	26	90
380-160908-3	Ka'amilo Wells Pump 2	61	83	42	93	17	81
MB 570-598833/1-A	Method Blank	70	70	42	76	21	73

Surrogate Legend
 TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl (Surr)
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 PHL6 = Phenol-d6 (Surr)
 TPHd14 = p-Terphenyl-d14 (Surr)

Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
380-160908-1	Ka'amilo Wells Pump 1	104	92	47	93	29	101
380-160908-3	Ka'amilo Wells Pump 2	98	89	47	92	28	97
380-160952-A-1-B MS	Matrix Spike	99	88	45	68	27	100
380-160952-A-1-C MSD	Matrix Spike Duplicate	93	89	51	72	32	89
LCS 570-598833/2-A	Lab Control Sample	89	74	40	58	25	89
LCSD 570-598833/3-A	Lab Control Sample Dup	100	98	62	80	37	100
MB 570-598833/1-A	Method Blank	81	69	41	72	24	78

Surrogate Legend
 TBP = 2,4,6-Tribromophenol (Surr)
 FBP = 2-Fluorobiphenyl (Surr)
 2FP = 2-Fluorophenol (Surr)
 NBZ = Nitrobenzene-d5 (Surr)

Surrogate Summary

Client: City & County of Honolulu
Project/Site: RED-HILL
PHL6 = Phenol-d6 (Surr)
TPHD14 = p-Terphenyl-d14 (Surr)

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-159486-C-1 MS	Matrix Spike	98
380-159486-C-1 MSD	Matrix Spike Duplicate	100
380-160908-1	Ka'amilo Wells Pump 1	100
380-160908-2	TB: Ka'amilo Wells Pump 1	77
380-160908-3	Ka'amilo Wells Pump 2	86
380-160908-4	TB: Ka'amilo Wells Pump 2	82
LCS 570-599688/1008	Lab Control Sample	99
LCSD 570-599688/9	Lab Control Sample Dup	89
MB 570-599688/10	Method Blank	79
MRL 570-599688/11	Lab Control Sample	82

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTCSN1 (60-130)
380-160908-1	Ka'amilo Wells Pump 1	99
380-160908-3	Ka'amilo Wells Pump 2	100
380-160952-B-1-A MS	Matrix Spike	99
380-160952-B-1-B MSD	Matrix Spike Duplicate	97
LCS 570-599701/2-A	Lab Control Sample	97
LCSD 570-599701/3-A	Lab Control Sample Dup	101
MB 570-599701/1-A	Method Blank	106
MRL 570-599701/4-A	Lab Control Sample	97

Surrogate Legend

OTCSN = n-Octacosane (Surr)

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: MB 380-163343/21-A

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 163343

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
2,4'-DDD	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
2,4'-DDE	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
2,4'-DDT	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
2-Methylnaphthalene	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
4,4'-DDD	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
4,4'-DDE	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
4,4'-DDT	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Acenaphthene	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Acenaphthylene	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Acetochlor	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Alachlor	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
alpha-BHC	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
alpha-Chlordane	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Anthracene	<0.020		0.020	ug/L		07/17/25 08:08	07/18/25 13:41	1
Atrazine	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Benz(a)anthracene	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/17/25 08:08	07/18/25 13:41	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/17/25 08:08	07/18/25 13:41	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/17/25 08:08	07/18/25 13:41	1
beta-BHC	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		07/17/25 08:08	07/18/25 13:41	1
Bromacil	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Butachlor	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Butylbenzylphthalate	<0.50		0.50	ug/L		07/17/25 08:08	07/18/25 13:41	1
Chlorobenzilate	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Chloroneb	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Chlorpyrifos	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Chrysene	<0.020		0.020	ug/L		07/17/25 08:08	07/18/25 13:41	1
delta-BHC	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		07/17/25 08:08	07/18/25 13:41	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Dieldrin	<0.0099		0.0099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Diethylphthalate	<0.50		0.50	ug/L		07/17/25 08:08	07/18/25 13:41	1
Dimethylphthalate	<0.50		0.50	ug/L		07/17/25 08:08	07/18/25 13:41	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		07/17/25 08:08	07/18/25 13:41	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Endosulfan sulfate	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Endrin	<0.0099		0.0099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Endrin aldehyde	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
EPTC	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1

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QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: MB 380-163343/21-A

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 163343

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Fluorene	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
gamma-Chlordane	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Heptachlor	<0.0099		0.0099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Hexachlorobenzene	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Isophorone	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Lindane	<0.0099		0.0099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Malathion	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Methoxychlor	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Metolachlor	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Molinate	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Naphthalene	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Parathion	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Phenanthrene	<0.040		0.040	ug/L		07/17/25 08:08	07/18/25 13:41	1
Propachlor	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Pyrene	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Simazine	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Terbacil	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Terbutylazine	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Thiobencarb	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/17/25 08:08	07/18/25 13:41	1
trans-Nonachlor	<0.050		0.050	ug/L		07/17/25 08:08	07/18/25 13:41	1
Trifluralin	<0.099		0.099	ug/L		07/17/25 08:08	07/18/25 13:41	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Cyclohexasiloxane, dodecamethyl-	0.585	T J N	ug/L		3.88	540-97-6	07/17/25 08:08	07/18/25 13:41	1
9-Octadecenamide, (Z)-	2.64	T J N	ug/L		7.89	301-02-0	07/17/25 08:08	07/18/25 13:41	1
13-Docosenamide, (Z)-	0.798	T J N	ug/L		10.42	112-84-5	07/17/25 08:08	07/18/25 13:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	93		70 - 130	07/17/25 08:08	07/18/25 13:41	1
Perylene-d12	93		70 - 130	07/17/25 08:08	07/18/25 13:41	1
Triphenylphosphate	102		70 - 130	07/17/25 08:08	07/18/25 13:41	1

Lab Sample ID: LCS 380-163343/23-A

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.99	1.97		ug/L		99	70 - 130
2,4'-DDD	1.99	2.05		ug/L		103	70 - 130
2,4'-DDE	1.99	2.00		ug/L		101	70 - 130
2,4'-DDT	1.99	1.94		ug/L		98	70 - 130
2,4-Dinitrotoluene	1.99	2.09		ug/L		105	70 - 130

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QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: LCS 380-163343/23-A

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,6-Dinitrotoluene	1.99	1.94		ug/L		97	70 - 130
2-Methylnaphthalene	1.99	1.85		ug/L		93	70 - 130
4,4'-DDD	1.99	2.12		ug/L		107	70 - 130
4,4'-DDE	1.99	1.98		ug/L		100	70 - 130
4,4'-DDT	1.99	2.12		ug/L		107	70 - 130
Acenaphthene	1.99	1.89		ug/L		95	70 - 130
Acenaphthylene	1.99	1.95		ug/L		98	70 - 130
Acetochlor	1.99	2.03		ug/L		102	70 - 130
Alachlor	1.99	2.04		ug/L		103	70 - 130
alpha-BHC	1.99	1.94		ug/L		98	70 - 130
alpha-Chlordane	1.99	2.02		ug/L		102	70 - 130
Anthracene	1.99	1.80		ug/L		91	70 - 130
Atrazine	1.99	2.06		ug/L		104	70 - 130
Benz(a)anthracene	1.99	2.00		ug/L		101	70 - 130
Benzo[a]pyrene	1.99	1.97		ug/L		99	70 - 130
Benzo[b]fluoranthene	1.99	2.02		ug/L		102	70 - 130
Benzo[g,h,i]perylene	1.99	2.06		ug/L		103	70 - 130
Benzo[k]fluoranthene	1.99	1.91		ug/L		96	70 - 130
beta-BHC	1.99	2.03		ug/L		102	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	1.76		ug/L		89	70 - 130
Bromacil	1.99	2.17		ug/L		109	70 - 130
Butachlor	1.99	2.24		ug/L		113	70 - 130
Butylbenzylphthalate	1.99	2.11		ug/L		106	70 - 130
Chlorobenzilate	1.99	2.08		ug/L		105	70 - 130
Chloroneb	1.99	1.93		ug/L		97	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.01		ug/L		101	70 - 130
Chlorpyrifos	1.99	2.06		ug/L		104	70 - 130
Chrysene	1.99	2.00		ug/L		101	70 - 130
delta-BHC	1.99	1.89		ug/L		95	70 - 130
Di(2-ethylhexyl)adipate	1.99	1.94		ug/L		98	70 - 130
Dibenz(a,h)anthracene	1.99	1.92		ug/L		97	70 - 130
Diclorvos (DDVP)	1.99	2.03		ug/L		102	70 - 130
Dieldrin	1.99	1.97		ug/L		99	70 - 130
Diethylphthalate	1.99	2.11		ug/L		106	70 - 130
Dimethylphthalate	1.99	2.00		ug/L		100	70 - 130
Di-n-butyl phthalate	3.97	4.64		ug/L		117	70 - 130
Di-n-octyl phthalate	1.99	1.84		ug/L		93	70 - 130
Endosulfan I (Alpha)	1.99	1.80		ug/L		91	70 - 130
Endosulfan II (Beta)	1.99	1.97		ug/L		99	70 - 130
Endosulfan sulfate	1.99	2.07		ug/L		104	70 - 130
Endrin	1.99	2.07		ug/L		104	70 - 130
Endrin aldehyde	1.99	1.80		ug/L		91	60 - 130
EPTC	1.99	1.99		ug/L		100	70 - 130
Fluoranthene	1.99	2.06		ug/L		104	70 - 130
Fluorene	1.99	2.03		ug/L		102	70 - 130
gamma-Chlordane	1.99	2.04		ug/L		103	70 - 130
Heptachlor	1.99	2.19		ug/L		110	70 - 130
Heptachlor epoxide (isomer B)	1.99	2.03		ug/L		102	70 - 130
Hexachlorobenzene	1.99	1.94		ug/L		98	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: LCS 380-163343/23-A

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorocyclopentadiene	1.99	1.98		ug/L		100	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.00		ug/L		101	70 - 130
Isophorone	1.99	1.96		ug/L		99	70 - 130
Lindane	1.99	2.15		ug/L		108	70 - 130
Malathion	1.99	2.02		ug/L		102	70 - 130
Methoxychlor	1.99	2.14		ug/L		108	70 - 130
Metolachlor	1.99	2.13		ug/L		107	70 - 130
Molinate	1.99	2.12		ug/L		107	70 - 130
Naphthalene	1.99	1.87		ug/L		94	70 - 130
Parathion	1.99	2.04		ug/L		103	70 - 130
Pendimethalin (Penoxaline)	1.99	1.98		ug/L		100	70 - 130
Phenanthrene	1.99	1.86		ug/L		94	70 - 130
Propachlor	1.99	2.18		ug/L		110	70 - 130
Pyrene	1.99	2.14		ug/L		108	70 - 130
Simazine	1.99	2.20		ug/L		111	70 - 130
Terbacil	1.99	2.22		ug/L		112	70 - 130
Terbutylazine	1.99	2.18		ug/L		110	70 - 130
Thiobencarb	1.99	2.09		ug/L		105	70 - 130
trans-Nonachlor	1.99	2.05		ug/L		103	70 - 130
Trifluralin	1.99	2.06		ug/L		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	95		70 - 130
Perylene-d12	98		70 - 130
Triphenylphosphate	103		70 - 130

Lab Sample ID: LCSD 380-163343/24-A

Matrix: Water

Analysis Batch: 163829

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.98	2.00		ug/L		101	70 - 130	1	20
2,4'-DDD	1.98	2.06		ug/L		104	70 - 130	0	20
2,4'-DDE	1.98	2.04		ug/L		103	70 - 130	2	20
2,4'-DDT	1.98	1.95		ug/L		98	70 - 130	0	20
2,4-Dinitrotoluene	1.98	1.98		ug/L		100	70 - 130	5	20
2,6-Dinitrotoluene	1.98	1.94		ug/L		98	70 - 130	0	20
2-Methylnaphthalene	1.98	1.86		ug/L		94	70 - 130	0	20
4,4'-DDD	1.98	2.10		ug/L		106	70 - 130	1	20
4,4'-DDE	1.98	1.99		ug/L		100	70 - 130	0	20
4,4'-DDT	1.98	2.06		ug/L		104	70 - 130	3	20
Acenaphthene	1.98	1.90		ug/L		96	70 - 130	0	20
Acenaphthylene	1.98	1.93		ug/L		98	70 - 130	1	20
Acetochlor	1.98	2.10		ug/L		106	70 - 130	3	20
Alachlor	1.98	2.08		ug/L		105	70 - 130	2	20
alpha-BHC	1.98	1.95		ug/L		99	70 - 130	1	20
alpha-Chlordane	1.98	2.11		ug/L		107	70 - 130	5	20
Anthracene	1.98	1.80		ug/L		91	70 - 130	0	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: LCSD 380-163343/24-A

Matrix: Water

Analysis Batch: 163829

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Atrazine	1.98	2.02		ug/L		102	70 - 130	2	20
Benz(a)anthracene	1.98	1.94		ug/L		98	70 - 130	3	20
Benzo[a]pyrene	1.98	1.89		ug/L		95	70 - 130	4	20
Benzo[b]fluoranthene	1.98	2.01		ug/L		101	70 - 130	0	20
Benzo[g,h,i]perylene	1.98	1.99		ug/L		101	70 - 130	3	20
Benzo[k]fluoranthene	1.98	1.92		ug/L		97	70 - 130	0	20
beta-BHC	1.98	2.02		ug/L		102	70 - 130	1	20
Bis(2-ethylhexyl) phthalate	1.98	1.82		ug/L		92	70 - 130	3	20
Bromacil	1.98	2.11		ug/L		107	70 - 130	3	20
Butachlor	1.98	2.24		ug/L		113	70 - 130	0	20
Butylbenzylphthalate	1.98	2.06		ug/L		104	70 - 130	3	20
Chlorobenzilate	1.98	2.08		ug/L		105	70 - 130	0	20
Chloroneb	1.98	1.96		ug/L		99	70 - 130	1	20
Chlorothalonil (Draconil, Bravo)	1.98	2.02		ug/L		102	70 - 130	1	20
Chlorpyrifos	1.98	2.07		ug/L		105	70 - 130	0	20
Chrysene	1.98	2.01		ug/L		101	70 - 130	0	20
delta-BHC	1.98	1.93		ug/L		97	70 - 130	2	20
Di(2-ethylhexyl)adipate	1.98	1.90		ug/L		96	70 - 130	2	20
Dibenz(a,h)anthracene	1.98	1.85		ug/L		93	70 - 130	4	20
Diclorvos (DDVP)	1.98	2.02		ug/L		102	70 - 130	1	20
Dieldrin	1.98	2.02		ug/L		102	70 - 130	3	20
Diethylphthalate	1.98	2.04		ug/L		103	70 - 130	4	20
Dimethylphthalate	1.98	2.01		ug/L		102	70 - 130	1	20
Di-n-butyl phthalate	3.96	4.65		ug/L		117	70 - 130	0	20
Di-n-octyl phthalate	1.98	1.79		ug/L		90	70 - 130	2	20
Endosulfan I (Alpha)	1.98	1.81		ug/L		92	70 - 130	1	20
Endosulfan II (Beta)	1.98	2.07		ug/L		104	70 - 130	5	20
Endosulfan sulfate	1.98	2.09		ug/L		105	70 - 130	1	20
Endrin	1.98	2.10		ug/L		106	70 - 130	1	20
Endrin aldehyde	1.98	1.84		ug/L		93	60 - 130	2	20
EPTC	1.98	2.02		ug/L		102	70 - 130	2	20
Fluoranthene	1.98	2.06		ug/L		104	70 - 130	0	20
Fluorene	1.98	1.96		ug/L		99	70 - 130	4	20
gamma-Chlordane	1.98	2.13		ug/L		108	70 - 130	4	20
Heptachlor	1.98	2.17		ug/L		110	70 - 130	1	20
Heptachlor epoxide (isomer B)	1.98	2.08		ug/L		105	70 - 130	2	20
Hexachlorobenzene	1.98	1.95		ug/L		98	70 - 130	0	20
Hexachlorocyclopentadiene	1.98	1.93		ug/L		98	70 - 130	3	20
Indeno[1,2,3-cd]pyrene	1.98	1.90		ug/L		96	70 - 130	5	20
Isophorone	1.98	2.02		ug/L		102	70 - 130	3	20
Lindane	1.98	2.13		ug/L		107	70 - 130	1	20
Malathion	1.98	2.02		ug/L		102	70 - 130	0	20
Methoxychlor	1.98	2.13		ug/L		107	70 - 130	1	20
Metolachlor	1.98	2.18		ug/L		110	70 - 130	2	20
Molinate	1.98	2.02		ug/L		102	70 - 130	5	20
Naphthalene	1.98	1.86		ug/L		94	70 - 130	0	20
Parathion	1.98	2.04		ug/L		103	70 - 130	0	20
Pendimethalin (Penoxaline)	1.98	1.93		ug/L		97	70 - 130	3	20
Phenanthrene	1.98	1.86		ug/L		94	70 - 130	0	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: LCSD 380-163343/24-A

Matrix: Water

Analysis Batch: 163829

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Propachlor	1.98	2.06		ug/L		104	70 - 130	6	20
Pyrene	1.98	2.11		ug/L		106	70 - 130	1	20
Simazine	1.98	2.09		ug/L		105	70 - 130	5	20
Terbacil	1.98	2.06		ug/L		104	70 - 130	8	20
Terbutylazine	1.98	2.19		ug/L		110	70 - 130	0	20
Thiobencarb	1.98	2.09		ug/L		106	70 - 130	0	20
trans-Nonachlor	1.98	2.09		ug/L		106	70 - 130	2	20
Trifluralin	1.98	2.00		ug/L		101	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	96		70 - 130
Triphenylphosphate	105		70 - 130

Lab Sample ID: MRL 380-163343/22-A

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0995	0.0977	J	ug/L		98	50 - 150
2,4'-DDD	0.0995	0.0906	J	ug/L		91	50 - 150
2,4'-DDE	0.0995	0.0973	J	ug/L		98	50 - 150
2,4'-DDT	0.0995	0.120		ug/L		120	50 - 150
2,4-Dinitrotoluene	0.0995	0.112		ug/L		112	50 - 150
2,6-Dinitrotoluene	0.0995	0.113		ug/L		114	50 - 150
2-Methylnaphthalene	0.0995	0.0991	J	ug/L		100	50 - 150
4,4'-DDD	0.0995	0.101		ug/L		101	50 - 150
4,4'-DDE	0.0995	0.0937	J	ug/L		94	50 - 150
4,4'-DDT	0.0995	0.130		ug/L		131	50 - 150
Acenaphthene	0.0995	0.0986	J	ug/L		99	50 - 150
Acenaphthylene	0.0995	0.0976	J	ug/L		98	50 - 150
Acetochlor	0.0995	0.108		ug/L		108	50 - 150
Alachlor	0.0498	0.0546		ug/L		110	50 - 150
alpha-BHC	0.0995	0.0958	J	ug/L		96	50 - 150
alpha-Chlordane	0.0249	<0.029		ug/L		103	50 - 150
Anthracene	0.0199	0.0205		ug/L		103	50 - 150
Atrazine	0.0498	0.0558		ug/L		112	50 - 150
Benz(a)anthracene	0.0498	0.0523		ug/L		105	50 - 150
Benzo[a]pyrene	0.0199	0.0246		ug/L		124	50 - 150
Benzo[b]fluoranthene	0.0199	0.0261		ug/L		131	50 - 150
Benzo[g,h,i]perylene	0.0498	0.0441	J	ug/L		89	50 - 150
Benzo[k]fluoranthene	0.0199	0.0241		ug/L		121	50 - 150
beta-BHC	0.0995	0.108		ug/L		108	50 - 150
Bis(2-ethylhexyl) phthalate	0.597	0.553	J	ug/L		93	50 - 150
Bromacil	0.0995	0.112		ug/L		113	50 - 150
Butachlor	0.0498	0.0543		ug/L		109	50 - 150
Butylbenzylphthalate	0.498	0.565		ug/L		114	50 - 150
Chlorobenzilate	0.0995	0.0973	J	ug/L		98	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: MRL 380-163343/22-A

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloroneb	0.0995	0.110		ug/L		110	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0995	0.104		ug/L		105	50 - 150
Chlorpyrifos	0.0498	0.0511		ug/L		103	50 - 150
Chrysene	0.0199	0.0213		ug/L		107	50 - 150
delta-BHC	0.0995	0.105		ug/L		106	50 - 150
Di(2-ethylhexyl)adipate	0.597	0.631		ug/L		106	50 - 150
Dibenz(a,h)anthracene	0.0498	0.0505		ug/L		102	50 - 150
Diclorvos (DDVP)	0.0498	0.0570		ug/L		115	50 - 150
Dieldrin	0.00995	0.0108		ug/L		108	50 - 150
Diethylphthalate	0.498	0.542		ug/L		109	50 - 150
Dimethylphthalate	0.498	0.520		ug/L		104	50 - 150
Di-n-butyl phthalate	0.498	1.14		ug/L		229	49 - 243
Di-n-octyl phthalate	0.0995	0.0944	J	ug/L		95	50 - 150
Endosulfan I (Alpha)	0.0995	0.0840	J	ug/L		84	50 - 150
Endosulfan II (Beta)	0.0995	0.107		ug/L		107	50 - 150
Endosulfan sulfate	0.0995	0.101		ug/L		102	50 - 150
Endrin	0.00995	0.0100		ug/L		101	50 - 150
Endrin aldehyde	0.0995	0.112		ug/L		113	50 - 150
EPTC	0.0995	0.0992	J	ug/L		100	50 - 150
Fluoranthene	0.0995	0.0967	J	ug/L		97	50 - 150
Fluorene	0.0498	<0.050		ug/L		100	50 - 150
gamma-Chlordane	0.0249	0.0246	J	ug/L		99	50 - 150
Heptachlor	0.00995	0.0108		ug/L		108	50 - 150
Heptachlor epoxide (isomer B)	0.00995	0.0105		ug/L		105	50 - 150
Hexachlorobenzene	0.0498	0.0426	J	ug/L		86	50 - 150
Hexachlorocyclopentadiene	0.0498	0.0526		ug/L		106	50 - 150
Indeno[1,2,3-cd]pyrene	0.0498	0.0501		ug/L		101	50 - 150
Isophorone	0.0995	0.109		ug/L		110	50 - 150
Lindane	0.00995	0.0100		ug/L		100	50 - 150
Malathion	0.0995	0.113		ug/L		114	50 - 150
Methoxychlor	0.0498	0.0595		ug/L		120	50 - 150
Metolachlor	0.0498	0.0533		ug/L		107	50 - 150
Molinate	0.0995	0.102		ug/L		102	50 - 150
Naphthalene	0.0995	0.0907	J	ug/L		91	50 - 150
Parathion	0.0995	0.101		ug/L		102	50 - 150
Pendimethalin (Penoxaline)	0.0995	0.110		ug/L		111	50 - 150
Phenanthrene	0.0398	0.0418		ug/L		105	50 - 150
Propachlor	0.0498	0.0539		ug/L		108	50 - 150
Pyrene	0.0498	0.0485	J	ug/L		98	50 - 150
Simazine	0.0498	0.0439	J	ug/L		88	50 - 150
Terbacil	0.0995	0.100		ug/L		101	50 - 150
Terbutylazine	0.0995	0.102		ug/L		102	50 - 150
Thiobencarb	0.0995	0.103		ug/L		103	50 - 150
trans-Nonachlor	0.0249	0.0260	J	ug/L		104	50 - 150
Trifluralin	0.0995	0.103		ug/L		103	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	93		70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: MRL 380-163343/22-A

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 163343

Surrogate	MRL %Recovery	MRL Qualifier	Limits
Perylene-d12	89		70 - 130
Triphenylphosphate	104		70 - 130

Lab Sample ID: 380-160908-1 MS

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Ka'amilo Wells Pump 1

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.95	2.03	*3	ug/L		104	70 - 130
2,4'-DDD	<0.097	F1	1.95	4.34	F1 *3	ug/L		222	70 - 130
2,4'-DDE	<0.097	F1	1.95	6.82	F1 *3	ug/L		349	70 - 130
2,4'-DDT	<0.097	F1	1.95	7.16	F1 *3	ug/L		366	70 - 130
2,4-Dinitrotoluene	<0.097	F1	1.95	0.485	F1 *3	ug/L		25	70 - 130
2,6-Dinitrotoluene	<0.097	F1	1.95	0.387	F1 *3	ug/L		20	70 - 130
2-Methylnaphthalene	<0.097		1.95	2.13	*3	ug/L		108	70 - 130
4,4'-DDD	<0.097	F1	1.95	4.46	F1 *3	ug/L		228	70 - 130
4,4'-DDE	<0.097	F1	1.95	8.08	F1 *3	ug/L		413	70 - 130
4,4'-DDT	<0.097	F1	1.95	7.14	E F1 *3	ug/L		365	70 - 130
Acenaphthene	<0.097		1.95	1.93	*3	ug/L		99	70 - 130
Acenaphthylene	<0.097		1.95	1.54	*3	ug/L		79	70 - 130
Acetochlor	<0.097	F1	1.95	0.619	F1 *3	ug/L		32	70 - 130
Alachlor	<0.049	F1	1.95	0.648	F1 *3	ug/L		33	70 - 130
alpha-BHC	<0.097	F1	1.95	1.02	F1 *3	ug/L		52	70 - 130
alpha-Chlordane	<0.049	F1	1.95	4.01	F1 *3	ug/L		204	70 - 130
Anthracene	<0.019		1.95	1.50	*3	ug/L		77	70 - 130
Atrazine	<0.049	F1	1.95	0.729	F1 *3	ug/L		37	70 - 130
Benz(a)anthracene	<0.049	F1	1.95	5.34	F1 *3	ug/L		273	70 - 130
Benzo[a]pyrene	<0.019		1.95	1.58		ug/L		81	70 - 130
Benzo[b]fluoranthene	<0.019		1.95	1.46		ug/L		75	70 - 130
Benzo[g,h,i]perylene	<0.049		1.95	2.02		ug/L		103	70 - 130
Benzo[k]fluoranthene	<0.019		1.95	1.60		ug/L		82	70 - 130
beta-BHC	<0.097	F1	1.95	0.906	F1 *3	ug/L		46	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.95	1.87		ug/L		96	70 - 130
Bromacil	<0.097	F1	1.95	0.237	F1 *3	ug/L		12	70 - 130
Butachlor	<0.049		1.95	2.37	*3	ug/L		121	70 - 130
Butylbenzylphthalate	<0.49	F1	1.95	3.04	F1 *3	ug/L		156	70 - 130
Chlorobenzilate	<0.097	F1	1.95	1.32	F1 *3	ug/L		67	70 - 130
Chloroneb	<0.097	F1	1.95	1.07	F1 *3	ug/L		55	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097	F1	1.95	0.660	F1 *3	ug/L		34	70 - 130
Chlorpyrifos	<0.049		1.95	2.24	*3	ug/L		115	70 - 130
Chrysene	<0.019	F1	1.95	1.32	F1	ug/L		67	70 - 130
delta-BHC	<0.097	F1	1.95	0.630	F1 *3	ug/L		32	70 - 130
Di(2-ethylhexyl)adipate	<0.58	F1	1.95	12.2	E F1 *3	ug/L		623	70 - 130
Dibenz(a,h)anthracene	<0.049		1.95	1.90		ug/L		97	70 - 130
Diclorvos (DDVP)	<0.049	F1	1.95	0.472	F1 *3	ug/L		24	70 - 130
Dieldrin	0.066		1.95	2.26	*3	ug/L		112	70 - 130
Diethylphthalate	<0.49	F1	1.95	1.15	F1 *3	ug/L		59	70 - 130
Dimethylphthalate	<0.49	F1	1.95	0.550	F1 *3	ug/L		28	70 - 130

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QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: 380-160908-1 MS

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Ka'amilo Wells Pump 1

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Di-n-butyl phthalate	<0.97	F1	3.91	7.83	F1 *3	ug/L		188	70 - 130
Di-n-octyl phthalate	<0.097		1.95	1.89		ug/L		97	70 - 130
Endosulfan I (Alpha)	<0.097		1.95	1.84	*3	ug/L		94	70 - 130
Endosulfan II (Beta)	<0.097		1.95	2.01	*3	ug/L		103	70 - 130
Endosulfan sulfate	<0.097	F1	1.95	1.24	F1 *3	ug/L		63	70 - 130
Endrin	<0.0097		1.95	2.00	*3	ug/L		102	70 - 130
Endrin aldehyde	<0.097	F1	1.95	1.08	F1 *3	ug/L		55	60 - 130
EPTC	<0.097	F1	1.95	1.27	F1 *3	ug/L		65	70 - 130
Fluoranthene	<0.097		1.95	2.19	*3	ug/L		112	70 - 130
Fluorene	<0.049		1.95	2.22	*3	ug/L		113	70 - 130
gamma-Chlordane	<0.049	F1	1.95	5.08	F1 *3	ug/L		259	70 - 130
Heptachlor	<0.0097	F1	1.95	3.47	F1 *3	ug/L		178	70 - 130
Heptachlor epoxide (isomer B)	0.011		1.95	1.54	*3	ug/L		78	70 - 130
Hexachlorobenzene	<0.049	F1	1.95	5.41	F1 *3	ug/L		277	70 - 130
Hexachlorocyclopentadiene	<0.049	F1	1.95	4.86	F1 *3	ug/L		249	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.95	1.88		ug/L		96	70 - 130
Isophorone	<0.097	F1	1.95	0.505	F1 *3	ug/L		26	70 - 130
Lindane	<0.0097	F1	1.95	1.07	F1 *3	ug/L		55	70 - 130
Malathion	<0.097	F1	1.95	0.810	F1 *3	ug/L		41	70 - 130
Methoxychlor	<0.049	F1	1.95	0.547	F1	ug/L		28	70 - 130
Metolachlor	<0.049	F1	1.95	0.814	F1 *3	ug/L		42	70 - 130
Molinate	<0.097	F1	1.95	1.01	F1 *3	ug/L		52	70 - 130
Naphthalene	<0.097	F1	1.95	1.16	F1 *3	ug/L		59	70 - 130
Parathion	<0.097	F1	1.95	0.986	F1 *3	ug/L		50	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.95	2.00	*3	ug/L		102	70 - 130
Phenanthrene	<0.039		1.95	1.44	*3	ug/L		73	70 - 130
Propachlor	<0.049	F1	1.95	0.762	F1 *3	ug/L		39	70 - 130
Pyrene	<0.049		1.95	2.39	*3	ug/L		122	70 - 130
Simazine	<0.049	F1	1.95	0.728	F1 *3	ug/L		37	70 - 130
Terbacil	<0.097	F1	1.95	0.249	F1 *3	ug/L		13	70 - 130
Terbutylazine	<0.097	F1	1.95	1.09	F1 *3	ug/L		56	70 - 130
Thiobencarb	<0.097	F1	1.95	1.22	F1 *3	ug/L		62	70 - 130
trans-Nonachlor	<0.049	F1	1.95	5.63	F1 *3	ug/L		287	70 - 130
Trifluralin	<0.097	F1	1.95	3.16	F1 *3	ug/L		161	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Nitro-m-xylene	43	S1- *3	70 - 130
Perylene-d12	99		70 - 130
Triphenylphosphate	120	*3	70 - 130

Lab Sample ID: 380-160926-AC-1-A DU

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1-Methylnaphthalene	<0.097		0.137	*3	ug/L		NC	20
2,4'-DDD	<0.097		<0.097	*3	ug/L		NC	20
2,4'-DDE	<0.097		<0.097	*3	ug/L		NC	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: 380-160926-AC-1-A DU

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
2,4'-DDT	<0.097		<0.097	*3	ug/L		NC	20
2,4-Dinitrotoluene	<0.097		<0.097	*3	ug/L		NC	20
2,6-Dinitrotoluene	<0.097		<0.097	*3	ug/L		NC	20
2-Methylnaphthalene	<0.097		0.101	*3	ug/L		NC	20
4,4'-DDD	<0.097		<0.097	*3	ug/L		NC	20
4,4'-DDE	<0.097		<0.097	*3	ug/L		NC	20
4,4'-DDT	<0.097		<0.097	*3	ug/L		NC	20
Acenaphthene	<0.097		<0.097	*3	ug/L		NC	20
Acenaphthylene	<0.097		<0.097	*3	ug/L		NC	20
Acetochlor	<0.097		<0.097	*3	ug/L		NC	20
Alachlor	<0.049		<0.048	*3	ug/L		NC	20
alpha-BHC	<0.097		<0.097	*3	ug/L		NC	20
alpha-Chlordane	<0.049		<0.048	*3	ug/L		NC	20
Anthracene	<0.019		<0.019	*3	ug/L		NC	20
Atrazine	<0.049		<0.048	*3	ug/L		NC	20
Benz(a)anthracene	<0.049		<0.048	*3	ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.048		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.019		ug/L		NC	20
beta-BHC	<0.097		<0.097	*3	ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.58		ug/L		NC	20
Bromacil	<0.097		<0.097	*3	ug/L		NC	20
Butachlor	<0.049		<0.048	*3	ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.48	*3	ug/L		NC	20
Chlorobenzilate	<0.097		<0.097	*3	ug/L		NC	20
Chloroneb	<0.097		<0.097	*3	ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.097		<0.097	*3	ug/L		NC	20
Chlorpyrifos	<0.049		<0.048	*3	ug/L		NC	20
Chrysene	<0.019		<0.019		ug/L		NC	20
delta-BHC	<0.097		<0.097	*3	ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58		<0.58	*3	ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.048		ug/L		NC	20
Diclorvos (DDVP)	<0.049		<0.048	*3	ug/L		NC	20
Dieldrin	<0.0097		<0.0097	*3	ug/L		NC	20
Diethylphthalate	<0.49		<0.48	*3	ug/L		NC	20
Dimethylphthalate	<0.49		<0.48	*3	ug/L		NC	20
Di-n-butyl phthalate	<0.97		1.84	*3	ug/L		NC	20
Di-n-octyl phthalate	<0.097		<0.097		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.097	*3	ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.097	*3	ug/L		NC	20
Endosulfan sulfate	<0.097		<0.097	*3	ug/L		NC	20
Endrin	<0.0097		<0.0097	*3	ug/L		NC	20
Endrin aldehyde	<0.097		<0.097	*3	ug/L		NC	20
EPTC	<0.097		<0.097	*3	ug/L		NC	20
Fluoranthene	<0.097		<0.097	*3	ug/L		NC	20
Fluorene	<0.049		<0.048	*3	ug/L		NC	20
gamma-Chlordane	<0.049		<0.048	*3	ug/L		NC	20
Heptachlor	<0.0097		<0.0097	*3	ug/L		NC	20

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QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: 380-160926-AC-1-A DU

Matrix: Water

Analysis Batch: 163629

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 163343

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Heptachlor epoxide (isomer B)	<0.0097		<0.0097	*3	ug/L		NC	20
Hexachlorobenzene	<0.049		<0.048	*3	ug/L		NC	20
Hexachlorocyclopentadiene	<0.049		<0.048	*3	ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.049		<0.048		ug/L		NC	20
Isophorone	<0.097		<0.097	*3	ug/L		NC	20
Lindane	<0.0097		<0.0097	*3	ug/L		NC	20
Malathion	<0.097		<0.097	*3	ug/L		NC	20
Methoxychlor	<0.049		<0.048		ug/L		NC	20
Metolachlor	<0.049		<0.048	*3	ug/L		NC	20
Molinate	<0.097		<0.097	*3	ug/L		NC	20
Naphthalene	<0.097		<0.097	*3	ug/L		NC	20
Parathion	<0.097		<0.097	*3	ug/L		NC	20
Pendimethalin (Penoxaline)	<0.097		<0.097	*3	ug/L		NC	20
Phenanthrene	<0.039		<0.039	*3	ug/L		NC	20
Propachlor	<0.049		<0.048	*3	ug/L		NC	20
Pyrene	<0.049		<0.048	*3	ug/L		NC	20
Simazine	<0.049		<0.048	*3	ug/L		NC	20
Terbacil	<0.097		<0.097	*3	ug/L		NC	20
Terbutylazine	<0.097		<0.097	*3	ug/L		NC	20
Thiobencarb	<0.097		<0.097	*3	ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.19		ug/L		NC	20
trans-Nonachlor	<0.049		<0.048	*3	ug/L		NC	20
Trifluralin	<0.097		<0.097	*3	ug/L		NC	20

Surrogate	%Recovery	DU Qualifier	Limits
2-Nitro-m-xylene	47	S1- *3	70 - 130
Perylene-d12	101		70 - 130
Triphenylphosphate	136	*3 S1+	70 - 130

Method: 625.1 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-598833/1-A

Matrix: Water

Analysis Batch: 603854

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 598833

Tentatively Identified Compound	Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/18/25 05:26	07/29/25 10:31	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		33 - 139	07/18/25 05:26	07/29/25 10:31	1
2-Fluorobiphenyl (Surr)	70		33 - 126	07/18/25 05:26	07/29/25 10:31	1
2-Fluorophenol (Surr)	42		12 - 120	07/18/25 05:26	07/29/25 10:31	1
Nitrobenzene-d5 (Surr)	76		36 - 120	07/18/25 05:26	07/29/25 10:31	1
Phenol-d6 (Surr)	21		10 - 120	07/18/25 05:26	07/29/25 10:31	1
p-Terphenyl-d14 (Surr)	73		47 - 131	07/18/25 05:26	07/29/25 10:31	1

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QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM)

Lab Sample ID: MB 570-598833/1-A

Matrix: Water

Analysis Batch: 601009

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 598833

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
2-Methylnaphthalene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Acenaphthene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Acenaphthylene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Anthracene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Benzo[a]anthracene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Benzo[a]pyrene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Chrysene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Fluoranthene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Fluorene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Naphthalene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Phenanthrene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1
Pyrene	<0.20		0.20	ug/L		07/18/25 05:26	07/23/25 07:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	81		28 - 127	07/18/25 05:26	07/23/25 07:59	1
2-Fluorobiphenyl (Surr)	69		31 - 120	07/18/25 05:26	07/23/25 07:59	1
2-Fluorophenol (Surr)	41		17 - 120	07/18/25 05:26	07/23/25 07:59	1
Nitrobenzene-d5 (Surr)	72		27 - 120	07/18/25 05:26	07/23/25 07:59	1
Phenol-d6 (Surr)	24		10 - 120	07/18/25 05:26	07/23/25 07:59	1
p-Terphenyl-d14 (Surr)	78		45 - 120	07/18/25 05:26	07/23/25 07:59	1

Lab Sample ID: LCS 570-598833/2-A

Matrix: Water

Analysis Batch: 601009

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 598833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	20.0	12.5		ug/L		62	47 - 120
2-Methylnaphthalene	20.0	12.2		ug/L		61	43 - 120
Acenaphthene	20.0	16.0		ug/L		80	60 - 132
Acenaphthylene	20.0	16.2		ug/L		81	54 - 126
Anthracene	20.0	17.0		ug/L		85	43 - 120
Benzo[a]anthracene	20.0	17.7		ug/L		89	42 - 133
Benzo[a]pyrene	20.0	17.8		ug/L		89	32 - 148
Benzo[b]fluoranthene	20.0	17.8		ug/L		89	42 - 140
Benzo[g,h,i]perylene	20.0	18.6		ug/L		93	1 - 195
Benzo[k]fluoranthene	20.0	18.3		ug/L		92	25 - 146
Chrysene	20.0	17.8		ug/L		89	44 - 140
Dibenz(a,h)anthracene	20.0	18.9		ug/L		95	1 - 200
Fluoranthene	20.0	17.9		ug/L		90	43 - 121
Fluorene	20.0	17.3		ug/L		86	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	17.5		ug/L		87	1 - 151
Naphthalene	20.0	11.9		ug/L		59	36 - 120

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QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

Lab Sample ID: LCS 570-598833/2-A

Matrix: Water

Analysis Batch: 601009

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 598833

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Phenanthrene	20.0	17.7		ug/L		88	65 - 120
Pyrene	20.0	18.4		ug/L		92	70 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	89		28 - 127
2-Fluorobiphenyl (Surr)	74		31 - 120
2-Fluorophenol (Surr)	40		17 - 120
Nitrobenzene-d5 (Surr)	58		27 - 120
Phenol-d6 (Surr)	25		10 - 120
p-Terphenyl-d14 (Surr)	89		45 - 120

Lab Sample ID: LCSD 570-598833/3-A

Matrix: Water

Analysis Batch: 601009

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 598833

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	16.4	*1	ug/L		82	47 - 120	27	20
2-Methylnaphthalene	20.0	16.2	*1	ug/L		81	43 - 120	28	20
Acenaphthene	20.0	20.1		ug/L		101	60 - 132	23	29
Acenaphthylene	20.0	20.5		ug/L		102	54 - 126	23	45
Anthracene	20.0	19.9		ug/L		100	43 - 120	16	40
Benzo[a]anthracene	20.0	20.3		ug/L		101	42 - 133	13	32
Benzo[a]pyrene	20.0	20.4		ug/L		102	32 - 148	13	43
Benzo[b]fluoranthene	20.0	20.3		ug/L		102	42 - 140	13	43
Benzo[g,h,i]perylene	20.0	21.0		ug/L		105	1 - 195	12	61
Benzo[k]fluoranthene	20.0	20.4		ug/L		102	25 - 146	11	38
Chrysene	20.0	20.3		ug/L		102	44 - 140	13	53
Dibenz(a,h)anthracene	20.0	21.4		ug/L		107	1 - 200	12	75
Fluoranthene	20.0	20.3		ug/L		102	43 - 121	12	40
Fluorene	20.0	20.3		ug/L		101	70 - 120	16	23
Indeno[1,2,3-cd]pyrene	20.0	19.8		ug/L		99	1 - 151	12	60
Naphthalene	20.0	16.3		ug/L		81	36 - 120	31	39
Phenanthrene	20.0	20.5		ug/L		103	65 - 120	15	24
Pyrene	20.0	21.3		ug/L		106	70 - 120	15	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	100		28 - 127
2-Fluorobiphenyl (Surr)	98		31 - 120
2-Fluorophenol (Surr)	62		17 - 120
Nitrobenzene-d5 (Surr)	80		27 - 120
Phenol-d6 (Surr)	37		10 - 120
p-Terphenyl-d14 (Surr)	100		45 - 120

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

Lab Sample ID: 380-160952-A-1-B MS

Matrix: Water

Analysis Batch: 601009

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 598833

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.19	*1	19.3	14.1		ug/L		73	36 - 120
2-Methylnaphthalene	<0.19	*1	19.3	13.8		ug/L		71	32 - 124
Acenaphthene	<0.19		19.3	17.5		ug/L		91	47 - 145
Acenaphthylene	<0.19		19.3	17.6		ug/L		91	33 - 145
Anthracene	<0.19		19.3	18.7		ug/L		97	27 - 133
Benzo[a]anthracene	<0.19		19.3	19.6		ug/L		101	33 - 143
Benzo[a]pyrene	<0.19		19.3	19.7		ug/L		102	17 - 163
Benzo[b]fluoranthene	<0.19		19.3	20.0		ug/L		103	24 - 159
Benzo[g,h,i]perylene	<0.19		19.3	19.3		ug/L		100	1 - 219
Benzo[k]fluoranthene	<0.19		19.3	19.4		ug/L		100	11 - 162
Chrysene	<0.19		19.3	19.8		ug/L		102	17 - 168
Dibenz(a,h)anthracene	<0.19		19.3	19.7		ug/L		102	1 - 227
Fluoranthene	<0.19		19.3	19.2		ug/L		99	26 - 137
Fluorene	<0.19		19.3	18.0		ug/L		93	59 - 121
Indeno[1,2,3-cd]pyrene	<0.19		19.3	18.5		ug/L		96	1 - 171
Naphthalene	<0.19		19.3	13.7		ug/L		71	21 - 133
Phenanthrene	<0.19		19.3	19.1		ug/L		99	54 - 120
Pyrene	<0.19		19.3	20.7		ug/L		107	52 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	99		28 - 127
2-Fluorobiphenyl (Surr)	88		31 - 120
2-Fluorophenol (Surr)	45		17 - 120
Nitrobenzene-d5 (Surr)	68		27 - 120
Phenol-d6 (Surr)	27		10 - 120
p-Terphenyl-d14 (Surr)	100		45 - 120

Lab Sample ID: 380-160952-A-1-C MSD

Matrix: Water

Analysis Batch: 601009

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 598833

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	<0.19	*1	19.3	14.4		ug/L		74	36 - 120	2	30
2-Methylnaphthalene	<0.19	*1	19.3	14.1		ug/L		73	32 - 124	2	30
Acenaphthene	<0.19		19.3	17.4		ug/L		90	47 - 145	1	48
Acenaphthylene	<0.19		19.3	17.7		ug/L		92	33 - 145	1	74
Anthracene	<0.19		19.3	17.5		ug/L		90	27 - 133	7	66
Benzo[a]anthracene	<0.19		19.3	17.7		ug/L		91	33 - 143	10	53
Benzo[a]pyrene	<0.19		19.3	17.8		ug/L		92	17 - 163	10	72
Benzo[b]fluoranthene	<0.19		19.3	18.1		ug/L		94	24 - 159	10	71
Benzo[g,h,i]perylene	<0.19		19.3	17.8		ug/L		92	1 - 219	8	97
Benzo[k]fluoranthene	<0.19		19.3	17.4		ug/L		90	11 - 162	11	63
Chrysene	<0.19		19.3	17.8		ug/L		92	17 - 168	11	87
Dibenz(a,h)anthracene	<0.19		19.3	17.5		ug/L		90	1 - 227	12	126
Fluoranthene	<0.19		19.3	17.4		ug/L		90	26 - 137	10	66
Fluorene	<0.19		19.3	17.7		ug/L		91	59 - 121	2	38
Indeno[1,2,3-cd]pyrene	<0.19		19.3	16.8		ug/L		87	1 - 171	9	99
Naphthalene	<0.19		19.3	14.1		ug/L		73	21 - 133	3	65

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Method: 625.1 SIM - Semivolatile Organic Compounds GC/MS (SIM) (Continued)

Lab Sample ID: 380-160952-A-1-C MSD

Matrix: Water

Analysis Batch: 601009

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 598833

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene	<0.19		19.3	18.0		ug/L		93	54 - 120	6	39
Pyrene	<0.19		19.3	18.4		ug/L		95	52 - 120	12	49

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2,4,6-Tribromophenol (Surr)	93		28 - 127
2-Fluorobiphenyl (Surr)	89		31 - 120
2-Fluorophenol (Surr)	51		17 - 120
Nitrobenzene-d5 (Surr)	72		27 - 120
Phenol-d6 (Surr)	32		10 - 120
p-Terphenyl-d14 (Surr)	89		45 - 120

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

Lab Sample ID: MB 570-599688/10

Matrix: Water

Analysis Batch: 599688

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C6-C10)	<10		10	ug/L			07/20/25 14:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		38 - 134		07/20/25 14:56	1

Lab Sample ID: LCS 570-599688/1008

Matrix: Water

Analysis Batch: 599688

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	400	379		ug/L		95	78 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		38 - 134

Lab Sample ID: LCSD 570-599688/9

Matrix: Water

Analysis Batch: 599688

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	400	389		ug/L		97	78 - 120	3	10

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		38 - 134

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: MRL 570-599688/11

Matrix: Water

Analysis Batch: 599688

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

			Spike	MRL	MRL				%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits		
Gasoline Range Organics (C4-C13)			10.0	8.45	J	ug/L		85	50 - 150		
Surrogate	MRL	MRL									
	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	82		38 - 134								

Lab Sample ID: 380-159486-C-1 MS

Matrix: Water

Analysis Batch: 599688

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Gasoline Range Organics (C4-C13)	<10		400	379		ug/L		95	68 - 122
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	98		38 - 134						

Lab Sample ID: 380-159486-C-1 MSD

Matrix: Water

Analysis Batch: 599688

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

<u>Analyte</u>	<u>Sample Result</u>	<u>Sample Qualifier</u>	<u>Spike Added</u>	<u>MSD Result</u>	<u>MSD Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Gasoline Range Organics (C4-C13)	<10		400	380		ug/L		95	68 - 122	0	18
<u>Surrogate</u>	<u>MSD %Recovery</u>	<u>MSD Qualifier</u>	<u>Limits</u>								
4-Bromofluorobenzene (Surr)	100		38 - 134								

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

Lab Sample ID: MB 570-599701/1-A

Matrix: Water

Analysis Batch: 602962

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 599701

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Diesel Range Organics (C10-C24)	<25		25	ug/L		07/20/25 12:47	07/27/25 03:34	1
Motor Oil Range Organics [C24-C36]	<25		25	ug/L		07/20/25 12:47	07/27/25 03:34	1
C8-C18	<25		25	ug/L		07/20/25 12:47	07/27/25 03:34	1
Surrogate	MB	MB	Limits			Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
n-Octacosane (Surr)	106		60 - 130			07/20/25 12:47	07/27/25 03:34	1

Lab Sample ID: LCS 570-599701/2-A

Matrix: Water

Analysis Batch: 602962

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 599701

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C10-C28	1600	1460		ug/L		91	56 - 127

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

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

Lab Sample ID: LCS 570-599701/2-A

Matrix: Water

Analysis Batch: 602962

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 599701

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
n-Octacosane (Surr)	97		60 - 130

Lab Sample ID: LCSD 570-599701/3-A

Matrix: Water

Analysis Batch: 602962

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 599701

			Spike	LCSD	LCSD					%Rec	RPD	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
C10-C28			1600	1500		ug/L		94	56 - 127	3	23	
Surrogate		LCSD										
n-Octacosane (Surr)		%Recovery	Qualifier	Limits								
		101		60 - 130								

Lab Sample ID: MRL 570-599701/4-A

Matrix: Water

Analysis Batch: 602962

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 599701

			Spike	MRL	MRL					%Rec		
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits			
C10-C28			0.0200	0.0270		mg/L		135	50 - 150			
Surrogate		MRL										
n-Octacosane (Surr)		%Recovery	Qualifier	Limits								
		97		60 - 130								

Lab Sample ID: 380-160952-B-1-A MS

Matrix: Water

Analysis Batch: 602962

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 599701

	Sample	Sample	Spike	MS	MS					%Rec		
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits			
C10-C28	<26		1640	1480		ug/L		90	70 - 130			
Surrogate		MS										
n-Octacosane (Surr)		%Recovery	Qualifier	Limits								
		99		60 - 130								

Lab Sample ID: 380-160952-B-1-B MSD

Matrix: Water

Analysis Batch: 602962

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 599701

	Sample	Sample	Spike	MSD	MSD					%Rec	RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
C10-C28	<26		1650	1520		ug/L		92	70 - 130	2	20	
Surrogate		MSD										
n-Octacosane (Surr)		%Recovery	Qualifier	Limits								
		97		60 - 130								

QC Association Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

GC/MS Semi VOA

Prep Batch: 163343

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160908-1	Ka'amilo Wells Pump 1	Total/NA	Water	525.2	
380-160908-3	Ka'amilo Wells Pump 2	Total/NA	Water	525.2	
MB 380-163343/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-163343/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-163343/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-163343/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-160908-1 MS	Ka'amilo Wells Pump 1	Total/NA	Water	525.2	
380-160926-AC-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 163629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160908-1	Ka'amilo Wells Pump 1	Total/NA	Water	525.2	163343
380-160908-3	Ka'amilo Wells Pump 2	Total/NA	Water	525.2	163343
MB 380-163343/21-A	Method Blank	Total/NA	Water	525.2	163343
LCS 380-163343/23-A	Lab Control Sample	Total/NA	Water	525.2	163343
MRL 380-163343/22-A	Lab Control Sample	Total/NA	Water	525.2	163343
380-160908-1 MS	Ka'amilo Wells Pump 1	Total/NA	Water	525.2	163343
380-160926-AC-1-A DU	Duplicate	Total/NA	Water	525.2	163343

Analysis Batch: 163829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 380-163343/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	163343

Prep Batch: 598833

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160908-1	Ka'amilo Wells Pump 1	Total/NA	Water	625.1	
380-160908-3	Ka'amilo Wells Pump 2	Total/NA	Water	625.1	
MB 570-598833/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-598833/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-598833/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	
380-160952-A-1-B MS	Matrix Spike	Total/NA	Water	625.1	
380-160952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	625.1	

Analysis Batch: 601009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160908-1	Ka'amilo Wells Pump 1	Total/NA	Water	625.1 SIM	598833
380-160908-3	Ka'amilo Wells Pump 2	Total/NA	Water	625.1 SIM	598833
MB 570-598833/1-A	Method Blank	Total/NA	Water	625.1 SIM	598833
LCS 570-598833/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	598833
LCSD 570-598833/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	598833
380-160952-A-1-B MS	Matrix Spike	Total/NA	Water	625.1 SIM	598833
380-160952-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	625.1 SIM	598833

Analysis Batch: 603854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160908-1	Ka'amilo Wells Pump 1	Total/NA	Water	625.1	598833
380-160908-3	Ka'amilo Wells Pump 2	Total/NA	Water	625.1	598833
MB 570-598833/1-A	Method Blank	Total/NA	Water	625.1	598833

QC Association Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

GC VOA

Analysis Batch: 599688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160908-1	Ka'amilo Wells Pump 1	Total/NA	Water	8015B GRO LL	
380-160908-2	TB: Ka'amilo Wells Pump 1	Total/NA	Water	8015B GRO LL	
380-160908-3	Ka'amilo Wells Pump 2	Total/NA	Water	8015B GRO LL	
380-160908-4	TB: Ka'amilo Wells Pump 2	Total/NA	Water	8015B GRO LL	
MB 570-599688/10	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-599688/1008	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-599688/9	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-599688/11	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-159486-C-1 MS	Matrix Spike	Total/NA	Water	8015B GRO LL	
380-159486-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B GRO LL	

GC Semi VOA

Prep Batch: 599701

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160908-1	Ka'amilo Wells Pump 1	Total/NA	Water	3510C	
380-160908-3	Ka'amilo Wells Pump 2	Total/NA	Water	3510C	
MB 570-599701/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-599701/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-599701/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-599701/4-A	Lab Control Sample	Total/NA	Water	3510C	
380-160952-B-1-A MS	Matrix Spike	Total/NA	Water	3510C	
380-160952-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	3510C	

Analysis Batch: 602962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-160908-1	Ka'amilo Wells Pump 1	Total/NA	Water	8015B	599701
380-160908-3	Ka'amilo Wells Pump 2	Total/NA	Water	8015B	599701
MB 570-599701/1-A	Method Blank	Total/NA	Water	8015B	599701
LCS 570-599701/2-A	Lab Control Sample	Total/NA	Water	8015B	599701
LCSD 570-599701/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	599701
MRL 570-599701/4-A	Lab Control Sample	Total/NA	Water	8015B	599701
380-160952-B-1-A MS	Matrix Spike	Total/NA	Water	8015B	599701
380-160952-B-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	599701

Lab Chronicle

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Client Sample ID: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-1

Date Collected: 07/14/25 11:36

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			163343	OTM3	EA POM	07/17/25 08:08
Total/NA	Analysis	525.2		1	163629	Q8LA	EA POM	07/18/25 14:02
Total/NA	Prep	625.1			598833	H1SH	EET CAL 4	07/18/25 05:26
Total/NA	Analysis	625.1		1	603854	CG	EET CAL 4	07/29/25 11:44
Total/NA	Prep	625.1			598833	H1SH	EET CAL 4	07/18/25 05:26
Total/NA	Analysis	625.1 SIM		1	601009	PQS1	EET CAL 4	07/23/25 13:49
Total/NA	Analysis	8015B GRO LL		1	599688	W4LC	EET CAL 4	07/20/25 20:14
Total/NA	Prep	3510C			599701	TVD6	EET CAL 4	07/20/25 12:47
Total/NA	Analysis	8015B		1	602962	NR	EET CAL 4	07/27/25 05:45

Client Sample ID: TB: Ka'amilo Wells Pump 1

Lab Sample ID: 380-160908-2

Date Collected: 07/14/25 11:36

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	599688	W4LC	EET CAL 4	07/21/25 00:15

Client Sample ID: Ka'amilo Wells Pump 2

Lab Sample ID: 380-160908-3

Date Collected: 07/14/25 12:17

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			163343	OTM3	EA POM	07/17/25 08:08
Total/NA	Analysis	525.2		1	163629	Q8LA	EA POM	07/18/25 15:23
Total/NA	Prep	625.1			598833	H1SH	EET CAL 4	07/18/25 05:26
Total/NA	Analysis	625.1		1	603854	CG	EET CAL 4	07/29/25 12:09
Total/NA	Prep	625.1			598833	H1SH	EET CAL 4	07/18/25 05:26
Total/NA	Analysis	625.1 SIM		1	601009	PQS1	EET CAL 4	07/23/25 14:11
Total/NA	Analysis	8015B GRO LL		1	599688	W4LC	EET CAL 4	07/20/25 20:36
Total/NA	Prep	3510C			599701	TVD6	EET CAL 4	07/20/25 12:47
Total/NA	Analysis	8015B		1	602962	NR	EET CAL 4	07/27/25 06:07

Client Sample ID: TB: Ka'amilo Wells Pump 2

Lab Sample ID: 380-160908-4

Date Collected: 07/14/25 12:17

Matrix: Water

Date Received: 07/16/25 09:17

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	599688	W4LC	EET CAL 4	07/21/25 00:37

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100
EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Eurofins Eaton Analytical Pomona

Accreditation/Certification Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Laboratory: Eurofins Eaton Analytical Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-26
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	Water	1-Methylnaphthalene
525.2	525.2	Water	2,4'-DDD
525.2	525.2	Water	2,4'-DDE
525.2	525.2	Water	2,4'-DDT
525.2	525.2	Water	2,4-Dinitrotoluene
525.2	525.2	Water	2,6-Dinitrotoluene
525.2	525.2	Water	2-Methylnaphthalene
525.2	525.2	Water	4,4'-DDD
525.2	525.2	Water	4,4'-DDE
525.2	525.2	Water	4,4' DDT
525.2	525.2	Water	Acetochlor
525.2	525.2	Water	alpha-BHC
525.2	525.2	Water	alpha-Chlordane
525.2	525.2	Water	beta-BHC
525.2	525.2	Water	Chlorobenzilate
525.2	525.2	Water	Chloroneb
525.2	525.2	Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Water	Chlorpyrifos
525.2	525.2	Water	delta-BHC
525.2	525.2	Water	Diclorvos (DDVP)
525.2	525.2	Water	Endosulfan I (Alpha)
525.2	525.2	Water	Endosulfan II (Beta)
525.2	525.2	Water	Endosulfan sulfate
525.2	525.2	Water	Endrin aldehyde
525.2	525.2	Water	EPTC
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbutylazine
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	Water	trans-Nonachlor

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	7296.01	11-30-26
A2LA	ISO/IEC 17025	7296.01	11-30-26
Alaska (UST)	State	25-005	03-02-26
Arizona	State	AZ0830	11-16-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-25

Eurofins Eaton Analytical Pomona

Accreditation/Certification Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Laboratory: Eurofins Calscience (Continued)

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

Authority	Program	Identification Number	Expiration Date
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25
Oregon	NELAP	4175	02-02-26
USDA	US Federal Programs	525-23-159-97150	06-08-26
Utah	NELAP	CA00111	02-28-26
Washington	State	C916	10-11-25

Method Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
625.1	Semivolatile Organic Compounds (GC/MS)	EPA	EET CAL 4
625.1 SIM	Semivolatile Organic Compounds GC/MS (SIM)	EPA	EET CAL 4
8015B GRO LL	Gasoline Range Organics - (GC)	SW846	EET CAL 4
8015B	Diesel Range Organics (DRO) (GC) Low Level	SW846	EET CAL 4
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CAL 4
5030C	Purge and Trap	SW846	EET CAL 4
525.2	Extraction of Semivolatile Compounds	EPA	EA POM
625.1	Liquid-Liquid Extraction	40CFR136A	EET CAL 4

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

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

Laboratory References:

EA POM = Eurofins Eaton Analytical Pomona, 941 Corporate Center Drive, Pomona, CA 91768-2642, TEL (626)386-1100

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

Sample Summary

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

Job ID: 380-160908-1
SDG: Weekly: Ka'amilo Wells Pump 1/Pump 2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-160908-1	Ka'amilo Wells Pump 1	Water	07/14/25 11:36	07/16/25 09:17
380-160908-2	TB: Ka'amilo Wells Pump 1	Water	07/14/25 11:36	07/16/25 09:17
380-160908-3	Ka'amilo Wells Pump 2	Water	07/14/25 12:17	07/16/25 09:17
380-160908-4	TB: Ka'amilo Wells Pump 2	Water	07/14/25 12:17	07/16/25 09:17

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eurofins | Environment Testing

380-160908 COC

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

Chain of Custody Record



Loc: 380
Envi 160908

[illegible]

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-160908-1

SDG Number: Weekly: Ka'amilo Wells Pump 1/Pump 2

Login Number: 160908

List Number: 1

Creator: Ngo, Theodore

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
CIO4 headspace requirement met (>50% for CA, >30% for other states).	N/A	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-160908-1

SDG Number: Weekly: Ka'amilo Wells Pump 1/Pump 2

Login Number: 160908

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 07/17/25 02:06 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	