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ANALYTICAL REPORT

PREPARED FOR

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Generated 7/23/2024 9:42:18 AM

JOB DESCRIPTION

RED-HILL [SUBCONTRACT]
625, 8015
RUSH Weekly Red Hill

JOB NUMBER

380-99954-1

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

my EOL

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

Rachelle Arada

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.

GC Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
S1+	Surrogate recovery exceeds control limits, high biased.

Glossary

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

Job Narrative
380-99954-1

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 6/14/2024 9:39 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.9°C, 3.2°C, 3.4°C and 3.5°C.

GC/MS Semi VOA
Method 625.1_SIM: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-451986. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch. 625.1 Sim

Method 625.1_SIM: The following analyte(s) recovered outside control limits for the LCS associated with preparation batch 570-451986 and analytical batch 570-461617: Fluorene. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

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

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

Diesel Range Organics
Method 8015B_DRO_LL_CS: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 570-452574. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

Method 8015B_DRO_LL_CS: The method reporting limit check (MRL) for preparation batch 570-452574 and analytical batch 570-458141 recovered outside control limits for the following analytes: C10-C28. These analytes were biased high in the MRL and were not detected in the associated samples; therefore, the data have been reported.

Method 8015B_DRO_LL_CS: Surrogate recovery for the following samples were outside the upper control limit: MOANALUA WELLS (380-99954-1) and HALAWA WELLS UNITS 1 & 2 (380-99954-4). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8015B: The following sample was re-prepared outside of preparation holding time to confirm initial results: AIEA GULCH WELLS PUMP 2 (380-99954-2). Data excluded due to analysis performed past hold time.

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

Detection Summary

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

Job ID: 380-99954-1
SDG: 625, 8015

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-99954-1
PWSID Number: HI0000331

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-99954-2
PWSID Number: HI0000331

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) — Lab Sample ID: 380-99954-3
PWSID Number: HI0000331

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-99954-4
PWSID Number: HI0000331

No Detections.

Client Sample ID: TB MOANALUA WELLS — Lab Sample ID: 380-99954-5

No Detections.

Client Sample ID: TB AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-99954-6

No Detections.

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) — Lab Sample ID: 380-99954-7

No Detections.

Client Sample ID: TB HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-99954-8

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

Job ID: 380-99954-1
SDG: 625, 8015

Client Sample ID: MOANALUA WELLS

Date Collected: 06/12/24 10:10
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99954-1

Matrix: Drinking Water
PWSID Number: HI0000331

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		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
2-Methylnaphthalene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Acenaphthene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Acenaphthylene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Anthracene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Benzo[a]anthracene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Benzo[a]pyrene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Benzo[b]fluoranthene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Benzo[g,h,i]perylene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Benzo[k]fluoranthene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Chrysene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Dibenz(a,h)anthracene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Fluoranthene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Fluorene	<0.19	*-	0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Naphthalene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Phenanthrene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1
Pyrene	<0.19		0.19	ug/L		06/18/24 11:50	07/18/24 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*71*		*28 - 127*	*06/18/24 11:50*	*07/18/24 15:55*	*1*
2-Fluorobiphenyl (Surr)	*60*		*31 - 120*	*06/18/24 11:50*	*07/18/24 15:55*	*1*
2-Fluorophenol (Surr)	*31*		*17 - 120*	*06/18/24 11:50*	*07/18/24 15:55*	*1*
Nitrobenzene-d5 (Surr)	*61*		*27 - 120*	*06/18/24 11:50*	*07/18/24 15:55*	*1*
Phenol-d6 (Surr)	*21*		*10 - 120*	*06/18/24 11:50*	*07/18/24 15:55*	*1*
p-Terphenyl-d14 (Surr)	*73*		*45 - 120*	*06/18/24 11:50*	*07/18/24 15:55*	*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*	*06/18/24 11:50*	*07/22/24 12:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*33 - 139*	*06/18/24 11:50*	*07/22/24 12:30*	*1*
2-Fluorobiphenyl (Surr)	*65*		*33 - 126*	*06/18/24 11:50*	*07/22/24 12:30*	*1*
2-Fluorophenol (Surr)	*37*		*12 - 120*	*06/18/24 11:50*	*07/22/24 12:30*	*1*
Nitrobenzene-d5 (Surr)	*66*		*36 - 120*	*06/18/24 11:50*	*07/22/24 12:30*	*1*
Phenol-d6 (Surr)	*21*		*10 - 120*	*06/18/24 11:50*	*07/22/24 12:30*	*1*
p-Terphenyl-d14 (Surr)	*77*		*47 - 131*	*06/18/24 11:50*	*07/22/24 12:30*	*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			06/25/24 15:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*62*		*38 - 134*		*06/25/24 15:25*	*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		06/19/24 17:03	07/08/24 15:14	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		06/19/24 17:03	07/08/24 15:14	1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-99954-1
Date Collected: 06/12/24 10:10
Matrix: Drinking Water
Date Received: 06/14/24 09:39
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C8-C18	<26		26		ug/L		06/19/24 17:03	07/08/24 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*137*	*S1+*	*60 - 130*	*06/19/24 17:03*	*07/08/24 15:14*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-99954-2
Date Collected: 06/12/24 11:00
Matrix: Drinking Water
Date Received: 06/14/24 09:39
PWSID Number: HI0000331

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		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
2-Methylnaphthalene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Acenaphthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Acenaphthylene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Benzo[a]anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Benzo[a]pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Benzo[b]fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Benzo[g,h,i]perylene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Benzo[k]fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Chrysene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Dibenz(a,h)anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Fluorene	<0.19	*-	0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Naphthalene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Phenanthrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1
Pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*80*		*28 - 127*	*06/18/24 11:50*	*07/18/24 16:16*	*1*
2-Fluorobiphenyl (Surr)	*72*		*31 - 120*	*06/18/24 11:50*	*07/18/24 16:16*	*1*
2-Fluorophenol (Surr)	*47*		*17 - 120*	*06/18/24 11:50*	*07/18/24 16:16*	*1*
Nitrobenzene-d5 (Surr)	*76*		*27 - 120*	*06/18/24 11:50*	*07/18/24 16:16*	*1*
Phenol-d6 (Surr)	*30*		*10 - 120*	*06/18/24 11:50*	*07/18/24 16:16*	*1*
p-Terphenyl-d14 (Surr)	*81*		*45 - 120*	*06/18/24 11:50*	*07/18/24 16:16*	*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*	*06/18/24 11:50*	*07/22/24 12:53*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*71*		*33 - 139*	*06/18/24 11:50*	*07/22/24 12:53*	*1*
2-Fluorobiphenyl (Surr)	*75*		*33 - 126*	*06/18/24 11:50*	*07/22/24 12:53*	*1*
2-Fluorophenol (Surr)	*49*		*12 - 120*	*06/18/24 11:50*	*07/22/24 12:53*	*1*
Nitrobenzene-d5 (Surr)	*81*		*36 - 120*	*06/18/24 11:50*	*07/22/24 12:53*	*1*
Phenol-d6 (Surr)	*29*		*10 - 120*	*06/18/24 11:50*	*07/22/24 12:53*	*1*
p-Terphenyl-d14 (Surr)	*84*		*47 - 131*	*06/18/24 11:50*	*07/22/24 12:53*	*1*

Client Sample Results

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

Job ID: 380-99954-1
SDG: 625, 8015

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-99954-2
Date Collected: 06/12/24 11:00
Matrix: Drinking Water
Date Received: 06/14/24 09:39
PWSID Number: HI0000331

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			06/25/24 16:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*		*38 - 134*		*06/25/24 16:46*	*1*

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-99954-3
Date Collected: 06/12/24 11:30
Matrix: Drinking Water
Date Received: 06/14/24 09:39
PWSID Number: HI0000331

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		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
2-Methylnaphthalene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Acenaphthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Acenaphthylene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Benzo[a]anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Benzo[a]pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Benzo[b]fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Benzo[g,h,i]perylene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Benzo[k]fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Chrysene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Dibenz(a,h)anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Fluorene	<0.19	*-	0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Naphthalene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Phenanthrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1
Pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 16:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*66*		*28 - 127*	*06/18/24 11:50*	*07/18/24 16:38*	*1*
2-Fluorobiphenyl (Surr)	*63*		*31 - 120*	*06/18/24 11:50*	*07/18/24 16:38*	*1*
2-Fluorophenol (Surr)	*40*		*17 - 120*	*06/18/24 11:50*	*07/18/24 16:38*	*1*
Nitrobenzene-d5 (Surr)	*70*		*27 - 120*	*06/18/24 11:50*	*07/18/24 16:38*	*1*
Phenol-d6 (Surr)	*28*		*10 - 120*	*06/18/24 11:50*	*07/18/24 16:38*	*1*
p-Terphenyl-d14 (Surr)	*85*		*45 - 120*	*06/18/24 11:50*	*07/18/24 16:38*	*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*	*06/18/24 11:50*	*07/22/24 13:16*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*58*		*33 - 139*	*06/18/24 11:50*	*07/22/24 13:16*	*1*
2-Fluorobiphenyl (Surr)	*66*		*33 - 126*	*06/18/24 11:50*	*07/22/24 13:16*	*1*
2-Fluorophenol (Surr)	*43*		*12 - 120*	*06/18/24 11:50*	*07/22/24 13:16*	*1*
Nitrobenzene-d5 (Surr)	*73*		*36 - 120*	*06/18/24 11:50*	*07/22/24 13:16*	*1*
Phenol-d6 (Surr)	*25*		*10 - 120*	*06/18/24 11:50*	*07/22/24 13:16*	*1*
p-Terphenyl-d14 (Surr)	*83*		*47 - 131*	*06/18/24 11:50*	*07/22/24 13:16*	*1*

Client Sample Results

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

Job ID: 380-99954-1
SDG: 625, 8015

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-99954-3
Date Collected: 06/12/24 11:30
Matrix: Drinking Water
Date Received: 06/14/24 09:39
PWSID Number: HI0000331

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			06/25/24 17:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*		*38 - 134*		*06/25/24 17:09*	*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)	<25		25		ug/L		06/19/24 17:03	07/08/24 15:55	1
Motor Oil Range Organics [C24-C36]	<25		25		ug/L		06/19/24 17:03	07/08/24 15:55	1
C8-C18	<25		25		ug/L		06/19/24 17:03	07/08/24 15:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane (Surr)	*128*		*60 - 130*	*06/19/24 17:03*	*07/08/24 15:55*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-99954-4
Date Collected: 06/12/24 10:40
Matrix: Drinking Water
Date Received: 06/14/24 09:39
PWSID Number: HI0000331

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		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
2-Methylnaphthalene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Acenaphthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Acenaphthylene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Benzo[a]anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Benzo[a]pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Benzo[b]fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Benzo[g,h,i]perylene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Benzo[k]fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Chrysene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Dibenz(a,h)anthracene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Fluoranthene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Fluorene	<0.19	*-	0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Indeno[1,2,3-cd]pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Naphthalene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Phenanthrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1
Pyrene	<0.19		0.19		ug/L		06/18/24 11:50	07/18/24 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*70*		*28 - 127*	*06/18/24 11:50*	*07/18/24 17:00*	*1*
2-Fluorobiphenyl (Surr)	*63*		*31 - 120*	*06/18/24 11:50*	*07/18/24 17:00*	*1*
2-Fluorophenol (Surr)	*44*		*17 - 120*	*06/18/24 11:50*	*07/18/24 17:00*	*1*
Nitrobenzene-d5 (Surr)	*67*		*27 - 120*	*06/18/24 11:50*	*07/18/24 17:00*	*1*
Phenol-d6 (Surr)	*29*		*10 - 120*	*06/18/24 11:50*	*07/18/24 17:00*	*1*
p-Terphenyl-d14 (Surr)	*79*		*45 - 120*	*06/18/24 11:50*	*07/18/24 17:00*	*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*	*06/18/24 11:50*	*07/22/24 13:40*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-99954-4
Date Collected: 06/12/24 10:40
Matrix: Drinking Water
Date Received: 06/14/24 09:39
PWSID Number: HI0000331

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	61		33 - 139	06/18/24 11:50	07/22/24 13:40	1
2-Fluorobiphenyl (Surr)	66		33 - 126	06/18/24 11:50	07/22/24 13:40	1
2-Fluorophenol (Surr)	47		12 - 120	06/18/24 11:50	07/22/24 13:40	1
Nitrobenzene-d5 (Surr)	72		36 - 120	06/18/24 11:50	07/22/24 13:40	1
Phenol-d6 (Surr)	27		10 - 120	06/18/24 11:50	07/22/24 13:40	1
p-Terphenyl-d14 (Surr)	76		47 - 131	06/18/24 11:50	07/22/24 13:40	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			06/25/24 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	67		38 - 134		06/25/24 17:33	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		06/19/24 17:03	07/08/24 16:16	1
Motor Oil Range Organics [C24-C36]	<26		26	ug/L		06/19/24 17:03	07/08/24 16:16	1
C8-C18	<26		26	ug/L		06/19/24 17:03	07/08/24 16:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	150	S1+	60 - 130	06/19/24 17:03	07/08/24 16:16	1

Client Sample ID: TB MOANALUA WELLS

Lab Sample ID: 380-99954-5
Date Collected: 06/12/24 10:10
Matrix: Water
Date Received: 06/14/24 09:39

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			06/25/24 13:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	62		38 - 134		06/25/24 13:49	1

Client Sample ID: TB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-99954-6
Date Collected: 06/12/24 11:00
Matrix: Water
Date Received: 06/14/24 09:39

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			06/25/24 14:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	64		38 - 134		06/25/24 14:13	1

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-99954-7
Date Collected: 06/12/24 11:30
Matrix: Water
Date Received: 06/14/24 09:39

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			06/25/24 14:37	1

Client Sample Results

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

Job ID: 380-99954-1
SDG: 625, 8015

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-99954-7
Date Collected: 06/12/24 11:30
Matrix: Water
Date Received: 06/14/24 09:39

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*64*		*38 - 134*		*06/25/24 14:37*	*1*

Client Sample ID: TB HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-99954-8
Date Collected: 06/12/24 10:40
Matrix: Water
Date Received: 06/14/24 09:39

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			06/25/24 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*65*		*38 - 134*		*06/25/24 15:01*	*1*

Surrogate Summary

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

Job ID: 380-99954-1
SDG: 625, 8015

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

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL6	TPHd14
Lab Sample ID	Client Sample ID	(33-139)	(33-126)	(12-120)	(36-120)	(10-120)	(47-131)
380-99954-1	MOANALUA WELLS	68	65	37	66	21	77
380-99954-2	AIEA GULCH WELLS PUMP 2	71	75	49	81	29	84
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	58	66	43	73	25	83
380-99954-4	HALAWA WELLS UNITS 1 & 2	61	66	47	72	27	76

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 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL6	TPHd14
Lab Sample ID	Client Sample ID	(33-139)	(33-126)	(12-120)	(36-120)	(10-120)	(47-131)
MB 570-451986/1-A	Method Blank	68	65	33	64	21	74

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: Drinking Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL6	TPHd14
Lab Sample ID	Client Sample ID	(28-127)	(31-120)	(17-120)	(27-120)	(10-120)	(45-120)
380-99954-1	MOANALUA WELLS	71	60	31	61	21	73
380-99954-2	AIEA GULCH WELLS PUMP 2	80	72	47	76	30	81
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	66	63	40	70	28	85
380-99954-4	HALAWA WELLS UNITS 1 & 2	70	63	44	67	29	79

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)

Surrogate Summary

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

Job ID: 380-99954-1
SDG: 625, 8015

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
Lab Sample ID	Client Sample ID	TBP (28-127)	FBP (31-120)	2FP (17-120)	NBZ (27-120)	PHL6 (10-120)	TPHd14 (45-120)
LCS 570-451986/2-A	Lab Control Sample	84	58	47	58	34	72
LCSD 570-451986/3-A	Lab Control Sample Dup	90	62	52	62	36	73
MB 570-451986/1-A	Method Blank	75	61	31	65	24	78

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

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB1 (38-134)
380-99954-1	MOANALUA WELLS	62
380-99954-1 MS	MOANALUA WELLS	72
380-99954-1 MSD	MOANALUA WELLS	70
380-99954-2	AIEA GULCH WELLS PUMP 2	65
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	65
380-99954-4	HALAWA WELLS UNITS 1 & 2	67

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

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)
380-99954-5	TB MOANALUA WELLS	62
380-99954-6	TB AIEA GULCH WELLS PUMP 2	64
380-99954-7	TB AIEA WELLS PUMPS 1&2 (260)	64
380-99954-8	TB HALAWA WELLS UNITS 1 & 2	65
LCS 570-454303/3	Lab Control Sample	71
LCSD 570-454303/4	Lab Control Sample Dup	72
MB 570-454303/6	Method Blank	67
MRL 570-454303/5	Lab Control Sample	66

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Surrogate Summary

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

Job ID: 380-99954-1
SDG: 625, 8015

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

Matrix: Drinking Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OTCSN1 (60-130)							
380-99954-1	MOANALUA WELLS	137 S1+							
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	128							
380-99954-4	HALAWA WELLS UNITS 1 & 2	150 S1+							

Surrogate Legend

OTCSN = n-Octacosane (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)							
LCS 570-452574/2-A	Lab Control Sample	127							
LCSD 570-452574/3-A	Lab Control Sample Dup	144 S1+							
MB 570-452574/1-A	Method Blank	111							
MRL 570-452574/4-A	Lab Control Sample	130							

Surrogate Legend

OTCSN = n-Octacosane (Surr)

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

Lab Sample ID: MB 570-451986/1-A
Matrix: Water
Analysis Batch: 462571

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 451986

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*68*		*33 - 139*	*06/18/24 11:50*	*07/22/24 12:07*	*1*
2-Fluorobiphenyl (Surr)	*65*		*33 - 126*	*06/18/24 11:50*	*07/22/24 12:07*	*1*
2-Fluorophenol (Surr)	*33*		*12 - 120*	*06/18/24 11:50*	*07/22/24 12:07*	*1*
Nitrobenzene-d5 (Surr)	*64*		*36 - 120*	*06/18/24 11:50*	*07/22/24 12:07*	*1*
Phenol-d6 (Surr)	*21*		*10 - 120*	*06/18/24 11:50*	*07/22/24 12:07*	*1*
p-Terphenyl-d14 (Surr)	*74*		*47 - 131*	*06/18/24 11:50*	*07/22/24 12:07*	*1*

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

Lab Sample ID: MB 570-451986/1-A
Matrix: Water
Analysis Batch: 461619

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 451986

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
2-Methylnaphthalene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Acenaphthene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Acenaphthylene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Anthracene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Benzo[a]anthracene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Benzo[a]pyrene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Benzo[b]fluoranthene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Benzo[g,h,i]perylene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Benzo[k]fluoranthene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Chrysene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Dibenz(a,h)anthracene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Fluoranthene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Fluorene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Indeno[1,2,3-cd]pyrene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Naphthalene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Phenanthrene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1
Pyrene	<0.20		0.20	ug/L		06/18/24 11:50	07/18/24 12:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*75*		*28 - 127*	*06/18/24 11:50*	*07/18/24 12:38*	*1*
2-Fluorobiphenyl (Surr)	*61*		*31 - 120*	*06/18/24 11:50*	*07/18/24 12:38*	*1*
2-Fluorophenol (Surr)	*31*		*17 - 120*	*06/18/24 11:50*	*07/18/24 12:38*	*1*
Nitrobenzene-d5 (Surr)	*65*		*27 - 120*	*06/18/24 11:50*	*07/18/24 12:38*	*1*
Phenol-d6 (Surr)	*24*		*10 - 120*	*06/18/24 11:50*	*07/18/24 12:38*	*1*
p-Terphenyl-d14 (Surr)	*78*		*45 - 120*	*06/18/24 11:50*	*07/18/24 12:38*	*1*

Lab Sample ID: LCS 570-451986/2-A
Matrix: Water
Analysis Batch: 461617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451986

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	20.0	11.4		ug/L		57	47 - 120
2-Methylnaphthalene	20.0	11.2		ug/L		56	43 - 120

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

Lab Sample ID: LCS 570-451986/2-A
Matrix: Water
Analysis Batch: 461617

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 451986

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acenaphthene	20.0	12.9		ug/L		64	60 - 132
Acenaphthylene	20.0	14.9		ug/L		75	54 - 126
Anthracene	20.0	14.3		ug/L		71	43 - 120
Benzo[a]anthracene	20.0	15.7		ug/L		78	42 - 133
Benzo[a]pyrene	20.0	13.7		ug/L		68	32 - 148
Benzo[b]fluoranthene	20.0	16.0		ug/L		80	42 - 140
Benzo[g,h,i]perylene	20.0	14.9		ug/L		75	1 - 195
Benzo[k]fluoranthene	20.0	16.2		ug/L		81	25 - 146
Chrysene	20.0	14.9		ug/L		74	44 - 140
Dibenz(a,h)anthracene	20.0	13.4		ug/L		67	1 - 200
Fluoranthene	20.0	16.0		ug/L		80	43 - 121
Fluorene	20.0	13.7	*-	ug/L		69	70 - 120
Indeno[1,2,3-cd]pyrene	20.0	13.2		ug/L		66	1 - 151
Naphthalene	20.0	10.9		ug/L		54	36 - 120
Phenanthrene	20.0	13.8		ug/L		69	65 - 120
Pyrene	20.0	14.3		ug/L		71	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*84*		*28 - 127*
2-Fluorobiphenyl (Surr)	*58*		*31 - 120*
2-Fluorophenol (Surr)	*47*		*17 - 120*
Nitrobenzene-d5 (Surr)	*58*		*27 - 120*
Phenol-d6 (Surr)	*34*		*10 - 120*
p-Terphenyl-d14 (Surr)	*72*		*45 - 120*

Lab Sample ID: LCSD 570-451986/3-A
Matrix: Water
Analysis Batch: 461617

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 451986

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	20.0	12.2		ug/L		61	47 - 120	7	20
2-Methylnaphthalene	20.0	11.9		ug/L		59	43 - 120	6	20
Acenaphthene	20.0	13.4		ug/L		67	60 - 132	4	29
Acenaphthylene	20.0	15.7		ug/L		78	54 - 126	5	45
Anthracene	20.0	14.6		ug/L		73	43 - 120	3	40
Benzo[a]anthracene	20.0	15.8		ug/L		79	42 - 133	1	32
Benzo[a]pyrene	20.0	14.9		ug/L		75	32 - 148	9	43
Benzo[b]fluoranthene	20.0	16.8		ug/L		84	42 - 140	5	43
Benzo[g,h,i]perylene	20.0	15.7		ug/L		78	1 - 195	5	61
Benzo[k]fluoranthene	20.0	17.2		ug/L		86	25 - 146	6	38
Chrysene	20.0	15.0		ug/L		75	44 - 140	1	53
Dibenz(a,h)anthracene	20.0	13.8		ug/L		69	1 - 200	3	75
Fluoranthene	20.0	15.8		ug/L		79	43 - 121	1	40
Fluorene	20.0	14.1		ug/L		70	70 - 120	3	23
Indeno[1,2,3-cd]pyrene	20.0	13.8		ug/L		69	1 - 151	5	60
Naphthalene	20.0	11.7		ug/L		58	36 - 120	7	39
Phenanthrene	20.0	13.8		ug/L		69	65 - 120	0	24
Pyrene	20.0	14.3		ug/L		71	70 - 120	0	30

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

Lab Sample ID: LCSD 570-451986/3-A
Matrix: Water
Analysis Batch: 461617

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 451986

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*90*		*28 - 127*
2-Fluorobiphenyl (Surr)	*62*		*31 - 120*
2-Fluorophenol (Surr)	*52*		*17 - 120*
Nitrobenzene-d5 (Surr)	*62*		*27 - 120*
Phenol-d6 (Surr)	*36*		*10 - 120*
p-Terphenyl-d14 (Surr)	*73*		*45 - 120*

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

Lab Sample ID: MB 570-454303/6
Matrix: Water
Analysis Batch: 454303

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			06/25/24 12:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*67*		*38 - 134*		*06/25/24 12:55*	*1*

Lab Sample ID: LCS 570-454303/3
Matrix: Water
Analysis Batch: 454303

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	377		ug/L		94	78 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*71*		*38 - 134*

Lab Sample ID: LCSD 570-454303/4
Matrix: Water
Analysis Batch: 454303

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	357		ug/L		89	78 - 120	5	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*72*		*38 - 134*

Lab Sample ID: MRL 570-454303/5
Matrix: Water
Analysis Batch: 454303

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

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C4-C13)			10.0	10.2		ug/L		102	50 - 150		

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

Lab Sample ID: MRL 570-454303/5
Matrix: Water
Analysis Batch: 454303

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

Surrogate	MRL %Recovery	MRL Qualifier	Limits
4-Bromofluorobenzene (Surr)	66		38 - 134

Lab Sample ID: 380-99954-1 MS
Matrix: Drinking Water
Analysis Batch: 454303

Client Sample ID: MOANALUA WELLS
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	331		ug/L		83	68 - 122		

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	72		38 - 134

Lab Sample ID: 380-99954-1 MSD
Matrix: Drinking Water
Analysis Batch: 454303

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C4-C13)	<10		400	331		ug/L		83	68 - 122	0	18

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	70		38 - 134

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

Lab Sample ID: MB 570-452574/1-A
Matrix: Water
Analysis Batch: 458141

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 452574

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (C10-C24)	<25		25		ug/L		06/19/24 17:03	07/08/24 14:12	1
Motor Oil Range Organics [C24-C36]	<25		25		ug/L		06/19/24 17:03	07/08/24 14:12	1
C8-C18	<25		25		ug/L		06/19/24 17:03	07/08/24 14:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Octacosane (Surr)	111		60 - 130	06/19/24 17:03	07/08/24 14:12	1

Lab Sample ID: LCS 570-452574/2-A
Matrix: Water
Analysis Batch: 458141

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 452574

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28			1600	1400		ug/L		88	56 - 127		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
n-Octacosane (Surr)	127		60 - 130

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

Lab Sample ID: LCSD 570-452574/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 458141 — **Prep Batch: 452574**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C10-C28			1600	1480		ug/L		93	56 - 127	6	23

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane (Surr)	*144*	*S1+*	*60 - 130*

Lab Sample ID: MRL 570-452574/4-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 458141 — **Prep Batch: 452574**

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
C10-C28			0.0200	0.0312	^3+	mg/L		156	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
n-Octacosane (Surr)	*130*		*60 - 130*

QC Association Summary

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

Job ID: 380-99954-1
SDG: 625, 8015

GC/MS Semi VOA

Prep Batch: 451986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99954-1	MOANALUA WELLS	Total/NA	Drinking Water	625.1	
380-99954-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1	
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	625.1	
380-99954-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	625.1	
MB 570-451986/1-A	Method Blank	Total/NA	Water	625.1	
LCS 570-451986/2-A	Lab Control Sample	Total/NA	Water	625.1	
LCSD 570-451986/3-A	Lab Control Sample Dup	Total/NA	Water	625.1	

Analysis Batch: 461617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 570-451986/2-A	Lab Control Sample	Total/NA	Water	625.1 SIM	451986
LCSD 570-451986/3-A	Lab Control Sample Dup	Total/NA	Water	625.1 SIM	451986

Analysis Batch: 461619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99954-1	MOANALUA WELLS	Total/NA	Drinking Water	625.1 SIM	451986
380-99954-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1 SIM	451986
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	625.1 SIM	451986
380-99954-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	625.1 SIM	451986
MB 570-451986/1-A	Method Blank	Total/NA	Water	625.1 SIM	451986

Analysis Batch: 462571

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99954-1	MOANALUA WELLS	Total/NA	Drinking Water	625.1	451986
380-99954-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625.1	451986
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	625.1	451986
380-99954-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	625.1	451986
MB 570-451986/1-A	Method Blank	Total/NA	Water	625.1	451986

GC VOA

Analysis Batch: 454303

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99954-1	MOANALUA WELLS	Total/NA	Drinking Water	8015B GRO LL	
380-99954-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015B GRO LL	
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015B GRO LL	
380-99954-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	8015B GRO LL	
380-99954-5	TB MOANALUA WELLS	Total/NA	Water	8015B GRO LL	
380-99954-6	TB AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015B GRO LL	
380-99954-7	TB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	8015B GRO LL	
380-99954-8	TB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	8015B GRO LL	
MB 570-454303/6	Method Blank	Total/NA	Water	8015B GRO LL	
LCS 570-454303/3	Lab Control Sample	Total/NA	Water	8015B GRO LL	
LCSD 570-454303/4	Lab Control Sample Dup	Total/NA	Water	8015B GRO LL	
MRL 570-454303/5	Lab Control Sample	Total/NA	Water	8015B GRO LL	
380-99954-1 MS	MOANALUA WELLS	Total/NA	Drinking Water	8015B GRO LL	
380-99954-1 MSD	MOANALUA WELLS	Total/NA	Drinking Water	8015B GRO LL	

QC Association Summary

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

Job ID: 380-99954-1
SDG: 625, 8015

GC Semi VOA

Prep Batch: 452574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99954-1	MOANALUA WELLS	Total/NA	Drinking Water	3510C	
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	3510C	
380-99954-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	3510C	
MB 570-452574/1-A	Method Blank	Total/NA	Water	3510C	
LCS 570-452574/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 570-452574/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MRL 570-452574/4-A	Lab Control Sample	Total/NA	Water	3510C	

Analysis Batch: 458141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99954-1	MOANALUA WELLS	Total/NA	Drinking Water	8015B	452574
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015B	452574
380-99954-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	8015B	452574
MB 570-452574/1-A	Method Blank	Total/NA	Water	8015B	452574
LCS 570-452574/2-A	Lab Control Sample	Total/NA	Water	8015B	452574
LCSD 570-452574/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	452574
MRL 570-452574/4-A	Lab Control Sample	Total/NA	Water	8015B	452574

Lab Chronicle

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

Job ID: 380-99954-1
SDG: 625, 8015

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-99954-1
Date Collected: 06/12/24 10:10
Matrix: Drinking Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	625.1			451986	OAJ3	EET CAL 4	06/18/24 11:50
Total/NA	Analysis	625.1		1	462571	CG	EET CAL 4	07/22/24 12:30
Total/NA	Prep	625.1			451986	OAJ3	EET CAL 4	06/18/24 11:50
Total/NA	Analysis	625.1 SIM		1	461619	PQS1	EET CAL 4	07/18/24 15:55
Total/NA	Analysis	8015B GRO LL		1	454303	A9VE	EET CAL 4	06/25/24 15:25
Total/NA	Prep	3510C			452574	H6FE	EET CAL 4	06/19/24 17:03
Total/NA	Analysis	8015B		1	458141	SP9M	EET CAL 4	07/08/24 15:14

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-99954-2
Date Collected: 06/12/24 11:00
Matrix: Drinking Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	625.1			451986	OAJ3	EET CAL 4	06/18/24 11:50
Total/NA	Analysis	625.1		1	462571	CG	EET CAL 4	07/22/24 12:53
Total/NA	Prep	625.1			451986	OAJ3	EET CAL 4	06/18/24 11:50
Total/NA	Analysis	625.1 SIM		1	461619	PQS1	EET CAL 4	07/18/24 16:16
Total/NA	Analysis	8015B GRO LL		1	454303	A9VE	EET CAL 4	06/25/24 16:46

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)

Lab Sample ID: 380-99954-3
Date Collected: 06/12/24 11:30
Matrix: Drinking Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	625.1			451986	OAJ3	EET CAL 4	06/18/24 11:50
Total/NA	Analysis	625.1		1	462571	CG	EET CAL 4	07/22/24 13:16
Total/NA	Prep	625.1			451986	OAJ3	EET CAL 4	06/18/24 11:50
Total/NA	Analysis	625.1 SIM		1	461619	PQS1	EET CAL 4	07/18/24 16:38
Total/NA	Analysis	8015B GRO LL		1	454303	A9VE	EET CAL 4	06/25/24 17:09
Total/NA	Prep	3510C			452574	H6FE	EET CAL 4	06/19/24 17:03
Total/NA	Analysis	8015B		1	458141	SP9M	EET CAL 4	07/08/24 15:55

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-99954-4
Date Collected: 06/12/24 10:40
Matrix: Drinking Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	625.1			451986	OAJ3	EET CAL 4	06/18/24 11:50
Total/NA	Analysis	625.1		1	462571	CG	EET CAL 4	07/22/24 13:40
Total/NA	Prep	625.1			451986	OAJ3	EET CAL 4	06/18/24 11:50
Total/NA	Analysis	625.1 SIM		1	461619	PQS1	EET CAL 4	07/18/24 17:00
Total/NA	Analysis	8015B GRO LL		1	454303	A9VE	EET CAL 4	06/25/24 17:33
Total/NA	Prep	3510C			452574	H6FE	EET CAL 4	06/19/24 17:03
Total/NA	Analysis	8015B		1	458141	SP9M	EET CAL 4	07/08/24 16:16

Lab Chronicle

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

Job ID: 380-99954-1
SDG: 625, 8015

Client Sample ID: TB MOANALUA WELLS — Lab Sample ID: 380-99954-5

Date Collected: 06/12/24 10:10 — **Matrix: Water**
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	454303	A9VE	EET CAL 4	06/25/24 13:49

Client Sample ID: TB AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-99954-6

Date Collected: 06/12/24 11:00 — **Matrix: Water**
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	454303	A9VE	EET CAL 4	06/25/24 14:13

Client Sample ID: TB AIEA WELLS PUMPS 1&2 (260) — Lab Sample ID: 380-99954-7

Date Collected: 06/12/24 11:30 — **Matrix: Water**
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	454303	A9VE	EET CAL 4	06/25/24 14:37

Client Sample ID: TB HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-99954-8

Date Collected: 06/12/24 10:40 — **Matrix: Water**
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015B GRO LL		1	454303	A9VE	EET CAL 4	06/25/24 15:01

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 380-99954-1
SDG: 625, 8015

Laboratory: Eurofins Calscience

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

Authority	Program	Identification Number	Expiration Date
Arizona	State	AZ0830	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24
California	State	3082	07-31-24
Kansas	NELAP	E-10420	07-31-24
Nevada	State	CA00111	07-31-24
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24

Method Summary

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

Job ID: 380-99954-1
SDG: 625, 8015

Method	Method Description	Protocol	Laboratory
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
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:

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 [SUBCONTRACT]

Job ID: 380-99954-1
SDG: 625, 8015

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-99954-1	MOANALUA WELLS	Drinking Water	06/12/24 10:10	06/14/24 09:39	HI0000331
380-99954-2	AIEA GULCH WELLS PUMP 2	Drinking Water	06/12/24 11:00	06/14/24 09:39	HI0000331
380-99954-3	AIEA WELLS PUMPS 1&2 (260)	Drinking Water	06/12/24 11:30	06/14/24 09:39	HI0000331
380-99954-4	HALAWA WELLS UNITS 1 & 2	Drinking Water	06/12/24 10:40	06/14/24 09:39	HI0000331
380-99954-5	TB MOANALUA WELLS	Water	06/12/24 10:10	06/14/24 09:39	
380-99954-6	TB AIEA GULCH WELLS PUMP 2	Water	06/12/24 11:00	06/14/24 09:39	
380-99954-7	TB AIEA WELLS PUMPS 1&2 (260)	Water	06/12/24 11:30	06/14/24 09:39	
380-99954-8	TB HALAWA WELLS UNITS 1 & 2	Water	06/12/24 10:40	06/14/24 09:39	

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Preetha Anand	Lab PM: Arada Rachelle	Carrier Tracking No(s):	COC No: 380-27984-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.euronisus.com	State of Origin:	Page: Page 1 of 2
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested			
City: Honolulu	TAT Requested (days):			
State, Zip: HI 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E NaHSO4, F - MeOH, G - Amchlor, H Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L EDA, M - Hexane, N None, O - AsNaO2, P - Na2O4S, Q Na2SO3, R Na2S2O3, S - H2SO4, T TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y Trizma, Z other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT 625 PAH Physis LL (EAL) + TICs	8015B_GRO_LL (MOD) GRO	8015B_DRO_LL_CS HNL Ranges C10-C24/C24-C36/C8-C18	525.2_PREC - (MOD) 525plus PLUS TICs	537 1_DW_PREC 537 1 Full List	533 All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	A	Q		Y	N		
MOANALUA WELLS	12-Jun-2024	1010	G	Water			2	4	2	2				chlorinated
AIEA GULCH WELLS PUMP2	12-Jun-2024	1100	G	Water			2	4	2	2				chlorinated
AIEA WELLS PUMPS 1&2 (260)	12-Jun-2024	1130	G	Water			2	4	2	2				(1) 7768 5643 9320
HALAWA WELLS UNITS 1&2	12-Jun-2024	1040	G	Water			2	4	2	2				(751A) 3.3°-0.1°=3.2°
														(2) 7768 5643 9330
														(751A) 3.5°-0.1°=3.4°
TB MOANALUA WELLS	12-Jun-2024	1010	G	Water				2						(3) 7768 5643 9341
TB AIEA GULCH WELLS PUMP2	12-Jun-2024	1100	G	Water				2						(751A) 3.6°-0.1°=3.5°
TB AIEA WELLS PUMPS 1&2 (260)	12-Jun-2024	1130	G	Water				2						(4) 7768 5643 9352
TB HALAWA WELLS UNITS 1&2	12-Jun-2024	1040	G	Water				2						(751A) 3.0°-0.1°=2.9°

380-99954 COC

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested I II III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time.	Method of Shipment: FED EX 4 COOLERS ↑

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
PA	6/13/24 1200	HBWS	G. RETTNER	06/14/2024 09:39	EEAP

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks. (751A) -0.1° CORRECTION GEL-FROZEN ↑

Ver: 01/16/2019

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Preetha Anand	Lab PM: Arada Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.euronisus.com	State of Origin:	Page: Page 2 of 2
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested			
City: Honolulu	TAT Requested (days)			
State, Zip: HI 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
A - HCL, B NaOH, C - Zn Acetate, D - Nitric Acid, E NaHSO4, F MeOH, G Amchlor, H - Ascorbic Acid, I Ice, J DI Water, K EDTA, L EDA
M - Hexane, N - None, O - AsNaO2, P Na2O4S, Q - Na2SO3, R - Na2S2O3, S H2SO4, T TSP Dodecahydrate, U Acetone, V - MCAA, W - pH 4-5, Y Trizma, Z other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT 625 PAH Physis LL (EAL) + TICs	8015B_GRO_LL (MOD) GRO	8015B_DRO_LL_CS HNL Ranges C10-C24/C24-C36/C8-C18	525.2_PREC (MOD) 525plus PLUS TICs	537 1_DW_PREC 537 1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	A	Q	QA	Y	I		
MOANALUA WELLS	12-Jun-2024	1010	G	Water							3	3		chlorinated
AIEA GULCH WELLS PUMP2	12-Jun-2024	1100	G	Water							3	3		chlorinated
AIEA WELLS PUMPS 1&2 (260)	12-Jun-2024	1130	G	Water							3	3		(1) 7768 5643 9320
HALAWA WELLS UNITS 1&2	12-Jun-2024	1040	G	Water							3	3		(751A) 3.3°-0.1°=3.2°
FB MOANALUA WELLS	12-Jun-2024	1010	G	Water							1	1		(1) FB bottle was filled with a regular sample bottle.
FB AIEA GULCH WELLS PUMP2	12-Jun-2024	1100	G	Water							1	1		(2) 7768 5643 9330
FB AIEA WELLS PUMPS 1&2 (260)	12-Jun-2024	1130	G	Water							1	1		(751A) 3.5°-0.1°=3.4°
FB HALAWA WELLS UNITS 1&2	12-Jun-2024	1040	G	Water							1	1		(3) 7768 5643 9341
														(751A) 3.6°-0.1°=3.5°
														(4) 7768 5643 9352

(751A) 3.0°-0.1°=2.9° (4)

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III IV Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time	Method of Shipment: FED EX 4 COOLERS ↑

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
PA	6/13/24 1200	HBWS	G. REITNER	06/14/2024 09:39	EEAP

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: (751A) -0.1° CORRECTION GEL-FROZEN ↑

Ver: 01/16/2019

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

Chain of Custody Record

Refer to J 99971 for these sites 525.2 & PFAS samples

eurofins Environment Testing America

Client Information	Sampler: Preetha Anand	Lab PM: Arada Rachelle	Carrier Tracking No(s)	COC No: 380-27984-2757.2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.euronisus.com	State of Origin	Page: Page 1 of 2
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested			
City: Honolulu	TAT Requested (days)			
State, Zip: HI 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Preservation Codes
A - HCL, B - NaOH, C - Zn Acetate, D Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L EDA
M - Hexane, N None, O AsNaO2, P Na2O4S, Q - Na2SO3, R Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U Acetone, V MCAA, W - pH 4-5, Y Trizma, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT 625 PAH Physis LL (EAL) + TICs	8015B_GRO_LL (MOD) GRO	8015B_DRO_LL_CS - HNL Ranges C10-C24/C24-C36/C8-C18	525.2_PREC (MOD) 525plus PLUS TICs	537 1_DW_PREC 537 1 Full List	533 All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	A	Q		Y	N		
MOANALUA WELLS	12-Jun-2024	1010	G	Water			2	4	2	2				chlorinated
AIEA GULCH WELLS PUMP2	12-Jun-2024	1100	G	Water			2	4	2	2				chlorinated
AIEA WELLS PUMPS 1&2 (260)	12-Jun-2024	1130	G	Water			2	4	2	2				(1) 7768 5643 9320
HALAWA WELLS UNITS 1&2	12-Jun-2024	1040	G	Water			2	4	2	2				(751A) 3.3°-0.1°=3.2°
														(2) 7768 5643 9330
														(751A) 3.5°-0.1°=3.4°
TB MOANALUA WELLS	12-Jun-2024	1010	G	Water				2						(3) 7768 5643 9341
TB AIEA GULCH WELLS PUMP2	12-Jun-2024	1100	G	Water				2						(751A) 3.6°-0.1°=3.5°
TB AIEA WELLS PUMPS 1&2 (260)	12-Jun-2024	1130	G	Water				2						(4) 7768 5643 9352
TB HALAWA WELLS UNITS 1&2	12-Jun-2024	1040	G	Water				2						(751A) 3.0°-0.1°=2.9°

380-99954 COC

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown* ☐ *Radiological*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested I, II III IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by	Date	Time	Method of Shipment: FED EX 4 COOLERS ↑

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
PA	6/13/24 1200	HBWS	G. RETTNER	06/14/2024 09:39	EEAP

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: (751A) -0.1° CORRECTION GEL-FROZEN ↑

Ver 01/16/2019

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

Chain of Custody Record

eurofins | Enviro

Loc: 380
99954

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-132266.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: Eurofins Environment Testing Southwest,		Accreditations Required (See note): State - Hawaii		Job #: 380-99954-1
Address: 2841 Dow Avenue, Suite 100, ,	Due Date Requested: 7/8/2024			Preservation Codes: -
City: Tustin	TAT Requested (days):			
State, Zip: CA, 92780				
Phone: 714-895-5494(Tel)	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015B_DRO_LL_CS/3510C_LL HNL Ranges: C10-C24/C24-C36/C8-C18	625.1/625_Prep Tentatively Identified Compounds	625.1_SIM/625_Prep (MOD) Extended PAH List	8015B_GRO_LL/5030C (MOD) GRO	8015B_GRO_LL/5030C GRO	Total Number of containers	Special Instructions/Note:
			Preservation Code:										
MOANALUA WELLS (380-99954-1)	6/12/24	10:10 Hawaiian		Water			X	X	X	X		8	initial volume (500ml) and final volume (2ml). MRLs are needed.
AIEA GULCH WELLS PUMP 2 (380-99954-2)	6/12/24	11:00 Hawaiian		Water			X	X	X	X		8	initial volume (500ml) and final volume (2ml). MRLs are needed.
AIEA WELLS PUMPS 1&2 (260) (380-99954-3)	6/12/24	11:30 Hawaiian		Water			X	X	X	X		8	initial volume (500ml) and final volume (2ml). MRLs are needed.
HALAWA WELLS UNITS 1 & 2 (380-99954-4)	6/12/24	10:40 Hawaiian		Water			X	X	X	X		8	initial volume (500ml) and final volume (2ml). MRLs are needed.
TB MOANALUA WELLS (380-99954-5)	6/12/24	10:10 Hawaiian		Water							X	2	MRLs are needed.
TB AIEA GULCH WELLS PUMP 2 (380-99954-6)	6/12/24	11:00 Hawaiian		Water							X	2	MRLs are needed.
TB AIEA WELLS PUMPS 1&2 (260) (380-99954-7)	6/12/24	11:30 Hawaiian		Water							X	2	MRLs are needed.
TB HALAWA WELLS UNITS 1 & 2 (380-99954-8)	6/12/24	10:40 Hawaiian		Water							X	2	MRLs are needed.

380-99954 Chain of Custody

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

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

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[illegible]	6/17/24 1200	EEA	[illegible]	6/17/24 12:00	EC
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.3/1.4 SCIP

Ver: 04/02/2024

7/23/2024

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-99954-1
SDG Number: 625, 8015

Login Number: 99954
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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	
ClO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-99954-1
SDG Number: 625, 8015

Login Number: 99954
List Number: 2
Creator: Khana, Piyush

List Source: Eurofins Calscience
List Creation: 06/17/24 01:06 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.4
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	