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ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-65785-1

Eurofins Eaton Analytical Pomona

Job Notes

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

Compliance Statement

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

Authorization



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Definitions/Glossary

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

Job ID: 380-65785-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^3-	Reporting Limit Check Standard is outside acceptance limits, low biased.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased.
B	Analyte was found in the associated method blank.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS 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/MS Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased.
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.

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 Semi 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.

HPLC/IC

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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.

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid

Definitions/Glossary

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

Job ID: 380-65785-1

Glossary (Continued)

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

Case Narrative

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

Job ID: 380-65785-1

Job ID: 380-65785-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative 380-65785-1

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

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

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

Receipt

The samples were received on 10/5/2023 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 2.9°C

Subcontract Work

Methods 8015 Ethanol, 8015 Gas (Purgeable) LL (EAL), 8015 LL DRO/MRO/JP5/JP8: These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

Method 625 Acid/Base/PAH + TICs: This method was subcontracted to Physis Environmental Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report. The subcontract report is appended in its entirety.

GC/MS VOA

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

GC/MS Semi VOA

Method 525.2_PREC: The continuing calibration verification (CCV) associated with batch 380-58450 recovered above the upper control limit for Hexachlorocyclopentadiene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: Aiea Wells Pumps 1&2 (260) P2 (380-65785-1) and (CCVIS 380-58450/2).

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

GC Semi VOA

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

HPLC/IC

Method 300_OF_28D_PREC: Due to the high concentration of Chloride, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 380-58315 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

Metals

Method 200.8: The continuing calibration blank (CCB) for analytical batch 380-58962 contained Silver above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

Case Narrative

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

Job ID: 380-65785-1

Job ID: 380-65785-1 (Continued)

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

General Chemistry

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

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Detection Summary

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Bromide	340		5.0	ug/L	1		300.0	Total/NA
Chloride	95		1.0	mg/L	2		300.0	Total/NA
Nitrate as N	0.74		0.050	mg/L	1		300.0	Total/NA
Sulfate	16		0.25	mg/L	1		300.0	Total/NA
Calcium	20		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	18		0.10	mg/L	1		200.7 Rev 4.4	Total/NA
Potassium	2.4		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Sodium	38		1.0	mg/L	1		200.7 Rev 4.4	Total/NA
Chromium	1.7		1.0	ug/L	1		200.8	Total Recoverable
Alkalinity	58		2.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	58		2.0	mg/L	1		SM 2320B	Total/NA
Specific Conductance	470		2.0	umhos/cm	1		SM 2510B	Total/NA
Total Dissolved Solids	280		20	mg/L	1		SM 2540C	Total/NA
Fluoride	0.051		0.050	mg/L	1		SM 4500 F C	Total/NA
pH	7.6	HF		SU	1		SM 4500 H+ B	Total/NA

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65785-2

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: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	<2.0		2.0	ug/L			10/10/23 18:14	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130				10/10/23 18:14	1
4-Bromofluorobenzene (Surr)	93		70 - 130				10/10/23 18:14	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 130				10/10/23 18:14	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 03:02	1
1,1-Dichloroethane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,1-Dichloropropene	<0.50		0.50	ug/L			10/11/23 03:02	1
1,2,3-Trichlorobenzene	<0.50	^3+	0.50	ug/L			10/11/23 03:02	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
1,2-Dichloroethane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,2-Dichloropropane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
1,3-Dichloropropane	<0.50		0.50	ug/L			10/11/23 03:02	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			10/11/23 03:02	1
2,2-Dichloropropane	<0.50		0.50	ug/L			10/11/23 23:29	1
2-Butanone (MEK)	<5.0		5.0	ug/L			10/11/23 03:02	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			10/11/23 03:02	1
Acetone	<500	^3-	500	ug/L			10/11/23 03:02	1
Benzene	<0.50		0.50	ug/L			10/11/23 03:02	1
Bromobenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
Bromochloromethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Bromodichloromethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Bromoethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Bromoform	<0.50	^3+	0.50	ug/L			10/11/23 03:02	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			10/11/23 03:02	1
Carbon disulfide	<0.50	*+	0.50	ug/L			10/11/23 23:29	1
Carbon tetrachloride	<0.50		0.50	ug/L			10/11/23 23:29	1
Chlorobenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
Chlorodibromomethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Chloroethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			10/11/23 03:02	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			10/11/23 03:02	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 03:02	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			10/11/23 03:02	1
Dibromomethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Dichloromethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Diisopropyl ether	<3.0		3.0	ug/L			10/11/23 03:02	1
Ethylbenzene	<0.50		0.50	ug/L			10/11/23 03:02	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	<0.50		0.50	ug/L			10/11/23 03:02	1
Isopropylbenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
m,p-Xylenes	<0.50	^3+	0.50	ug/L			10/11/23 03:02	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			10/11/23 03:02	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			10/11/23 03:02	1
Naphthalene	<0.50	^3+	0.50	ug/L			10/11/23 03:02	1
n-Butylbenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
N-Propylbenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
o-Chlorotoluene	<0.50		0.50	ug/L			10/11/23 03:02	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			10/11/23 03:02	1
o-Xylene	<0.50		0.50	ug/L			10/11/23 03:02	1
p-Chlorotoluene	<0.50		0.50	ug/L			10/11/23 03:02	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			10/11/23 03:02	1
p-Isopropyltoluene	<0.50		0.50	ug/L			10/11/23 03:02	1
sec-Butylbenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
Styrene	<0.50		0.50	ug/L			10/11/23 03:02	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			10/11/23 03:02	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			10/11/23 03:02	1
tert-Butylbenzene	<0.50		0.50	ug/L			10/11/23 03:02	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			10/11/23 03:02	1
Toluene	<0.50		0.50	ug/L			10/11/23 03:02	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 03:02	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			10/11/23 23:29	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			10/11/23 03:02	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			10/11/23 03:02	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			10/11/23 03:02	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			10/11/23 03:02	1
Xylenes, Total	<0.50		0.50	ug/L			10/11/23 03:02	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A		10/11/23 03:02	1
Tentatively Identified Compound	None		ug/L			N/A		10/11/23 23:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		10/11/23 03:02	1
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		10/11/23 23:29	1
4-Bromofluorobenzene (Surr)	96		70 - 130		10/11/23 03:02	1
4-Bromofluorobenzene (Surr)	108		70 - 130		10/11/23 23:29	1
Toluene-d8 (Surr)	100		70 - 130		10/11/23 03:02	1
Toluene-d8 (Surr)	99		70 - 130		10/11/23 23:29	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
2,4'-DDE	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
2,4'-DDT	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
2,4-Dinitrotoluene	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
4,4'-DDD	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
4,4'-DDE	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Acenaphthene	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Acenaphthylene	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Acetochlor	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Alachlor	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
alpha-BHC	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
alpha-Chlordane	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Anthracene	<0.019		0.019	ug/L		10/07/23 14:37	10/08/23 15:13	1
Atrazine	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Benz(a)anthracene	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Benzo[a]pyrene	<0.019		0.019	ug/L		10/07/23 14:37	10/08/23 15:13	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		10/07/23 14:37	10/08/23 15:13	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		10/07/23 14:37	10/08/23 15:13	1
beta-BHC	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		10/07/23 14:37	10/08/23 15:13	1
Bromacil	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Butachlor	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Butylbenzylphthalate	<0.49		0.49	ug/L		10/07/23 14:37	10/08/23 15:13	1
Chlorobenzilate	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Chloroneb	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Chlorothalonil (Draconil, Bravo)	<0.097	^3+	0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Chlorpyrifos	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Chrysene	<0.019		0.019	ug/L		10/07/23 14:37	10/08/23 15:13	1
delta-BHC	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		10/07/23 14:37	10/08/23 15:13	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Diclorvos (DDVP)	<0.049	^3+	0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Dieldrin	<0.19		0.19	ug/L		10/07/23 14:37	10/08/23 15:13	1
Diethylphthalate	<0.49		0.49	ug/L		10/07/23 14:37	10/08/23 15:13	1
Dimethylphthalate	<0.49		0.49	ug/L		10/07/23 14:37	10/08/23 15:13	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		10/07/23 14:37	10/08/23 15:13	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Endosulfan sulfate	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Endrin	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Endrin aldehyde	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
EPTC	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Fluoranthene	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Fluorene	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
gamma-BHC (Lindane)	<0.039		0.039	ug/L		10/07/23 14:37	10/08/23 15:13	1
gamma-Chlordane	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Heptachlor	<0.039		0.039	ug/L		10/07/23 14:37	10/08/23 15:13	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Hexachlorobenzene	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Isophorone	<0.49		0.49	ug/L		10/07/23 14:37	10/08/23 15:13	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Malathion	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Methoxychlor	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Metolachlor	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Molinate	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Naphthalene	<0.29		0.29	ug/L		10/07/23 14:37	10/08/23 15:13	1
Parathion	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Phenanthrene	<0.039		0.039	ug/L		10/07/23 14:37	10/08/23 15:13	1
Propachlor	<0.049	^3+	0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Pyrene	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Simazine	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Terbacil	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Terbutylazine	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
Thiobencarb	<0.19		0.19	ug/L		10/07/23 14:37	10/08/23 15:13	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		10/07/23 14:37	10/08/23 15:13	1
trans-Nonachlor	<0.049		0.049	ug/L		10/07/23 14:37	10/08/23 15:13	1
Trifluralin	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
1-Methylnaphthalene	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1
2-Methylnaphthalene	<0.097		0.097	ug/L		10/07/23 14:37	10/08/23 15:13	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	10/07/23 14:37	10/08/23 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	102		70 - 130	10/07/23 14:37	10/08/23 15:13	1
Perylene-d12	94		70 - 130	10/07/23 14:37	10/08/23 15:13	1
Triphenylphosphate	100		70 - 130	10/07/23 14:37	10/08/23 15:13	1

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.020		0.020	ug/L		10/09/23 11:30	10/09/23 19:14	1
1,2-Dibromo-3-Chloropropane	<0.010		0.010	ug/L		10/09/23 11:30	10/09/23 19:14	1
1,2-Dibromoethane	<0.010		0.010	ug/L		10/09/23 11:30	10/09/23 19:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	102		60 - 140	10/09/23 11:30	10/09/23 19:14	1

Method: EPA 505 - Organochlorine Pesticides/PCBs (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 04:03	1
Dieldrin	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 04:03	1
Toxaphene	<0.50		0.50	ug/L		10/09/23 11:51	10/10/23 04:03	1
Alachlor	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 04:03	1
Chlordane (n.o.s.)	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 04:03	1
Endrin	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 04:03	1
Heptachlor	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 04:03	1
Heptachlor epoxide	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 04:03	1
gamma-BHC (Lindane)	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 04:03	1
Methoxychlor	<0.050		0.050	ug/L		10/09/23 11:51	10/10/23 04:03	1
PCB-1016	<0.070		0.070	ug/L		10/09/23 11:51	10/10/23 04:03	1
PCB-1221	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 04:03	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Method: EPA 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1232	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 04:03	1
PCB-1242	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 04:03	1
PCB-1248	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 04:03	1
PCB-1254	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 04:03	1
PCB-1260	<0.070		0.070	ug/L		10/09/23 11:51	10/10/23 04:03	1
Polychlorinated biphenyls, Total	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 04:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	95		70 - 130	10/09/23 11:51	10/10/23 04:03	1

Method: EPA 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	340		5.0	ug/L			10/12/23 05:05	1
Chloride	95		1.0	mg/L			10/07/23 07:42	2
Nitrate as N	0.74		0.050	mg/L			10/06/23 05:51	1
Nitrite as N	<0.050		0.050	mg/L			10/06/23 05:51	1
Sulfate	16		0.25	mg/L			10/06/23 05:51	1

Method: EPA 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	20		1.0	mg/L			10/16/23 14:39	1
Magnesium	18		0.10	mg/L			10/16/23 14:39	1
Potassium	2.4		1.0	mg/L			10/16/23 14:39	1
Sodium	38		1.0	mg/L			10/16/23 14:39	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	ug/L		10/11/23 09:17	10/11/23 16:07	1
Arsenic	<1.0		1.0	ug/L		10/11/23 09:17	10/11/23 16:07	1
Beryllium	<1.0		1.0	ug/L		10/11/23 09:17	10/11/23 19:20	1
Cadmium	<0.50		0.50	ug/L		10/11/23 09:17	10/11/23 16:07	1
Chromium	1.7		1.0	ug/L		10/11/23 09:17	10/11/23 16:07	1
Copper	<2.0		2.0	ug/L		10/11/23 09:17	10/11/23 16:07	1
Lead	<0.50		0.50	ug/L		10/11/23 09:17	10/11/23 16:07	1
Nickel	<5.0		5.0	ug/L		10/11/23 09:17	10/11/23 16:07	1
Selenium	<5.0		5.0	ug/L		10/11/23 09:17	10/11/23 16:07	1
Silver	<0.50	^2	0.50	ug/L		10/11/23 09:17	10/11/23 16:07	1
Thallium	<1.0		1.0	ug/L		10/11/23 09:17	10/11/23 16:07	1
Zinc	<20		20	ug/L		10/11/23 09:17	10/11/23 16:07	1

Method: EPA 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		10/09/23 13:26	10/09/23 21:39	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity (SM 2320B)	58		2.0	mg/L			10/10/23 16:14	1
Bicarbonate Alkalinity as CaCO3 (SM 2320B)	58		2.0	mg/L			10/10/23 16:14	1
Carbonate Alkalinity as CaCO3 (SM 2320B)	<2.0		2.0	mg/L			10/10/23 16:14	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	470		2.0	umhos/cm			10/10/23 16:14	1
Total Dissolved Solids (SM 2540C)	280		20	mg/L			10/06/23 17:28	1
Fluoride (SM 4500 F C)	0.051		0.050	mg/L			10/11/23 20:11	1
pH (SM 4500 H+ B)	7.6	HF		SU			10/10/23 16:14	1
Sulfide (SM 4500 S2 D)	<0.050		0.050	mg/L			10/10/23 12:26	1

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2-Chlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
2-Methylphenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
2-Nitroaniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
2-Nitrophenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
3-Nitroaniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
4-Chloroaniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
4-Nitroaniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
4-Nitrophenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Acenaphthene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Aniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Anthracene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benzidine	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benzoic Acid	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
Biphenyl	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Chrysene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Dibenzofuran	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Fluoranthene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Fluorene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Hexachloroethane	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Naphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Nitrobenzene	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Pentachlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Perylene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Phenanthrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1
Phenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/10/23 00:36	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/10/23 00:36	1
Pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/10/23 00:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	34		31 - 143	10/12/23 00:00	11/10/23 00:36	1
(d10-Acenaphthene)	73		27 - 133	10/12/23 00:00	11/10/23 00:36	1
(d10-Phenanthrene)	77		43 - 129	10/12/23 00:00	11/10/23 00:36	1
(d12-Chrysene)	90		52 - 144	10/12/23 00:00	11/10/23 00:36	1
(d12-Perylene)	87		36 - 161	10/12/23 00:00	11/10/23 00:36	1
(d5-Phenol)	40		0 - 85	10/12/23 00:00	11/10/23 00:36	1
(d8-Naphthalene)	68		25 - 125	10/12/23 00:00	11/10/23 00:36	1

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ETHANOL	ND	U	2000		ug/L			10/09/23 15:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/10/23 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	90		60 - 140		10/10/23 17:28	1

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.028		mg/L			10/14/23 15:28	1
JP5	ND	U	0.057		mg/L			10/14/23 15:28	1
JP8	ND	U	0.057		mg/L			10/14/23 15:28	1
MOTOR OIL	ND	U	0.057		mg/L			10/14/23 15:28	1

Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	68		60 - 130		10/14/23 15:28	1
HEXACOSANE	96		60 - 130		10/14/23 15:28	1

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65785-2

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	<2.0		2.0	ug/L			10/10/23 18:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		10/10/23 18:38	1
4-Bromofluorobenzene (Surr)	100		70 - 130		10/10/23 18:38	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 130		10/10/23 18:38	1

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			10/11/23 03:26	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			10/11/23 03:26	1
1,1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			10/11/23 03:26	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			10/11/23 03:26	1
1,1-Dichloroethane	<0.50		0.50	ug/L			10/11/23 03:26	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 03:26	1
1,1-Dichloropropene	<0.50		0.50	ug/L			10/11/23 03:26	1
1,2,3-Trichlorobenzene	<0.50	^3+	0.50	ug/L			10/11/23 03:26	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			10/11/23 03:26	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
1,2-Dichloroethane	<0.50		0.50	ug/L			10/11/23 03:26	1
1,2-Dichloropropane	<0.50		0.50	ug/L			10/11/23 03:26	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
1,3-Dichloropropane	<0.50		0.50	ug/L			10/11/23 03:26	1
2,2-Dichloropropane	<0.50		0.50	ug/L			10/11/23 19:46	1
2-Butanone (MEK)	<5.0		5.0	ug/L			10/11/23 03:26	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			10/11/23 03:26	1
Acetone	<500	^3-	500	ug/L			10/11/23 03:26	1
Benzene	<0.50		0.50	ug/L			10/11/23 03:26	1
Bromobenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
Bromochloromethane	<0.50		0.50	ug/L			10/11/23 03:26	1
Bromodichloromethane	<0.50		0.50	ug/L			10/11/23 03:26	1
Bromoform	<0.50	^3+	0.50	ug/L			10/11/23 03:26	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			10/11/23 03:26	1
Carbon disulfide	<0.50	*+	0.50	ug/L			10/11/23 19:46	1
Carbon tetrachloride	<0.50		0.50	ug/L			10/11/23 19:46	1
Chlorobenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
Chlorodibromomethane	<0.50		0.50	ug/L			10/11/23 03:26	1
Chloroethane	<0.50		0.50	ug/L			10/11/23 03:26	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			10/11/23 03:26	1
Dichloromethane	<0.50		0.50	ug/L			10/11/23 03:26	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 03:26	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65785-2

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Method: EPA-DW 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			10/11/23 03:26	1
Dibromomethane	<0.50		0.50	ug/L			10/11/23 03:26	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			10/11/23 03:26	1
Ethylbenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
Hexachlorobutadiene	<0.50		0.50	ug/L			10/11/23 03:26	1
Isopropylbenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
m,p-Xylenes	<0.50	^3+	0.50	ug/L			10/11/23 03:26	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			10/11/23 03:26	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			10/11/23 03:26	1
Naphthalene	<0.50	^3+	0.50	ug/L			10/11/23 03:26	1
n-Butylbenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
N-Propylbenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			10/11/23 03:26	1
o-Chlorotoluene	<0.50		0.50	ug/L			10/11/23 03:26	1
o-Xylene	<0.50		0.50	ug/L			10/11/23 03:26	1
p-Chlorotoluene	<0.50		0.50	ug/L			10/11/23 03:26	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			10/11/23 03:26	1
p-Isopropyltoluene	<0.50		0.50	ug/L			10/11/23 03:26	1
sec-Butylbenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
Styrene	<0.50		0.50	ug/L			10/11/23 03:26	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			10/11/23 03:26	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			10/11/23 03:26	1
tert-Butylbenzene	<0.50		0.50	ug/L			10/11/23 03:26	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			10/11/23 03:26	1
Toluene	<0.50		0.50	ug/L			10/11/23 03:26	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			10/11/23 03:26	1
Xylenes, Total	<0.50		0.50	ug/L			10/11/23 03:26	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 03:26	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			10/11/23 19:46	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			10/11/23 03:26	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			10/11/23 03:26	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			10/11/23 03:26	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			10/11/23 03:26	1
Bromoethane	<0.50		0.50	ug/L			10/11/23 03:26	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			10/11/23 03:26	1
Diisopropyl ether	<3.0		3.0	ug/L			10/11/23 03:26	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Acetaldehyde	7.3	T J N	ug/L		1.46	75-07-0		10/11/23 19:46	1
Unknown	8.1	T J	ug/L		9.59	N/A		10/11/23 03:26	1
Furfural	24	T J N	ug/L		9.85	98-01-1		10/11/23 19:46	1
Heptane, 2,2,4,6,6-pentamethyl-	0.51	T J N	ug/L		11.15	13475-82-6		10/11/23 19:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 130		10/11/23 03:26	1
1,2-Dichloroethane-d4 (Surr)	99		70 - 130		10/11/23 19:46	1
4-Bromofluorobenzene (Surr)	103		70 - 130		10/11/23 03:26	1
4-Bromofluorobenzene (Surr)	106		70 - 130		10/11/23 19:46	1
Toluene-d8 (Surr)	101		70 - 130		10/11/23 03:26	1
Toluene-d8 (Surr)	100		70 - 130		10/11/23 19:46	1

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Client Sample Results

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

Job ID: 380-65785-1

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65785-2

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Method: EPA-DW2 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.020		0.020	ug/L		10/09/23 11:30	10/09/23 19:48	1
1,2-Dibromo-3-Chloropropane	<0.010		0.010	ug/L		10/09/23 11:30	10/09/23 19:48	1
1,2-Dibromoethane	<0.010		0.010	ug/L		10/09/23 11:30	10/09/23 19:48	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	104		60 - 140			10/09/23 11:30	10/09/23 19:48	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/10/23 19:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	89		60 - 140					10/10/23 19:29	1

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

Action Limit Summary

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	HI Org	EPAMCL	EPAMCL	Method	Prep Type
				Limit	Limit	S Limit		
1,1,1-Trichloroethane	<0.50		ug/L	200.0	200		524.2	Total/NA
1,1,2-Trichloroethane	<0.50		ug/L	5.000	5		524.2	Total/NA
1,1-Dichloroethylene	<0.50		ug/L	7.000	7		524.2	Total/NA
1,2,3-Trichloropropane	<0.50		ug/L	0.6000			524.2	Total/NA
1,2,4-Trichlorobenzene	<0.50		ug/L	70.00	70		524.2	Total/NA
1,2-Dichloroethane	<0.50		ug/L	5.000	5		524.2	Total/NA
1,2-Dichloropropane	<0.50		ug/L	5.000	5		524.2	Total/NA
Benzene	<0.50		ug/L	5.000	5		524.2	Total/NA
Carbon tetrachloride	<0.50		ug/L	5.000	5		524.2	Total/NA
Chlorobenzene	<0.50		ug/L	100.0	100		524.2	Total/NA
cis-1,2-Dichloroethylene	<0.50		ug/L	70.00	70		524.2	Total/NA
Dichloromethane	<0.50		ug/L	5.000	5		524.2	Total/NA
Ethylbenzene	<0.50		ug/L	700.0	700		524.2	Total/NA
o-Dichlorobenzene (1,2-DCB)	<0.50		ug/L	600.0	600		524.2	Total/NA
p-Dichlorobenzene (1,4-DCB)	<0.50		ug/L	75.000	75		524.2	Total/NA
Styrene	<0.50		ug/L	100.0	100		524.2	Total/NA
Tetrachloroethene (PCE)	<0.50		ug/L	5.000	5		524.2	Total/NA
Toluene	<0.50		ug/L	1000	1000		524.2	Total/NA
trans-1,2-Dichloroethylene	<0.50		ug/L	100.0	100		524.2	Total/NA
Trichloroethylene (TCE)	<0.50		ug/L	5.000	5		524.2	Total/NA
Vinyl Chloride (VC)	<0.30		ug/L	2.000	2		524.2	Total/NA
Xylenes, Total	<0.50		ug/L	10000	10000		524.2	Total/NA
Alachlor	<0.049		ug/L		2		525.2	Total/NA
Atrazine	<0.049		ug/L		3		525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L		0.2		525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L		6		525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L		400		525.2	Total/NA
Endrin	<0.097		ug/L		2		525.2	Total/NA
gamma-BHC (Lindane)	<0.039		ug/L		0.2		525.2	Total/NA
Heptachlor	<0.039		ug/L		0.4		525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.049		ug/L		0.2		525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L		1		525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L		50		525.2	Total/NA
Methoxychlor	<0.097		ug/L		40		525.2	Total/NA
Simazine	<0.049		ug/L		4		525.2	Total/NA
1,2,3-Trichloropropane	<0.020		ug/L	0.6000			504.1	Total/NA
1,2-Dibromo-3-Chloropropane	<0.010		ug/L		0.2		504.1	Total/NA
1,2-Dibromoethane	<0.010		ug/L		0.05		504.1	Total/NA
Toxaphene	<0.50		ug/L		3		505	Total/NA
Alachlor	<0.10		ug/L		2		505	Total/NA
Endrin	<0.010		ug/L		2		505	Total/NA
Heptachlor	<0.010		ug/L		0.4		505	Total/NA
Heptachlor epoxide	<0.010		ug/L		0.2		505	Total/NA
gamma-BHC (Lindane)	<0.010		ug/L		0.2		505	Total/NA
Methoxychlor	<0.050		ug/L		40		505	Total/NA
Polychlorinated biphenyls, Total	<0.10		ug/L		0.5		505	Total/NA
Chloride	95		mg/L			250	300.0	Total/NA
Nitrate as N	0.74		mg/L		10		300.0	Total/NA

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Action Limit Summary

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2 (Continued)

Lab Sample ID: 380-65785-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	HI Org Limit	EPAMCL Limit	EPAMCL S Limit	Method	Prep Type
Nitrite as N	<0.050		mg/L		1		300.0	Total/NA
Sulfate	16		mg/L			250	300.0	Total/NA
Mercury	<0.10		ug/L		2		245.1	Total/NA
Total Dissolved Solids	280		mg/L			500	SM 2540C	Total/NA
Fluoride	0.051		mg/L		4	2	SM 4500 F C	Total/NA

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65785-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	HI Org Limit	EPAMCL Limit	RL	Method	Prep Type
1,1,1-Trichloroethane	<0.50		ug/L	200.0	200	0.50	524.2	Total/NA
1,1,2-Trichloroethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
1,1-Dichloroethylene	<0.50		ug/L	7.000	7	0.50	524.2	Total/NA
1,2,3-Trichloropropane	<0.50		ug/L	0.6000		0.50	524.2	Total/NA
1,2,4-Trichlorobenzene	<0.50		ug/L	70.00	70	0.50	524.2	Total/NA
1,2-Dichloroethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
1,2-Dichloropropane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Benzene	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Carbon tetrachloride	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Chlorobenzene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Dichloromethane	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
cis-1,2-Dichloroethylene	<0.50		ug/L	70.00	70	0.50	524.2	Total/NA
Ethylbenzene	<0.50		ug/L	700.0	700	0.50	524.2	Total/NA
o-Dichlorobenzene (1,2-DCB)	<0.50		ug/L	600.0	600	0.50	524.2	Total/NA
p-Dichlorobenzene (1,4-DCB)	<0.50		ug/L	75.000	75	0.50	524.2	Total/NA
Styrene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Tetrachloroethene (PCE)	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Toluene	<0.50		ug/L	1000	1000	0.50	524.2	Total/NA
Xylenes, Total	<0.50		ug/L	10000	10000	0.50	524.2	Total/NA
trans-1,2-Dichloroethylene	<0.50		ug/L	100.0	100	0.50	524.2	Total/NA
Trichloroethylene (TCE)	<0.50		ug/L	5.000	5	0.50	524.2	Total/NA
Vinyl Chloride (VC)	<0.30		ug/L	2.000	2	0.30	524.2	Total/NA
1,2,3-Trichloropropane	<0.020		ug/L	0.6000		0.020	504.1	Total/NA
1,2-Dibromo-3-Chloropropane	<0.010		ug/L		0.2	0.010	504.1	Total/NA
1,2-Dibromoethane	<0.010		ug/L		0.05	0.010	504.1	Total/NA

Surrogate Summary

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (70-130)	BFB (70-130)	DCA (70-130)
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	99	93	115
380-65785-2	TRAVEL BLANK	94	100	114
LCS 380-58700/2	Lab Control Sample	98	95	114
LCSD 380-58700/3	Lab Control Sample Dup	101	99	115
MB 380-58700/5	Method Blank	98	101	112

Surrogate Legend
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		TOL (50-150)	BFB (50-150)	DCA (50-150)
MRL 380-58700/4	Lab Control Sample	100	96	115

Surrogate Legend
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DCA (70-130)	BFB (70-130)	TOL (70-130)
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	106	96	100
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	100	108	99
380-65785-2	TRAVEL BLANK	101	103	101
380-65785-2	TRAVEL BLANK	99	106	100
LCS 380-58681/5	Lab Control Sample	103	98	106
LCS 380-58698/3	Lab Control Sample	99	100	103
LCS 380-58904/4	Lab Control Sample	98	102	100
LCSD 380-58681/6	Lab Control Sample Dup	101	103	103
LCSD 380-58698/4	Lab Control Sample Dup	108	92	102
LCSD 380-58904/5	Lab Control Sample Dup	100	101	101
MB 380-58681/8	Method Blank	100	93	103
MB 380-58698/5	Method Blank	102	102	102
MB 380-58904/8	Method Blank	98	105	99
MRL 380-58681/3	Lab Control Sample	103	96	102
MRL 380-58681/4	Lab Control Sample	105	99	99
MRL 380-58904/6	Lab Control Sample	98	103	98
MRL 380-58904/7	Lab Control Sample	102	103	99

Surrogate Legend
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Surrogate Summary

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

Job ID: 380-65785-1

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)
380-65745-X-1-A DU	Duplicate	96	77	84
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	102	94	100
380-64951-EQ-1-A MS	Matrix Spike	102	92	101
LCS 380-58414/23-A	Lab Control Sample	100	93	104
LCSD 380-58414/24-A	Lab Control Sample Dup	102	95	106
MB 380-58414/21-A	Method Blank	101	90	103
MRL 380-58414/22-A	Lab Control Sample	100	91	102

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

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		DBPP1 (60-140)
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	102
380-65785-2	TRAVEL BLANK	104
380-65868-J-1-A MS	Matrix Spike	112
380-65869-H-1-A DU	Duplicate	104
LCS 380-58522/29-A	Lab Control Sample	104
MBL 380-58522/4-A	Method Blank	88
MRL 380-58522/2-A	Lab Control Sample	100
MRL 380-58522/3-A	Lab Control Sample	108

Surrogate Legend
 DBPP = 1,2-Dibromopropane (Surr)

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		TCX1 (70-130)
380-65571-C-3-A MS	Matrix Spike	95
380-65571-D-3-A MS	Matrix Spike	97
380-65596-D-1-A MS	Matrix Spike	94
380-65596-G-1-A MS	Matrix Spike	93
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	95
MB 380-58555/3-A	Method Blank	91
MRL 380-58555/1-A	Lab Control Sample	93
MRL 380-58555/2-A	Lab Control Sample	96

Surrogate Legend
 TCX = Tetrachloro-m-xylene

Surrogate Summary

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

Job ID: 380-65785-1

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Matrix: BlankMatrix

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PHL (0-130)	PRY (36-161)	TBP (30-130)
111830-B1	Method Blank	101	100	97	104	107	92	44
111830-BS1	Lab Control Sample	103	99	95	101	112	93	59
111830-BS2	Lab Control Sample Dup	97	96	94	96	103	89	55

Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)

(d10-Phenanthrene) = (d10-Phenanthrene)

CRY = (d12-Chrysene)

NPT = (d8-Naphthalene)

PHL = (d5-Phenol)

PRY = (d12-Perylene)

TBP = (2,4,6-Tribromophenol)

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)						
		Acenaphtl (27-133)	Phenanth (43-129)	CRY (52-144)	NPT (25-125)	PHL (0-85)	PRY (36-161)	TBP (31-143)
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	73	77	90	68	40	87	34

Surrogate Legend

(d10-Acenaphthene) = (d10-Acenaphthene)

(d10-Phenanthrene) = (d10-Phenanthrene)

CRY = (d12-Chrysene)

NPT = (d8-Naphthalene)

PHL = (d5-Phenol)

PRY = (d12-Perylene)

TBP = (2,4,6-Tribromophenol)

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

Matrix: WATER

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB (60-140)
23J065-01M	Matrix Spike	112
23J065-01S	Matrix Spike Duplicate	116

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB
23VGH7J01B	Method Blank	

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-65785-1

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (70-130)
23VGH7J01C	LCD	103
23VGH7J01L	Lab Control Sample	102

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	90
380-65785-2	TRAVEL BLANK	89

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB	XACOSAI
23DSJ014WB	Method Blank		

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XACOSAI (60-130)
23DSJ014WL	Lab Control Sample	68	99
23J5J014WL	Lab Control Sample	66	97
23J8J014WL	Lab Control Sample	90	102

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BB (60-130)	XACOSAI (60-130)
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	68	96

Surrogate Legend

BB = BROMOBENZENE

Surrogate Summary

Client: City & County of Honolulu

Project/Site: RED-HILL

HEXACOSANE = HEXACOSANE

Job ID: 380-65785-1

- 1
- 2
- 3
- 4
- 5
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- 17

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 380-58681/8
Matrix: Water
Analysis Batch: 58681

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			10/10/23 15:44	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			10/10/23 15:44	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			10/10/23 15:44	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			10/10/23 15:44	1
1,1-Dichloroethane	<0.50		0.50	ug/L			10/10/23 15:44	1
1,1-Dichlorethylene	<0.50		0.50	ug/L			10/10/23 15:44	1
1,1-Dichloropropene	<0.50		0.50	ug/L			10/10/23 15:44	1
1,2,3-Trichlorobenzene	1.15	B	0.50	ug/L			10/10/23 15:44	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			10/10/23 15:44	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
1,2-Dichloroethane	<0.50		0.50	ug/L			10/10/23 15:44	1
1,2-Dichloropropane	<0.50		0.50	ug/L			10/10/23 15:44	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
1,3-Dichloropropane	<0.50		0.50	ug/L			10/10/23 15:44	1
2,2-Dichloropropane	<0.50		0.50	ug/L			10/10/23 15:44	1
2-Butanone (MEK)	<5.0		5.0	ug/L			10/10/23 15:44	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			10/10/23 15:44	1
Acetone	<500		500	ug/L			10/10/23 15:44	1
Benzene	<0.50		0.50	ug/L			10/10/23 15:44	1
Bromobenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
Bromochloromethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Bromodichloromethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Bromoform	<0.50		0.50	ug/L			10/10/23 15:44	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			10/10/23 15:44	1
Carbon disulfide	<0.50		0.50	ug/L			10/10/23 15:44	1
Carbon tetrachloride	<0.50		0.50	ug/L			10/10/23 15:44	1
Chlorobenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
Chlorodibromomethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Chloroethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			10/10/23 15:44	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/10/23 15:44	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			10/10/23 15:44	1
Dibromomethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Dichloromethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Ethylbenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
Hexachlorobutadiene	<0.50		0.50	ug/L			10/10/23 15:44	1
Isopropylbenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
m,p-Xylenes	<0.50		0.50	ug/L			10/10/23 15:44	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			10/10/23 15:44	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			10/10/23 15:44	1
Naphthalene	<0.50		0.50	ug/L			10/10/23 15:44	1
n-Butylbenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
N-Propylbenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
o-Chlorotoluene	<0.50		0.50	ug/L			10/10/23 15:44	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			10/10/23 15:44	1
o-Xylene	<0.50		0.50	ug/L			10/10/23 15:44	1

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QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-58681/8
Matrix: Water
Analysis Batch: 58681

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
p-Chlorotoluene	<0.50		0.50	ug/L			10/10/23 15:44	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			10/10/23 15:44	1
p-Isopropyltoluene	<0.50		0.50	ug/L			10/10/23 15:44	1
sec-Butylbenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
Styrene	<0.50		0.50	ug/L			10/10/23 15:44	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			10/10/23 15:44	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			10/10/23 15:44	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			10/10/23 15:44	1
tert-Butylbenzene	<0.50		0.50	ug/L			10/10/23 15:44	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			10/10/23 15:44	1
Toluene	<0.50		0.50	ug/L			10/10/23 15:44	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/10/23 15:44	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			10/10/23 15:44	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			10/10/23 15:44	1
Bromoethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			10/10/23 15:44	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			10/10/23 15:44	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			10/10/23 15:44	1
Diisopropyl ether	<3.0		3.0	ug/L			10/10/23 15:44	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			10/10/23 15:44	1
Xylenes, Total	<0.50		0.50	ug/L			10/10/23 15:44	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A		10/10/23 15:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 130		10/10/23 15:44	1
4-Bromofluorobenzene (Surr)	93		70 - 130		10/10/23 15:44	1
Toluene-d8 (Surr)	103		70 - 130		10/10/23 15:44	1

Lab Sample ID: LCS 380-58681/5
Matrix: Water
Analysis Batch: 58681

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	5.00	4.15		ug/L		83	70 - 130
1,1,1-Trichloroethane	5.00	3.75		ug/L		75	70 - 130
1,1,2,2-Tetrachloroethane	5.00	4.71		ug/L		94	70 - 130
1,1,2-Trichloroethane	5.00	4.48		ug/L		90	70 - 130
1,1-Dichloroethane	5.00	4.31		ug/L		86	70 - 130
1,1-Dichlorethylene	5.00	4.19		ug/L		84	70 - 130
1,1-Dichloropropene	5.00	4.15		ug/L		83	70 - 130
1,2,3-Trichlorobenzene	5.00	6.13		ug/L		123	70 - 130
1,2,3-Trichloropropane	5.00	4.26		ug/L		85	70 - 130
1,2,4-Trichlorobenzene	5.00	6.36		ug/L		127	70 - 130
1,2,4-Trimethylbenzene	5.00	4.71		ug/L		94	70 - 130
1,2-Dichloroethane	5.00	4.29		ug/L		86	70 - 130
1,2-Dichloropropane	5.00	4.19		ug/L		84	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-58681/5

Matrix: Water

Analysis Batch: 58681

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3,5-Trimethylbenzene	5.00	4.76		ug/L		95	70 - 130
1,3-Dichloropropane	5.00	4.57		ug/L		91	70 - 130
2,2-Dichloropropane	5.00	4.05		ug/L		81	70 - 130
2-Butanone (MEK)	50.0	43.4		ug/L		87	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	50.4		ug/L		101	70 - 130
Acetone	50.0	42.7	J	ug/L		85	70 - 130
Benzene	5.00	4.41		ug/L		88	70 - 130
Bromobenzene	5.00	4.32		ug/L		86	70 - 130
Bromochloromethane	5.00	4.44		ug/L		89	70 - 130
Bromodichloromethane	5.00	3.76		ug/L		75	70 - 130
Bromoform	5.00	3.57		ug/L		71	70 - 130
Bromomethane (Methyl Bromide)	5.00	4.51		ug/L		90	70 - 130
Carbon disulfide	5.00	4.96		ug/L		99	70 - 130
Carbon tetrachloride	5.00	3.99		ug/L		80	70 - 130
Chlorobenzene	5.00	4.44		ug/L		89	70 - 130
Chlorodibromomethane	5.00	3.79		ug/L		76	70 - 130
cis-1,3-Dichloropropene	5.00	3.88		ug/L		78	70 - 130
Dichloromethane	5.00	4.33		ug/L		87	70 - 130
Ethylbenzene	5.00	4.56		ug/L		91	70 - 130
Hexachlorobutadiene	5.00	4.66		ug/L		93	70 - 130
Isopropylbenzene	5.00	4.35		ug/L		87	70 - 130
m,p-Xylenes	10.0	9.58		ug/L		96	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	4.46		ug/L		89	70 - 130
Methyl-tert-butyl Ether (MTBE)	5.00	4.44		ug/L		89	70 - 130
Naphthalene	5.00	5.82		ug/L		116	70 - 130
n-Butylbenzene	5.00	4.56		ug/L		91	70 - 130
N-Propylbenzene	5.00	4.57		ug/L		91	70 - 130
o-Chlorotoluene	5.00	4.60		ug/L		92	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	4.46		ug/L		89	70 - 130
o-Xylene	5.00	4.62		ug/L		92	70 - 130
p-Chlorotoluene	5.00	4.68		ug/L		94	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	4.58		ug/L		92	70 - 130
p-Isopropyltoluene	5.00	4.59		ug/L		92	70 - 130
sec-Butylbenzene	5.00	4.60		ug/L		92	70 - 130
Styrene	5.00	4.94		ug/L		99	70 - 130
Tert-amyl methyl ether	5.00	4.54		ug/L		91	70 - 130
1,3-Dichloropropene, Total	10.0	7.61		ug/L		76	70 - 130
Tert-butyl ethyl ether	5.00	4.47		ug/L		89	70 - 130
tert-Butylbenzene	5.00	4.64		ug/L		93	70 - 130
Tetrachloroethene (PCE)	5.00	4.46		ug/L		89	70 - 130
Toluene	5.00	4.31		ug/L		86	70 - 130
trans-1,2-Dichloroethylene	5.00	4.13		ug/L		83	70 - 130
trans-1,3-Dichloropropene	5.00	3.73		ug/L		75	70 - 130
Trichloroethylene (TCE)	5.00	4.24		ug/L		85	70 - 130
Bromoethane	5.00	4.40		ug/L		88	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	4.41		ug/L		88	70 - 130
Trichlorotrifluoroethane	5.00	4.37		ug/L		87	70 - 130
Diisopropyl ether	5.00	4.35		ug/L		87	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-58681/5
Matrix: Water
Analysis Batch: 58681

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl Chloride (VC)	5.00	4.17		ug/L		83	70 - 130
Xylenes, Total	15.0	14.2		ug/L		95	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Toluene-d8 (Surr)	106		70 - 130

Lab Sample ID: LCSD 380-58681/6
Matrix: Water
Analysis Batch: 58681

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	4.31		ug/L		86	70 - 130	4	20
1,1,1-Trichloroethane	5.00	3.96		ug/L		79	70 - 130	5	20
1,1,2,2-Tetrachloroethane	5.00	5.14		ug/L		103	70 - 130	9	20
1,1,2-Trichloroethane	5.00	4.39		ug/L		88	70 - 130	2	20
1,1-Dichloroethane	5.00	4.55		ug/L		91	70 - 130	5	20
1,1-Dichlorethylene	5.00	4.40		ug/L		88	70 - 130	5	20
1,1-Dichloropropene	5.00	4.42		ug/L		88	70 - 130	6	20
1,2,3-Trichlorobenzene	5.00	5.04		ug/L		101	70 - 130	20	20
1,2,3-Trichloropropane	5.00	4.70		ug/L		94	70 - 130	10	20
1,2,4-Trichlorobenzene	5.00	6.31		ug/L		126	70 - 130	1	20
1,2,4-Trimethylbenzene	5.00	5.18		ug/L		104	70 - 130	10	20
1,2-Dichloroethane	5.00	4.57		ug/L		91	70 - 130	6	20
1,2-Dichloropropane	5.00	4.41		ug/L		88	70 - 130	5	20
1,3,5-Trimethylbenzene	5.00	5.27		ug/L		105	70 - 130	10	20
1,3-Dichloropropane	5.00	4.63		ug/L		93	70 - 130	1	20
2,2-Dichloropropane	5.00	4.11		ug/L		82	70 - 130	2	20
2-Butanone (MEK)	50.0	44.5		ug/L		89	70 - 130	2	20
4-Methyl-2-pentanone (MIBK)	50.0	49.0		ug/L		98	70 - 130	3	20
Acetone	50.0	51.8	J	ug/L		104	70 - 130	19	20
Benzene	5.00	4.47		ug/L		89	70 - 130	1	20
Bromobenzene	5.00	4.75		ug/L		95	70 - 130	9	20
Bromochloromethane	5.00	4.46		ug/L		89	70 - 130	1	20
Bromodichloromethane	5.00	4.06		ug/L		81	70 - 130	8	20
Bromoform	5.00	3.85		ug/L		77	70 - 130	8	20
Bromomethane (Methyl Bromide)	5.00	4.38		ug/L		88	70 - 130	3	20
Carbon disulfide	5.00	5.09		ug/L		102	70 - 130	3	20
Carbon tetrachloride	5.00	4.01		ug/L		80	70 - 130	0	20
Chlorobenzene	5.00	4.57		ug/L		91	70 - 130	3	20
Chlorodibromomethane	5.00	3.65		ug/L		73	70 - 130	4	20
cis-1,3-Dichloropropene	5.00	4.11		ug/L		82	70 - 130	6	20
Dichloromethane	5.00	4.39		ug/L		88	70 - 130	1	20
Ethylbenzene	5.00	4.66		ug/L		93	70 - 130	2	20
Hexachlorobutadiene	5.00	4.74		ug/L		95	70 - 130	2	20
Isopropylbenzene	5.00	4.93		ug/L		99	70 - 130	12	20
m,p-Xylenes	10.0	9.61		ug/L		96	70 - 130	0	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-58681/6
Matrix: Water
Analysis Batch: 58681

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
m-Dichlorobenzene (1,3-DCB)	5.00	4.90		ug/L		98	70 - 130	9	20
Methyl-tert-butyl Ether (MTBE)	5.00	4.49		ug/L		90	70 - 130	1	20
Naphthalene	5.00	5.95		ug/L		119	70 - 130	2	20
n-Butylbenzene	5.00	4.73		ug/L		95	70 - 130	4	20
N-Propylbenzene	5.00	4.53		ug/L		91	70 - 130	1	20
o-Chlorotoluene	5.00	4.97		ug/L		99	70 - 130	8	20
o-Dichlorobenzene (1,2-DCB)	5.00	4.72		ug/L		94	70 - 130	6	20
o-Xylene	5.00	4.57		ug/L		91	70 - 130	1	20
p-Chlorotoluene	5.00	4.53		ug/L		91	70 - 130	3	20
p-Dichlorobenzene (1,4-DCB)	5.00	4.01		ug/L		80	70 - 130	13	20
p-Isopropyltoluene	5.00	5.02		ug/L		100	70 - 130	9	20
sec-Butylbenzene	5.00	5.01		ug/L		100	70 - 130	8	20
Styrene	5.00	4.94		ug/L		99	70 - 130	0	20
Tert-amyl methyl ether	5.00	4.50		ug/L		90	70 - 130	1	20
1,3-Dichloropropene, Total	10.0	7.86		ug/L		79	70 - 130	3	20
Tert-butyl ethyl ether	5.00	4.58		ug/L		92	70 - 130	2	20
tert-Butylbenzene	5.00	5.14		ug/L		103	70 - 130	10	20
Tetrachloroethene (PCE)	5.00	4.51		ug/L		90	70 - 130	1	20
Toluene	5.00	4.54		ug/L		91	70 - 130	5	20
trans-1,2-Dichloroethylene	5.00	4.39		ug/L		88	70 - 130	6	20
trans-1,3-Dichloropropene	5.00	3.75		ug/L		75	70 - 130	1	20
Trichloroethylene (TCE)	5.00	4.47		ug/L		89	70 - 130	5	20
Bromoethane	5.00	4.94		ug/L		99	70 - 130	12	20
Trichlorofluoromethane (Freon 11)	5.00	4.31		ug/L		86	70 - 130	2	20
Trichlorotrifluoroethane	5.00	4.48		ug/L		90	70 - 130	2	20
Diisopropyl ether	5.00	4.54		ug/L		91	70 - 130	4	20
Vinyl Chloride (VC)	5.00	4.35		ug/L		87	70 - 130	4	20
Xylenes, Total	15.0	14.2		ug/L		95	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 130
4-Bromofluorobenzene (Surr)	103		70 - 130
Toluene-d8 (Surr)	103		70 - 130

Lab Sample ID: MRL 380-58681/3
Matrix: Water
Analysis Batch: 58681

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
m,p-Xylenes	0.500	0.757	^3+	ug/L		151	50 - 150
Vinyl Chloride (VC)	0.250	0.299	J	ug/L		119	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
1,2-Dichloroethane-d4 (Surr)	103		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Toluene-d8 (Surr)	102		70 - 130

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-58681/4
Matrix: Water
Analysis Batch: 58681

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	0.500	0.567		ug/L		113	50 - 150
1,1,1-Trichloroethane	0.500	0.550		ug/L		110	50 - 150
1,1,2,2-Tetrachloroethane	0.500	0.720		ug/L		144	50 - 150
1,1,2-Trichloroethane	0.500	0.673		ug/L		135	50 - 150
1,1-Dichloroethane	0.500	0.640		ug/L		128	50 - 150
1,1-Dichlorethylene	0.500	0.569		ug/L		114	50 - 150
1,1-Dichloropropene	0.500	0.606		ug/L		121	50 - 150
1,2,3-Trichlorobenzene	0.500	0.866	^3+	ug/L		173	50 - 150
1,2,3-Trichloropropane	0.500	0.624		ug/L		125	50 - 150
1,2,4-Trichlorobenzene	0.500	0.736		ug/L		147	50 - 150
1,2,4-Trimethylbenzene	0.500	0.665		ug/L		133	50 - 150
1,2-Dichloroethane	0.500	0.656		ug/L		131	50 - 150
1,2-Dichloropropane	0.500	0.602		ug/L		120	50 - 150
1,3,5-Trimethylbenzene	0.500	0.622		ug/L		124	50 - 150
1,3-Dichloropropane	0.500	0.604		ug/L		121	50 - 150
2,2-Dichloropropane	0.500	0.514		ug/L		103	50 - 150
2-Butanone (MEK)	5.00	5.83		ug/L		117	50 - 150
4-Methyl-2-pentanone (MIBK)	5.00	6.71		ug/L		134	50 - 150
Acetone	5.00	<4.0	^3-	ug/L		0	50 - 150
Benzene	0.500	0.633		ug/L		127	50 - 150
Bromobenzene	0.500	0.573		ug/L		115	50 - 150
Bromochloromethane	0.500	0.646		ug/L		129	50 - 150
Bromodichloromethane	0.500	0.554		ug/L		111	50 - 150
Bromoform	0.500	0.777	^3+	ug/L		155	50 - 150
Bromomethane (Methyl Bromide)	0.500	0.417	J	ug/L		83	50 - 150
Carbon disulfide	0.500	0.580		ug/L		116	50 - 150
Carbon tetrachloride	0.500	0.530		ug/L		106	50 - 150
Chlorobenzene	0.500	0.612		ug/L		122	50 - 150
Chlorodibromomethane	0.500	0.483	J	ug/L		97	50 - 150
cis-1,3-Dichloropropene	0.500	0.510		ug/L		102	50 - 150
Dichloromethane	0.500	0.555		ug/L		111	50 - 150
Ethylbenzene	0.500	0.638		ug/L		128	50 - 150
Hexachlorobutadiene	0.500	0.692		ug/L		138	50 - 150
Isopropylbenzene	0.500	0.621		ug/L		124	50 - 150
m,p-Xylenes	1.00	1.25		ug/L		125	50 - 150
m-Dichlorobenzene (1,3-DCB)	0.500	0.672		ug/L		134	50 - 150
Methyl-tert-butyl Ether (MTBE)	0.500	0.630		ug/L		126	50 - 150
Naphthalene	0.500	0.756	^3+	ug/L		151	50 - 150
n-Butylbenzene	0.500	0.660		ug/L		132	50 - 150
N-Propylbenzene	0.500	0.663		ug/L		133	50 - 150
o-Chlorotoluene	0.500	0.677		ug/L		135	50 - 150
o-Dichlorobenzene (1,2-DCB)	0.500	0.651		ug/L		130	50 - 150
o-Xylene	0.500	0.595		ug/L		119	50 - 150
p-Chlorotoluene	0.500	0.688		ug/L		138	50 - 150
p-Dichlorobenzene (1,4-DCB)	0.500	0.632		ug/L		126	50 - 150
p-Isopropyltoluene	0.500	0.627		ug/L		125	50 - 150
sec-Butylbenzene	0.500	0.625		ug/L		125	50 - 150
Styrene	0.500	0.631		ug/L		126	50 - 150

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-58681/4
Matrix: Water
Analysis Batch: 58681

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Tert-amyl methyl ether	0.500	0.640	J	ug/L		128	50 - 150
1,3-Dichloropropene, Total	1.00	0.976		ug/L		98	50 - 150
Tert-butyl ethyl ether	0.500	0.621	J	ug/L		124	50 - 150
tert-Butylbenzene	0.500	0.688		ug/L		138	50 - 150
Tetrachloroethene (PCE)	0.500	0.557		ug/L		111	50 - 150
Toluene	0.500	0.592		ug/L		118	50 - 150
trans-1,2-Dichloroethylene	0.500	0.561		ug/L		112	50 - 150
trans-1,3-Dichloropropene	0.500	0.466	J	ug/L		93	50 - 150
Trichloroethylene (TCE)	0.500	0.638		ug/L		128	50 - 150
Bromoethane	0.500	0.682		ug/L		136	50 - 150
Trichlorofluoromethane (Freon 11)	0.500	0.504		ug/L		101	50 - 150
Trichlorotrifluoroethane	0.500	0.574		ug/L		115	50 - 150
Diisopropyl ether	0.500	0.598	J	ug/L		120	50 - 150
Vinyl Chloride (VC)	0.500	0.555		ug/L		111	50 - 150
Xylenes, Total	1.50	1.84		ug/L		123	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: MB 380-58698/5
Matrix: Water
Analysis Batch: 58698

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			10/11/23 01:29	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			10/11/23 01:29	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			10/11/23 01:29	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			10/11/23 01:29	1
1,1-Dichloroethane	<0.50		0.50	ug/L			10/11/23 01:29	1
1,1-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 01:29	1
1,1-Dichloropropene	<0.50		0.50	ug/L			10/11/23 01:29	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			10/11/23 01:29	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
1,2-Dichloroethane	<0.50		0.50	ug/L			10/11/23 01:29	1
1,2-Dichloropropane	<0.50		0.50	ug/L			10/11/23 01:29	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
1,3-Dichloropropane	<0.50		0.50	ug/L			10/11/23 01:29	1
2,2-Dichloropropane	<0.50		0.50	ug/L			10/11/23 01:29	1
2-Butanone (MEK)	<5.0		5.0	ug/L			10/11/23 01:29	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			10/11/23 01:29	1
Acetone	<500		500	ug/L			10/11/23 01:29	1
Benzene	<0.50		0.50	ug/L			10/11/23 01:29	1
Bromobenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
Bromochloromethane	<0.50		0.50	ug/L			10/11/23 01:29	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-58698/5
Matrix: Water
Analysis Batch: 58698

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

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Bromodichloromethane	<0.50		0.50	ug/L			10/11/23 01:29	1
Bromoform	<0.50		0.50	ug/L			10/11/23 01:29	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			10/11/23 01:29	1
Carbon disulfide	<0.50		0.50	ug/L			10/11/23 01:29	1
Carbon tetrachloride	<0.50		0.50	ug/L			10/11/23 01:29	1
Chlorobenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
Chlorodibromomethane	<0.50		0.50	ug/L			10/11/23 01:29	1
Chloroethane	<0.50		0.50	ug/L			10/11/23 01:29	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			10/11/23 01:29	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 01:29	1
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			10/11/23 01:29	1
Dibromomethane	<0.50		0.50	ug/L			10/11/23 01:29	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			10/11/23 01:29	1
Dichloromethane	<0.50		0.50	ug/L			10/11/23 01:29	1
Ethylbenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
Hexachlorobutadiene	<0.50		0.50	ug/L			10/11/23 01:29	1
Isopropylbenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
m,p-Xylenes	<0.50		0.50	ug/L			10/11/23 01:29	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			10/11/23 01:29	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			10/11/23 01:29	1
Naphthalene	<0.50		0.50	ug/L			10/11/23 01:29	1
n-Butylbenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
N-Propylbenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
o-Chlorotoluene	<0.50		0.50	ug/L			10/11/23 01:29	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			10/11/23 01:29	1
o-Xylene	<0.50		0.50	ug/L			10/11/23 01:29	1
p-Chlorotoluene	<0.50		0.50	ug/L			10/11/23 01:29	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			10/11/23 01:29	1
p-Isopropyltoluene	<0.50		0.50	ug/L			10/11/23 01:29	1
sec-Butylbenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
Styrene	<0.50		0.50	ug/L			10/11/23 01:29	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			10/11/23 01:29	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			10/11/23 01:29	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			10/11/23 01:29	1
tert-Butylbenzene	<0.50		0.50	ug/L			10/11/23 01:29	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			10/11/23 01:29	1
Toluene	<0.50		0.50	ug/L			10/11/23 01:29	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 01:29	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			10/11/23 01:29	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			10/11/23 01:29	1
Bromoethane	<0.50		0.50	ug/L			10/11/23 01:29	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			10/11/23 01:29	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			10/11/23 01:29	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			10/11/23 01:29	1
Diisopropyl ether	<3.0		3.0	ug/L			10/11/23 01:29	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			10/11/23 01:29	1
Xylenes, Total	<0.50		0.50	ug/L			10/11/23 01:29	1

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-58698/5
Matrix: Water
Analysis Batch: 58698

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

<i>Tentatively Identified Compound</i>	<i>Est. Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RT</i>	<i>CAS No.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Tentatively Identified Compound</i>	<i>None</i>		<i>ug/L</i>			<i>N/A</i>		<i>10/11/23 01:29</i>	<i>1</i>

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>1,2-Dichloroethane-d4 (Surr)</i>	<i>102</i>		<i>70 - 130</i>		<i>10/11/23 01:29</i>	<i>1</i>
<i>4-Bromofluorobenzene (Surr)</i>	<i>102</i>		<i>70 - 130</i>		<i>10/11/23 01:29</i>	<i>1</i>
<i>Toluene-d8 (Surr)</i>	<i>102</i>		<i>70 - 130</i>		<i>10/11/23 01:29</i>	<i>1</i>

Lab Sample ID: LCS 380-58698/3
Matrix: Water
Analysis Batch: 58698

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

<i>Analyte</i>	<i>Spike Added</i>	<i>LCS Result</i>	<i>LCS Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
1,1,1,2-Tetrachloroethane	5.00	4.07		ug/L		81	70 - 130
1,1,1-Trichloroethane	5.00	4.43		ug/L		89	70 - 130
1,1,2,2-Tetrachloroethane	5.00	4.90		ug/L		98	70 - 130
1,1,2-Trichloroethane	5.00	4.35		ug/L		87	70 - 130
1,1-Dichloroethane	5.00	4.39		ug/L		88	70 - 130
1,1-Dichlorethylene	5.00	4.32		ug/L		86	70 - 130
1,1-Dichloropropene	5.00	4.07		ug/L		81	70 - 130
1,2,3-Trichlorobenzene	5.00	4.16		ug/L		83	70 - 130
1,2,3-Trichloropropane	5.00	4.42		ug/L		88	70 - 130
1,2,4-Trichlorobenzene	5.00	5.65		ug/L		113	70 - 130
1,2,4-Trimethylbenzene	5.00	4.76		ug/L		95	70 - 130
1,2-Dichloroethane	5.00	4.24		ug/L		85	70 - 130
1,2-Dichloropropane	5.00	4.18		ug/L		84	70 - 130
1,3,5-Trimethylbenzene	5.00	4.68		ug/L		94	70 - 130
1,3-Dichloropropane	5.00	4.61		ug/L		92	70 - 130
2,2-Dichloropropane	5.00	3.42	*-	ug/L		68	70 - 130
2-Butanone (MEK)	50.0	45.6		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	48.4		ug/L		97	70 - 130
Acetone	50.0	48.1	J	ug/L		96	70 - 130
Benzene	5.00	4.43		ug/L		89	70 - 130
Bromobenzene	5.00	4.51		ug/L		90	70 - 130
Bromochloromethane	5.00	4.30		ug/L		86	70 - 130
Bromodichloromethane	5.00	3.58		ug/L		72	70 - 130
Bromoform	5.00	3.64		ug/L		73	70 - 130
Bromomethane (Methyl Bromide)	5.00	4.31		ug/L		86	70 - 130
Carbon disulfide	5.00	3.47	*-	ug/L		69	70 - 130
Carbon tetrachloride	5.00	3.42	*-	ug/L		68	70 - 130
Chlorobenzene	5.00	4.43		ug/L		89	70 - 130
Chlorodibromomethane	5.00	3.59		ug/L		72	70 - 130
cis-1,3-Dichloropropene	5.00	3.69		ug/L		74	70 - 130
Dichloromethane	5.00	4.29		ug/L		86	70 - 130
Ethylbenzene	5.00	4.53		ug/L		91	70 - 130
Hexachlorobutadiene	5.00	4.27		ug/L		85	70 - 130
Isopropylbenzene	5.00	4.53		ug/L		91	70 - 130
m,p-Xylenes	10.0	9.59		ug/L		96	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	4.60		ug/L		92	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-58698/3
Matrix: Water
Analysis Batch: 58698

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methyl-tert-butyl Ether (MTBE)	5.00	4.40		ug/L		88	70 - 130
Naphthalene	5.00	4.69		ug/L		94	70 - 130
n-Butylbenzene	5.00	4.59		ug/L		92	70 - 130
N-Propylbenzene	5.00	4.47		ug/L		89	70 - 130
o-Chlorotoluene	5.00	4.76		ug/L		95	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	4.65		ug/L		93	70 - 130
o-Xylene	5.00	4.49		ug/L		90	70 - 130
p-Chlorotoluene	5.00	4.57		ug/L		91	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	4.40		ug/L		88	70 - 130
p-Isopropyltoluene	5.00	4.76		ug/L		95	70 - 130
sec-Butylbenzene	5.00	4.84		ug/L		97	70 - 130
Styrene	5.00	4.62		ug/L		92	70 - 130
Tert-amyl methyl ether	5.00	4.37		ug/L		87	70 - 130
1,3-Dichloropropene, Total	10.0	6.96		ug/L		70	70 - 130
Tert-butyl ethyl ether	5.00	4.51		ug/L		90	70 - 130
tert-Butylbenzene	5.00	4.85		ug/L		97	70 - 130
Tetrachloroethene (PCE)	5.00	4.37		ug/L		87	70 - 130
Toluene	5.00	4.32		ug/L		86	70 - 130
trans-1,2-Dichloroethylene	5.00	4.34		ug/L		87	70 - 130
trans-1,3-Dichloropropene	5.00	3.27	*-	ug/L		65	70 - 130
Trichloroethylene (TCE)	5.00	4.30		ug/L		86	70 - 130
Bromoethane	5.00	4.51		ug/L		90	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	4.25		ug/L		85	70 - 130
Trichlorotrifluoroethane	5.00	4.27		ug/L		85	70 - 130
Diisopropyl ether	5.00	4.36		ug/L		87	70 - 130
Vinyl Chloride (VC)	5.00	4.29		ug/L		86	70 - 130
Xylenes, Total	15.0	14.1		ug/L		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	100		70 - 130
Toluene-d8 (Surr)	103		70 - 130

Lab Sample ID: LCSD 380-58698/4
Matrix: Water
Analysis Batch: 58698

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	4.15		ug/L		83	70 - 130	2	20
1,1,1-Trichloroethane	5.00	4.33		ug/L		87	70 - 130	2	20
1,1,2,2-Tetrachloroethane	5.00	4.77		ug/L		95	70 - 130	3	20
1,1,2-Trichloroethane	5.00	4.58		ug/L		92	70 - 130	5	20
1,1-Dichloroethane	5.00	4.62		ug/L		92	70 - 130	5	20
1,1-Dichloroethylene	5.00	4.28		ug/L		86	70 - 130	1	20
1,1-Dichloropropene	5.00	4.35		ug/L		87	70 - 130	7	20
1,2,3-Trichlorobenzene	5.00	3.92		ug/L		78	70 - 130	6	20
1,2,3-Trichloropropane	5.00	4.70		ug/L		94	70 - 130	6	20
1,2,4-Trichlorobenzene	5.00	5.22		ug/L		104	70 - 130	8	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-58698/4
Matrix: Water
Analysis Batch: 58698

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4-Trimethylbenzene	5.00	4.31		ug/L		86	70 - 130	10	20
1,2-Dichloroethane	5.00	4.68		ug/L		94	70 - 130	10	20
1,2-Dichloropropane	5.00	4.23		ug/L		85	70 - 130	1	20
1,3,5-Trimethylbenzene	5.00	4.52		ug/L		90	70 - 130	3	20
1,3-Dichloropropane	5.00	4.58		ug/L		92	70 - 130	1	20
2,2-Dichloropropane	5.00	3.42	*	ug/L		68	70 - 130	0	20
2-Butanone (MEK)	50.0	48.4		ug/L		97	70 - 130	6	20
4-Methyl-2-pentanone (MIBK)	50.0	49.5		ug/L		99	70 - 130	2	20
Acetone	50.0	48.9	J	ug/L		98	70 - 130	2	20
Benzene	5.00	4.64		ug/L		93	70 - 130	5	20
Bromobenzene	5.00	4.22		ug/L		84	70 - 130	7	20
Bromochloromethane	5.00	4.45		ug/L		89	70 - 130	4	20
Bromodichloromethane	5.00	3.69		ug/L		74	70 - 130	3	20
Bromoform	5.00	3.56		ug/L		71	70 - 130	2	20
Bromomethane (Methyl Bromide)	5.00	4.52		ug/L		90	70 - 130	5	20
Carbon disulfide	5.00	3.53		ug/L		71	70 - 130	2	20
Carbon tetrachloride	5.00	3.78		ug/L		76	70 - 130	10	20
Chlorobenzene	5.00	4.71		ug/L		94	70 - 130	6	20
Chlorodibromomethane	5.00	3.85		ug/L		77	70 - 130	7	20
cis-1,3-Dichloropropene	5.00	3.80		ug/L		76	70 - 130	3	20
Dichloromethane	5.00	4.42		ug/L		88	70 - 130	3	20
Ethylbenzene	5.00	4.64		ug/L		93	70 - 130	2	20
Hexachlorobutadiene	5.00	4.60		ug/L		92	70 - 130	7	20
Isopropylbenzene	5.00	4.36		ug/L		87	70 - 130	4	20
m,p-Xylenes	10.0	9.48		ug/L		95	70 - 130	1	20
m-Dichlorobenzene (1,3-DCB)	5.00	4.44		ug/L		89	70 - 130	4	20
Methyl-tert-butyl Ether (MTBE)	5.00	4.55		ug/L		91	70 - 130	3	20
Naphthalene	5.00	5.06		ug/L		101	70 - 130	8	20
n-Butylbenzene	5.00	4.47		ug/L		89	70 - 130	3	20
N-Propylbenzene	5.00	4.58		ug/L		92	70 - 130	2	20
o-Chlorotoluene	5.00	4.39		ug/L		88	70 - 130	8	20
o-Dichlorobenzene (1,2-DCB)	5.00	4.49		ug/L		90	70 - 130	4	20
o-Xylene	5.00	4.62		ug/L		92	70 - 130	3	20
p-Chlorotoluene	5.00	4.59		ug/L		92	70 - 130	0	20
p-Dichlorobenzene (1,4-DCB)	5.00	4.47		ug/L		89	70 - 130	2	20
p-Isopropyltoluene	5.00	4.40		ug/L		88	70 - 130	8	20
sec-Butylbenzene	5.00	4.50		ug/L		90	70 - 130	7	20
Styrene	5.00	4.75		ug/L		95	70 - 130	3	20
Tert-amyl methyl ether	5.00	4.54		ug/L		91	70 - 130	4	20
1,3-Dichloropropene, Total	10.0	7.15		ug/L		72	70 - 130	3	20
Tert-butyl ethyl ether	5.00	4.59		ug/L		92	70 - 130	2	20
tert-Butylbenzene	5.00	4.64		ug/L		93	70 - 130	5	20
Tetrachloroethene (PCE)	5.00	4.47		ug/L		89	70 - 130	2	20
Toluene	5.00	4.42		ug/L		88	70 - 130	2	20
trans-1,2-Dichloroethylene	5.00	4.54		ug/L		91	70 - 130	4	20
trans-1,3-Dichloropropene	5.00	3.35	*	ug/L		67	70 - 130	3	20
Trichloroethylene (TCE)	5.00	4.41		ug/L		88	70 - 130	3	20
Bromoethane	5.00	4.30		ug/L		86	70 - 130	5	20

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-58698/4
Matrix: Water
Analysis Batch: 58698

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
Trichlorofluoromethane (Freon 11)	5.00	4.35		ug/L		87	70 - 130	2	20
Trichlorotrifluoroethane	5.00	4.32		ug/L		86	70 - 130	1	20
Diisopropyl ether	5.00	4.62		ug/L		92	70 - 130	6	20
Vinyl Chloride (VC)	5.00	4.37		ug/L		87	70 - 130	2	20
Xylenes, Total	15.0	14.1		ug/L		94	70 - 130	0	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		70 - 130
4-Bromofluorobenzene (Surr)	92		70 - 130
Toluene-d8 (Surr)	102		70 - 130

Lab Sample ID: MB 380-58904/8
Matrix: Water
Analysis Batch: 58904

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.50		0.50	ug/L			10/11/23 16:03	1
1,1,1-Trichloroethane	<0.50		0.50	ug/L			10/11/23 16:03	1
1,1,2,2-Tetrachloroethane	<0.50		0.50	ug/L			10/11/23 16:03	1
1,1,2-Trichloroethane	<0.50		0.50	ug/L			10/11/23 16:03	1
1,1-Dichloroethane	<0.50		0.50	ug/L			10/11/23 16:03	1
1,1-Dichlorethylene	<0.50		0.50	ug/L			10/11/23 16:03	1
1,1-Dichloropropene	<0.50		0.50	ug/L			10/11/23 16:03	1
1,2,3-Trichlorobenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
1,2,3-Trichloropropane	<0.50		0.50	ug/L			10/11/23 16:03	1
1,2,4-Trichlorobenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
1,2,4-Trimethylbenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
1,2-Dichloroethane	<0.50		0.50	ug/L			10/11/23 16:03	1
1,2-Dichloropropane	<0.50		0.50	ug/L			10/11/23 16:03	1
1,3,5-Trimethylbenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
1,3-Dichloropropane	<0.50		0.50	ug/L			10/11/23 16:03	1
2,2-Dichloropropane	<0.50		0.50	ug/L			10/11/23 16:03	1
2-Butanone (MEK)	<5.0		5.0	ug/L			10/11/23 16:03	1
4-Methyl-2-pentanone (MIBK)	<5.0		5.0	ug/L			10/11/23 16:03	1
Acetone	<500		500	ug/L			10/11/23 16:03	1
Benzene	<0.50		0.50	ug/L			10/11/23 16:03	1
Bromobenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
Bromochloromethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Bromodichloromethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Bromoform	<0.50		0.50	ug/L			10/11/23 16:03	1
Bromomethane (Methyl Bromide)	<0.50		0.50	ug/L			10/11/23 16:03	1
Carbon disulfide	<0.50		0.50	ug/L			10/11/23 16:03	1
Carbon tetrachloride	<0.50		0.50	ug/L			10/11/23 16:03	1
Chlorobenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
Chlorodibromomethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Chloroethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Chloroform (Trichloromethane)	<0.50		0.50	ug/L			10/11/23 16:03	1
cis-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 16:03	1

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QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-58904/8
Matrix: Water
Analysis Batch: 58904

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	<0.50		0.50	ug/L			10/11/23 16:03	1
Dibromomethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Dichlorodifluoromethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Dichloromethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Ethylbenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
Hexachlorobutadiene	<0.50		0.50	ug/L			10/11/23 16:03	1
Isopropylbenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
m,p-Xylenes	<0.50		0.50	ug/L			10/11/23 16:03	1
m-Dichlorobenzene (1,3-DCB)	<0.50		0.50	ug/L			10/11/23 16:03	1
Methyl-tert-butyl Ether (MTBE)	<0.50		0.50	ug/L			10/11/23 16:03	1
Naphthalene	<0.50		0.50	ug/L			10/11/23 16:03	1
n-Butylbenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
N-Propylbenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
o-Chlorotoluene	<0.50		0.50	ug/L			10/11/23 16:03	1
o-Dichlorobenzene (1,2-DCB)	<0.50		0.50	ug/L			10/11/23 16:03	1
o-Xylene	<0.50		0.50	ug/L			10/11/23 16:03	1
p-Chlorotoluene	<0.50		0.50	ug/L			10/11/23 16:03	1
p-Dichlorobenzene (1,4-DCB)	<0.50		0.50	ug/L			10/11/23 16:03	1
p-Isopropyltoluene	<0.50		0.50	ug/L			10/11/23 16:03	1
sec-Butylbenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
Styrene	<0.50		0.50	ug/L			10/11/23 16:03	1
Tert-amyl methyl ether	<3.0		3.0	ug/L			10/11/23 16:03	1
1,3-Dichloropropene, Total	<0.50		0.50	ug/L			10/11/23 16:03	1
Tert-butyl ethyl ether	<3.0		3.0	ug/L			10/11/23 16:03	1
tert-Butylbenzene	<0.50		0.50	ug/L			10/11/23 16:03	1
Tetrachloroethene (PCE)	<0.50		0.50	ug/L			10/11/23 16:03	1
Toluene	<0.50		0.50	ug/L			10/11/23 16:03	1
trans-1,2-Dichloroethylene	<0.50		0.50	ug/L			10/11/23 16:03	1
trans-1,3-Dichloropropene	<0.50		0.50	ug/L			10/11/23 16:03	1
Trichloroethylene (TCE)	<0.50		0.50	ug/L			10/11/23 16:03	1
Bromoethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Trichlorofluoromethane (Freon 11)	<0.50		0.50	ug/L			10/11/23 16:03	1
Chloromethane (methyl chloride)	<0.50		0.50	ug/L			10/11/23 16:03	1
Trichlorotrifluoroethane	<0.50		0.50	ug/L			10/11/23 16:03	1
Diisopropyl ether	<3.0		3.0	ug/L			10/11/23 16:03	1
Vinyl Chloride (VC)	<0.30		0.30	ug/L			10/11/23 16:03	1
Xylenes, Total	<0.50		0.50	ug/L			10/11/23 16:03	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Tentatively Identified Compound</i>	None		ug/L			N/A		10/11/23 16:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 130		10/11/23 16:03	1
4-Bromofluorobenzene (Surr)	105		70 - 130		10/11/23 16:03	1
Toluene-d8 (Surr)	99		70 - 130		10/11/23 16:03	1

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-58904/4
Matrix: Water
Analysis Batch: 58904

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	5.00	4.56		ug/L		91	70 - 130
1,1,1-Trichloroethane	5.00	4.06		ug/L		81	70 - 130
1,1,2,2-Tetrachloroethane	5.00	5.13		ug/L		103	70 - 130
1,1,2-Trichloroethane	5.00	4.65		ug/L		93	70 - 130
1,1-Dichloroethane	5.00	4.49		ug/L		90	70 - 130
1,1-Dichlorethylene	5.00	4.63		ug/L		93	70 - 130
1,1-Dichloropropene	5.00	4.68		ug/L		94	70 - 130
1,2,3-Trichlorobenzene	5.00	4.77		ug/L		95	70 - 130
1,2,3-Trichloropropane	5.00	5.03		ug/L		101	70 - 130
1,2,4-Trichlorobenzene	5.00	4.80		ug/L		96	70 - 130
1,2,4-Trimethylbenzene	5.00	4.84		ug/L		97	70 - 130
1,2-Dichloroethane	5.00	4.72		ug/L		94	70 - 130
1,2-Dichloropropane	5.00	4.58		ug/L		92	70 - 130
1,3,5-Trimethylbenzene	5.00	4.92		ug/L		98	70 - 130
1,3-Dichloropropane	5.00	4.76		ug/L		95	70 - 130
2,2-Dichloropropane	5.00	3.86		ug/L		77	70 - 130
2-Butanone (MEK)	50.0	45.4		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	50.0	48.2		ug/L		96	70 - 130
Acetone	50.0	51.2	J	ug/L		102	70 - 130
Benzene	5.00	4.67		ug/L		93	70 - 130
Bromobenzene	5.00	4.97		ug/L		99	70 - 130
Bromochloromethane	5.00	4.76		ug/L		95	70 - 130
Bromodichloromethane	5.00	4.51		ug/L		90	70 - 130
Bromoform	5.00	5.03		ug/L		101	70 - 130
Bromomethane (Methyl Bromide)	5.00	6.00		ug/L		120	70 - 130
Carbon disulfide	5.00	8.35	*+	ug/L		167	70 - 130
Carbon tetrachloride	5.00	4.09		ug/L		82	70 - 130
Chlorobenzene	5.00	4.78		ug/L		96	70 - 130
Chlorodibromomethane	5.00	4.50		ug/L		90	70 - 130
cis-1,3-Dichloropropene	5.00	4.26		ug/L		85	70 - 130
Dichloromethane	5.00	5.14		ug/L		103	70 - 130
Ethylbenzene	5.00	4.61		ug/L		92	70 - 130
Hexachlorobutadiene	5.00	4.59		ug/L		92	70 - 130
Isopropylbenzene	5.00	4.84		ug/L		97	70 - 130
m,p-Xylenes	10.0	9.33		ug/L		93	70 - 130
m-Dichlorobenzene (1,3-DCB)	5.00	4.99		ug/L		100	70 - 130
Methyl-tert-butyl Ether (MTBE)	5.00	4.82		ug/L		96	70 - 130
Naphthalene	5.00	4.66		ug/L		93	70 - 130
n-Butylbenzene	5.00	4.33		ug/L		87	70 - 130
N-Propylbenzene	5.00	4.80		ug/L		96	70 - 130
o-Chlorotoluene	5.00	5.02		ug/L		100	70 - 130
o-Dichlorobenzene (1,2-DCB)	5.00	4.80		ug/L		96	70 - 130
o-Xylene	5.00	4.75		ug/L		95	70 - 130
p-Chlorotoluene	5.00	5.12		ug/L		102	70 - 130
p-Dichlorobenzene (1,4-DCB)	5.00	4.87		ug/L		97	70 - 130
p-Isopropyltoluene	5.00	4.80		ug/L		96	70 - 130
sec-Butylbenzene	5.00	4.81		ug/L		96	70 - 130
Styrene	5.00	4.70		ug/L		94	70 - 130

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-58904/4
Matrix: Water
Analysis Batch: 58904

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tert-amyl methyl ether	5.00	4.53		ug/L		91	70 - 130
1,3-Dichloropropene, Total	10.0	8.41		ug/L		84	70 - 130
Tert-butyl ethyl ether	5.00	4.76		ug/L		95	70 - 130
tert-Butylbenzene	5.00	4.80		ug/L		96	70 - 130
Tetrachloroethene (PCE)	5.00	4.54		ug/L		91	70 - 130
Toluene	5.00	4.57		ug/L		91	70 - 130
trans-1,2-Dichloroethylene	5.00	4.48		ug/L		90	70 - 130
trans-1,3-Dichloropropene	5.00	4.15		ug/L		83	70 - 130
Trichloroethylene (TCE)	5.00	4.74		ug/L		95	70 - 130
Bromoethane	5.00	6.91	*+	ug/L		138	70 - 130
Trichlorofluoromethane (Freon 11)	5.00	4.51		ug/L		90	70 - 130
Trichlorotrifluoroethane	5.00	5.95		ug/L		119	70 - 130
Diisopropyl ether	5.00	4.77		ug/L		95	70 - 130
Vinyl Chloride (VC)	5.00	5.21		ug/L		104	70 - 130
Xylenes, Total	15.0	14.1		ug/L		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 380-58904/5
Matrix: Water
Analysis Batch: 58904

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	5.00	4.36		ug/L		87	70 - 130	5	20
1,1,1-Trichloroethane	5.00	3.89		ug/L		78	70 - 130	4	20
1,1,1,2,2-Tetrachloroethane	5.00	4.96		ug/L		99	70 - 130	3	20
1,1,2-Trichloroethane	5.00	4.46		ug/L		89	70 - 130	4	20
1,1-Dichloroethane	5.00	4.27		ug/L		85	70 - 130	5	20
1,1-Dichlorethylene	5.00	4.50		ug/L		90	70 - 130	3	20
1,1-Dichloropropene	5.00	4.41		ug/L		88	70 - 130	6	20
1,2,3-Trichlorobenzene	5.00	4.81		ug/L		96	70 - 130	1	20
1,2,3-Trichloropropane	5.00	4.94		ug/L		99	70 - 130	2	20
1,2,4-Trichlorobenzene	5.00	4.71		ug/L		94	70 - 130	2	20
1,2,4-Trimethylbenzene	5.00	4.54		ug/L		91	70 - 130	6	20
1,2-Dichloroethane	5.00	4.62		ug/L		92	70 - 130	2	20
1,2-Dichloropropane	5.00	4.39		ug/L		88	70 - 130	4	20
1,3,5-Trimethylbenzene	5.00	4.59		ug/L		92	70 - 130	7	20
1,3-Dichloropropane	5.00	4.59		ug/L		92	70 - 130	4	20
2,2-Dichloropropane	5.00	3.67		ug/L		73	70 - 130	5	20
2-Butanone (MEK)	50.0	46.8		ug/L		94	70 - 130	3	20
4-Methyl-2-pentanone (MIBK)	50.0	47.8		ug/L		96	70 - 130	1	20
Acetone	50.0	49.2	J	ug/L		98	70 - 130	4	20
Benzene	5.00	4.42		ug/L		88	70 - 130	6	20
Bromobenzene	5.00	4.63		ug/L		93	70 - 130	7	20
Bromochloromethane	5.00	4.61		ug/L		92	70 - 130	3	20

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QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-58904/5
Matrix: Water
Analysis Batch: 58904

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
Bromodichloromethane	5.00	4.26		ug/L		85	70 - 130	6	20
Bromoform	5.00	4.66		ug/L		93	70 - 130	8	20
Bromomethane (Methyl Bromide)	5.00	5.34		ug/L		107	70 - 130	12	20
Carbon disulfide	5.00	7.74	*+	ug/L		155	70 - 130	7	20
Carbon tetrachloride	5.00	3.82		ug/L		76	70 - 130	7	20
Chlorobenzene	5.00	4.51		ug/L		90	70 - 130	6	20
Chlorodibromomethane	5.00	4.25		ug/L		85	70 - 130	6	20
cis-1,3-Dichloropropene	5.00	4.06		ug/L		81	70 - 130	5	20
Dichloromethane	5.00	4.88		ug/L		98	70 - 130	5	20
Ethylbenzene	5.00	4.38		ug/L		88	70 - 130	5	20
Hexachlorobutadiene	5.00	4.52		ug/L		90	70 - 130	1	20
Isopropylbenzene	5.00	4.53		ug/L		91	70 - 130	7	20
m,p-Xylenes	10.0	8.84		ug/L		88	70 - 130	5	20
m-Dichlorobenzene (1,3-DCB)	5.00	4.65		ug/L		93	70 - 130	7	20
Methyl-tert-butyl Ether (MTBE)	5.00	4.65		ug/L		93	70 - 130	4	20
Naphthalene	5.00	4.82		ug/L		96	70 - 130	4	20
n-Butylbenzene	5.00	4.19		ug/L		84	70 - 130	3	20
N-Propylbenzene	5.00	4.43		ug/L		89	70 - 130	8	20
o-Chlorotoluene	5.00	4.70		ug/L		94	70 - 130	7	20
o-Dichlorobenzene (1,2-DCB)	5.00	4.78		ug/L		96	70 - 130	0	20
o-Xylene	5.00	4.49		ug/L		90	70 - 130	6	20
p-Chlorotoluene	5.00	4.72		ug/L		94	70 - 130	8	20
p-Dichlorobenzene (1,4-DCB)	5.00	4.63		ug/L		93	70 - 130	5	20
p-Isopropyltoluene	5.00	4.42		ug/L		88	70 - 130	8	20
sec-Butylbenzene	5.00	4.48		ug/L		90	70 - 130	7	20
Styrene	5.00	4.48		ug/L		90	70 - 130	5	20
Tert-amyl methyl ether	5.00	4.36		ug/L		87	70 - 130	4	20
1,3-Dichloropropene, Total	10.0	7.92		ug/L		79	70 - 130	6	20
Tert-butyl ethyl ether	5.00	4.59		ug/L		92	70 - 130	3	20
tert-Butylbenzene	5.00	4.48		ug/L		90	70 - 130	7	20
Tetrachloroethene (PCE)	5.00	4.29		ug/L		86	70 - 130	6	20
Toluene	5.00	4.30		ug/L		86	70 - 130	6	20
trans-1,2-Dichloroethylene	5.00	4.30		ug/L		86	70 - 130	4	20
trans-1,3-Dichloropropene	5.00	3.86		ug/L		77	70 - 130	7	20
Trichloroethylene (TCE)	5.00	4.44		ug/L		89	70 - 130	6	20
Bromoethane	5.00	6.64	*+	ug/L		133	70 - 130	4	20
Trichlorofluoromethane (Freon 11)	5.00	4.26		ug/L		85	70 - 130	6	20
Trichlorotrifluoroethane	5.00	5.70		ug/L		114	70 - 130	4	20
Diisopropyl ether	5.00	4.48		ug/L		90	70 - 130	6	20
Vinyl Chloride (VC)	5.00	4.86		ug/L		97	70 - 130	7	20
Xylenes, Total	15.0	13.3		ug/L		89	70 - 130	5	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	101		70 - 130
Toluene-d8 (Surr)	101		70 - 130

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-58904/6
Matrix: Water
Analysis Batch: 58904

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
m,p-Xylenes	0.500	0.523		ug/L		105	50 - 150
Vinyl Chloride (VC)	0.250	0.264	J	ug/L		106	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	103		70 - 130
Toluene-d8 (Surr)	98		70 - 130

Lab Sample ID: MRL 380-58904/7
Matrix: Water
Analysis Batch: 58904

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	0.500	0.468	J	ug/L		94	50 - 150
1,1,1-Trichloroethane	0.500	0.455	J	ug/L		91	50 - 150
1,1,2,2-Tetrachloroethane	0.500	0.633		ug/L		127	50 - 150
1,1,2-Trichloroethane	0.500	0.539		ug/L		108	50 - 150
1,1-Dichloroethane	0.500	0.506		ug/L		101	50 - 150
1,1-Dichlorethylene	0.500	0.514		ug/L		103	50 - 150
1,1-Dichloropropene	0.500	0.486	J	ug/L		97	50 - 150
1,2,3-Trichlorobenzene	0.500	0.636		ug/L		127	50 - 150
1,2,3-Trichloropropane	0.500	0.632		ug/L		126	50 - 150
1,2,4-Trichlorobenzene	0.500	0.595		ug/L		119	50 - 150
1,2,4-Trimethylbenzene	0.500	0.533		ug/L		107	50 - 150
1,2-Dichloroethane	0.500	0.513		ug/L		103	50 - 150
1,2-Dichloropropane	0.500	0.474	J	ug/L		95	50 - 150
1,3,5-Trimethylbenzene	0.500	0.514		ug/L		103	50 - 150
1,3-Dichloropropane	0.500	0.522		ug/L		104	50 - 150
2,2-Dichloropropane	0.500	0.381	J	ug/L		76	50 - 150
2-Butanone (MEK)	5.00	5.24		ug/L		105	50 - 150
4-Methyl-2-pentanone (MIBK)	5.00	5.45		ug/L		109	50 - 150
Acetone	5.00	5.64	J	ug/L		113	50 - 150
Benzene	0.500	0.512		ug/L		102	50 - 150
Bromobenzene	0.500	0.575		ug/L		115	50 - 150
Bromochloromethane	0.500	0.520		ug/L		104	50 - 150
Bromodichloromethane	0.500	0.445	J	ug/L		89	50 - 150
Bromoform	0.500	0.550		ug/L		110	50 - 150
Bromomethane (Methyl Bromide)	0.500	0.596		ug/L		119	50 - 150
Carbon disulfide	0.500	0.428	J	ug/L		86	50 - 150
Carbon tetrachloride	0.500	0.421	J	ug/L		84	50 - 150
Chlorobenzene	0.500	0.522		ug/L		104	50 - 150
Chlorodibromomethane	0.500	0.432	J	ug/L		86	50 - 150
cis-1,3-Dichloropropene	0.500	0.419	J	ug/L		84	50 - 150
Dichloromethane	0.500	0.626		ug/L		125	50 - 150
Ethylbenzene	0.500	0.506		ug/L		101	50 - 150
Hexachlorobutadiene	0.500	0.568		ug/L		114	50 - 150
Isopropylbenzene	0.500	0.541		ug/L		108	50 - 150
m,p-Xylenes	1.00	1.01		ug/L		101	50 - 150

QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-58904/7
Matrix: Water
Analysis Batch: 58904

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
m-Dichlorobenzene (1,3-DCB)	0.500	0.591		ug/L		118	50 - 150
Methyl-tert-butyl Ether (MTBE)	0.500	0.477	J	ug/L		95	50 - 150
Naphthalene	0.500	0.589		ug/L		118	50 - 150
n-Butylbenzene	0.500	0.523		ug/L		105	50 - 150
N-Propylbenzene	0.500	0.520		ug/L		104	50 - 150
o-Chlorotoluene	0.500	0.568		ug/L		114	50 - 150
o-Dichlorobenzene (1,2-DCB)	0.500	0.595		ug/L		119	50 - 150
o-Xylene	0.500	0.497	J	ug/L		99	50 - 150
p-Chlorotoluene	0.500	0.586		ug/L		117	50 - 150
p-Dichlorobenzene (1,4-DCB)	0.500	0.602		ug/L		120	50 - 150
p-Isopropyltoluene	0.500	0.530		ug/L		106	50 - 150
sec-Butylbenzene	0.500	0.542		ug/L		108	50 - 150
Styrene	0.500	0.500		ug/L		100	50 - 150
Tert-amyl methyl ether	0.500	0.460	J	ug/L		92	50 - 150
1,3-Dichloropropene, Total	1.00	0.793		ug/L		79	50 - 150
Tert-butyl ethyl ether	0.500	0.496	J	ug/L		99	50 - 150
tert-Butylbenzene	0.500	0.558		ug/L		112	50 - 150
Tetrachloroethene (PCE)	0.500	0.488	J	ug/L		98	50 - 150
Toluene	0.500	0.512		ug/L		102	50 - 150
trans-1,2-Dichloroethylene	0.500	0.499	J	ug/L		100	50 - 150
trans-1,3-Dichloropropene	0.500	0.374	J	ug/L		75	50 - 150
Trichloroethylene (TCE)	0.500	0.505		ug/L		101	50 - 150
Bromoethane	0.500	0.514		ug/L		103	50 - 150
Trichlorofluoromethane (Freon 11)	0.500	0.472	J	ug/L		94	50 - 150
Trichlorotrifluoroethane	0.500	0.468	J	ug/L		94	50 - 150
Diisopropyl ether	0.500	0.484	J	ug/L		97	50 - 150
Vinyl Chloride (VC)	0.500	0.486		ug/L		97	50 - 150
Xylenes, Total	1.50	1.50		ug/L		100	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		70 - 130
4-Bromofluorobenzene (Surr)	103		70 - 130
Toluene-d8 (Surr)	99		70 - 130

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 380-58700/5
Matrix: Water
Analysis Batch: 58700

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Tertiary Butyl Alcohol (TBA)	<2.0		2.0	ug/L			10/10/23 15:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		10/10/23 15:07	1
4-Bromofluorobenzene (Surr)	101		70 - 130		10/10/23 15:07	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 130		10/10/23 15:07	1

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QC Sample Results

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

Job ID: 380-65785-1

Method: 524.2 - Volatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 380-58700/2
Matrix: Water
Analysis Batch: 58700

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	5.00	5.17		ug/L		103	70 - 130
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
Toluene-d8 (Surr)	98		70 - 130				
4-Bromofluorobenzene (Surr)	95		70 - 130				
1,2-Dichloroethane-d4 (Surr)	114		70 - 130				

Lab Sample ID: LCSD 380-58700/3
Matrix: Water
Analysis Batch: 58700

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
Tertiary Butyl Alcohol (TBA)	5.00	5.58		ug/L		112	70 - 130	8	20
LCSD LCSD									
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	101		70 - 130						
4-Bromofluorobenzene (Surr)	99		70 - 130						
1,2-Dichloroethane-d4 (Surr)	115		70 - 130						

Lab Sample ID: MRL 380-58700/4
Matrix: Water
Analysis Batch: 58700

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Tertiary Butyl Alcohol (TBA)	2.00	2.24		ug/L		112	50 - 150
MRL MRL							
Surrogate	%Recovery	Qualifier	Limits				
Toluene-d8 (Surr)	100		50 - 150				
4-Bromofluorobenzene (Surr)	96		50 - 150				
1,2-Dichloroethane-d4 (Surr)	115		50 - 150				

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

Lab Sample ID: MB 380-58414/21-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58414

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
2,4'-DDE	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
2,4'-DDT	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
4,4'-DDD	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
4,4'-DDE	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
4,4'-DDT	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Acenaphthene	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Acenaphthylene	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: MB 380-58414/21-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58414

Analyte	MB	MB	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Acetochlor	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Alachlor	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
alpha-BHC	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
alpha-Chlordane	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Anthracene	<0.020		0.020	ug/L		10/07/23 13:19	10/08/23 13:10	1
Atrazine	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Benz(a)anthracene	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Benzo[a]pyrene	<0.020		0.020	ug/L		10/07/23 13:19	10/08/23 13:10	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		10/07/23 13:19	10/08/23 13:10	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		10/07/23 13:19	10/08/23 13:10	1
beta-BHC	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		10/07/23 13:19	10/08/23 13:10	1
Bromacil	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Butachlor	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Butylbenzylphthalate	<0.49		0.49	ug/L		10/07/23 13:19	10/08/23 13:10	1
Chlorobenzilate	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Chloroneb	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Chlorpyrifos	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Chrysene	<0.020		0.020	ug/L		10/07/23 13:19	10/08/23 13:10	1
delta-BHC	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		10/07/23 13:19	10/08/23 13:10	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Dieldrin	<0.20		0.20	ug/L		10/07/23 13:19	10/08/23 13:10	1
Diethylphthalate	<0.49		0.49	ug/L		10/07/23 13:19	10/08/23 13:10	1
Dimethylphthalate	<0.49		0.49	ug/L		10/07/23 13:19	10/08/23 13:10	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		10/07/23 13:19	10/08/23 13:10	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Endosulfan sulfate	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Endrin	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Endrin aldehyde	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
EPTC	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Fluoranthene	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Fluorene	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
gamma-BHC (Lindane)	<0.039		0.039	ug/L		10/07/23 13:19	10/08/23 13:10	1
gamma-Chlordane	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Heptachlor	<0.039		0.039	ug/L		10/07/23 13:19	10/08/23 13:10	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Hexachlorobenzene	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Isophorone	<0.49		0.49	ug/L		10/07/23 13:19	10/08/23 13:10	1
Malathion	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Methoxychlor	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Metolachlor	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: MB 380-58414/21-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58414

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Molinate	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Naphthalene	<0.29		0.29	ug/L		10/07/23 13:19	10/08/23 13:10	1
Parathion	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Phenanthrene	<0.039		0.039	ug/L		10/07/23 13:19	10/08/23 13:10	1
Propachlor	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Pyrene	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Simazine	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Terbacil	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Terbuthylazine	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
Thiobencarb	<0.20		0.20	ug/L		10/07/23 13:19	10/08/23 13:10	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		10/07/23 13:19	10/08/23 13:10	1
trans-Nonachlor	<0.049		0.049	ug/L		10/07/23 13:19	10/08/23 13:10	1
Trifluralin	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
1-Methylnaphthalene	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1
2-Methylnaphthalene	<0.098		0.098	ug/L		10/07/23 13:19	10/08/23 13:10	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	2.66	T J N	ug/L		2.31	124-18-5	10/07/23 13:19	10/08/23 13:10	1
n-Hexadecanoic acid	0.998	T J N	ug/L		5.68	57-10-3	10/07/23 13:19	10/08/23 13:10	1
Octadecanoic acid	0.890	T J N	ug/L		6.34	57-11-4	10/07/23 13:19	10/08/23 13:10	1
9-Octadecenamamide, (Z)-	1.55	T J N	ug/L		7.26	301-02-0	10/07/23 13:19	10/08/23 13:10	1
1,3-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	0.673	T J N	ug/L		9.51	137-89-3	10/07/23 13:19	10/08/23 13:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	101		70 - 130	10/07/23 13:19	10/08/23 13:10	1
Perylene-d12	90		70 - 130	10/07/23 13:19	10/08/23 13:10	1
Triphenylphosphate	103		70 - 130	10/07/23 13:19	10/08/23 13:10	1

Lab Sample ID: LCS 380-58414/23-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.96	2.02		ug/L		103	70 - 130
2,4'-DDE	1.96	2.05		ug/L		105	70 - 130
2,4'-DDT	1.96	2.32		ug/L		118	70 - 130
2,4-Dinitrotoluene	1.96	1.93		ug/L		98	70 - 130
2,6-Dinitrotoluene	1.96	1.94		ug/L		99	70 - 130
4,4'-DDD	1.96	2.15		ug/L		109	70 - 130
4,4'-DDE	1.96	1.98		ug/L		101	70 - 130
4,4'-DDT	1.96	2.22		ug/L		113	70 - 130
Acenaphthene	1.96	2.06		ug/L		105	70 - 130
Acenaphthylene	1.96	2.00		ug/L		102	70 - 130
Acetochlor	1.96	2.15		ug/L		110	70 - 130
Alachlor	1.96	2.20		ug/L		112	70 - 130
alpha-BHC	1.96	2.23		ug/L		114	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: LCS 380-58414/23-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
alpha-Chlordane	1.96	1.97		ug/L		100	70 - 130
Anthracene	1.96	2.08		ug/L		106	70 - 130
Atrazine	1.96	2.35		ug/L		119	70 - 130
Benz(a)anthracene	1.96	2.23		ug/L		114	70 - 130
Benzo[a]pyrene	1.96	1.99		ug/L		102	70 - 130
Benzo[b]fluoranthene	1.96	2.16		ug/L		110	70 - 130
Benzo[g,h,i]perylene	1.96	2.07		ug/L		106	70 - 130
Benzo[k]fluoranthene	1.96	2.17		ug/L		110	70 - 130
beta-BHC	1.96	2.21		ug/L		113	70 - 130
Bis(2-ethylhexyl) phthalate	1.96	2.10		ug/L		107	70 - 130
Bromacil	1.96	2.20		ug/L		112	70 - 130
Butachlor	1.96	2.36		ug/L		120	70 - 130
Butylbenzylphthalate	1.96	2.25		ug/L		114	70 - 130
Chlorobenzilate	1.96	2.10		ug/L		107	70 - 130
Chloroneb	1.96	2.11		ug/L		108	70 - 130
Chlorothalonil (Draconil, Bravo)	1.96	1.99		ug/L		101	70 - 130
Chlorpyrifos	1.96	2.16		ug/L		110	70 - 130
Chrysene	1.96	2.08		ug/L		106	70 - 130
delta-BHC	1.96	2.07		ug/L		105	70 - 130
Di(2-ethylhexyl)adipate	1.96	2.29		ug/L		116	70 - 130
Dibenz(a,h)anthracene	1.96	2.11		ug/L		107	70 - 130
Diclorvos (DDVP)	1.96	2.20		ug/L		112	70 - 130
Dieldrin	1.96	2.01		ug/L		102	70 - 130
Diethylphthalate	1.96	2.31		ug/L		118	70 - 130
Dimethylphthalate	1.96	2.14		ug/L		109	70 - 130
Di-n-butyl phthalate	3.93	4.29		ug/L		109	70 - 130
Di-n-octyl phthalate	1.96	1.81		ug/L		92	70 - 130
Endosulfan I (Alpha)	1.96	2.07		ug/L		105	70 - 130
Endosulfan II (Beta)	1.96	2.19		ug/L		111	70 - 130
Endosulfan sulfate	1.96	2.16		ug/L		110	70 - 130
Endrin	1.96	2.13		ug/L		109	70 - 130
Endrin aldehyde	1.96	1.96		ug/L		100	70 - 130
EPTC	1.96	2.21		ug/L		113	70 - 130
Fluoranthene	1.96	2.16		ug/L		110	70 - 130
Fluorene	1.96	2.17		ug/L		111	70 - 130
gamma-BHC (Lindane)	1.96	2.27		ug/L		115	70 - 130
gamma-Chlordane	1.96	1.95		ug/L		99	70 - 130
Heptachlor	1.96	2.24		ug/L		114	70 - 130
Heptachlor epoxide (isomer B)	1.96	2.00		ug/L		102	70 - 130
Hexachlorobenzene	1.96	2.13		ug/L		108	70 - 130
Hexachlorocyclopentadiene	1.96	2.54		ug/L		129	70 - 130
Indeno[1,2,3-cd]pyrene	1.96	2.08		ug/L		106	70 - 130
Isophorone	1.96	2.16		ug/L		110	70 - 130
Malathion	1.96	2.17		ug/L		110	70 - 130
Methoxychlor	1.96	2.16		ug/L		110	70 - 130
Metolachlor	1.96	2.26		ug/L		115	70 - 130
Molinate	1.96	2.26		ug/L		115	70 - 130
Naphthalene	1.96	2.04		ug/L		104	70 - 130
Parathion	1.96	2.17		ug/L		111	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: LCS 380-58414/23-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Pendimethalin (Penoxaline)	1.96	2.04		ug/L		104	70 - 130
Phenanthrene	1.96	2.06		ug/L		105	70 - 130
Propachlor	1.96	2.08		ug/L		106	70 - 130
Pyrene	1.96	2.16		ug/L		110	70 - 130
Simazine	1.96	2.34		ug/L		119	70 - 130
Terbacil	1.96	2.23		ug/L		113	70 - 130
Terbutylazine	1.96	2.26		ug/L		115	70 - 130
Thiobencarb	1.96	2.27		ug/L		115	70 - 130
trans-Nonachlor	1.96	1.96		ug/L		100	70 - 130
Trifluralin	1.96	1.96		ug/L		100	70 - 130
1-Methylnaphthalene	1.96	2.13		ug/L		108	70 - 130
2-Methylnaphthalene	1.96	2.21		ug/L		113	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	100		70 - 130
Perylene-d12	93		70 - 130
Triphenylphosphate	104		70 - 130

Lab Sample ID: LCSD 380-58414/24-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.97	2.04		ug/L		103	70 - 130	1	20
2,4'-DDE	1.97	2.03		ug/L		103	70 - 130	1	20
2,4'-DDT	1.97	2.33		ug/L		118	70 - 130	0	20
2,4-Dinitrotoluene	1.97	1.93		ug/L		98	70 - 130	0	20
2,6-Dinitrotoluene	1.97	1.92		ug/L		98	70 - 130	1	20
4,4'-DDD	1.97	2.16		ug/L		110	70 - 130	1	20
4,4'-DDE	1.97	1.96		ug/L		100	70 - 130	1	20
4,4'-DDT	1.97	2.23		ug/L		113	70 - 130	0	20
Acenaphthene	1.97	2.09		ug/L		106	70 - 130	1	20
Acenaphthylene	1.97	2.08		ug/L		105	70 - 130	4	20
Acetochlor	1.97	2.14		ug/L		108	70 - 130	1	20
Alachlor	1.97	2.14		ug/L		108	70 - 130	3	20
alpha-BHC	1.97	2.26		ug/L		115	70 - 130	1	20
alpha-Chlordane	1.97	1.95		ug/L		99	70 - 130	1	20
Anthracene	1.97	2.07		ug/L		105	70 - 130	0	20
Atrazine	1.97	2.45		ug/L		125	70 - 130	5	20
Benz(a)anthracene	1.97	2.25		ug/L		114	70 - 130	1	20
Benzo[a]pyrene	1.97	2.03		ug/L		103	70 - 130	2	20
Benzo[b]fluoranthene	1.97	2.17		ug/L		110	70 - 130	0	20
Benzo[g,h,i]perylene	1.97	2.06		ug/L		104	70 - 130	1	20
Benzo[k]fluoranthene	1.97	2.14		ug/L		108	70 - 130	2	20
beta-BHC	1.97	2.29		ug/L		116	70 - 130	3	20
Bis(2-ethylhexyl) phthalate	1.97	2.06		ug/L		104	70 - 130	2	20
Bromacil	1.97	2.25		ug/L		114	70 - 130	2	20
Butachlor	1.97	2.39		ug/L		121	70 - 130	1	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: LCSD 380-58414/24-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Butylbenzylphthalate	1.97	2.27		ug/L		115	70 - 130	1	20	
Chlorobenzilate	1.97	2.09		ug/L		106	70 - 130	1	20	
Chloroneb	1.97	2.15		ug/L		109	70 - 130	2	20	
Chlorothalonil (Draconil, Bravo)	1.97	2.03		ug/L		103	70 - 130	2	20	
Chlorpyrifos	1.97	2.14		ug/L		108	70 - 130	1	20	
Chrysene	1.97	2.08		ug/L		106	70 - 130	0	20	
delta-BHC	1.97	2.08		ug/L		105	70 - 130	0	20	
Di(2-ethylhexyl)adipate	1.97	2.26		ug/L		115	70 - 130	1	20	
Dibenz(a,h)anthracene	1.97	2.15		ug/L		109	70 - 130	2	20	
Diclorvos (DDVP)	1.97	2.29		ug/L		116	70 - 130	4	20	
Dieldrin	1.97	2.00		ug/L		101	70 - 130	1	20	
Diethylphthalate	1.97	2.37		ug/L		120	70 - 130	2	20	
Dimethylphthalate	1.97	2.20		ug/L		112	70 - 130	3	20	
Di-n-butyl phthalate	3.94	4.24		ug/L		108	70 - 130	1	20	
Di-n-octyl phthalate	1.97	1.76		ug/L		89	70 - 130	3	20	
Endosulfan I (Alpha)	1.97	2.03		ug/L		103	70 - 130	2	20	
Endosulfan II (Beta)	1.97	2.25		ug/L		114	70 - 130	3	20	
Endosulfan sulfate	1.97	2.21		ug/L		112	70 - 130	2	20	
Endrin	1.97	2.13		ug/L		108	70 - 130	0	20	
Endrin aldehyde	1.97	1.97		ug/L		100	70 - 130	0	20	
EPTC	1.97	2.22		ug/L		113	70 - 130	0	20	
Fluoranthene	1.97	2.15		ug/L		109	70 - 130	0	20	
Fluorene	1.97	2.21		ug/L		112	70 - 130	2	20	
gamma-BHC (Lindane)	1.97	2.28		ug/L		116	70 - 130	0	20	
gamma-Chlordane	1.97	1.95		ug/L		99	70 - 130	0	20	
Heptachlor	1.97	2.22		ug/L		113	70 - 130	1	20	
Heptachlor epoxide (isomer B)	1.97	2.00		ug/L		101	70 - 130	0	20	
Hexachlorobenzene	1.97	2.11		ug/L		107	70 - 130	1	20	
Hexachlorocyclopentadiene	1.97	2.55		ug/L		129	70 - 130	0	20	
Indeno[1,2,3-cd]pyrene	1.97	2.10		ug/L		106	70 - 130	1	20	
Isophorone	1.97	2.25		ug/L		114	70 - 130	4	20	
Malathion	1.97	2.19		ug/L		111	70 - 130	1	20	
Methoxychlor	1.97	2.18		ug/L		111	70 - 130	1	20	
Metolachlor	1.97	2.26		ug/L		115	70 - 130	0	20	
Molinate	1.97	2.27		ug/L		115	70 - 130	0	20	
Naphthalene	1.97	2.09		ug/L		106	70 - 130	2	20	
Parathion	1.97	2.18		ug/L		111	70 - 130	0	20	
Pendimethalin (Penoxaline)	1.97	2.03		ug/L		103	70 - 130	1	20	
Phenanthrene	1.97	2.05		ug/L		104	70 - 130	0	20	
Propachlor	1.97	2.15		ug/L		109	70 - 130	4	20	
Pyrene	1.97	2.17		ug/L		110	70 - 130	0	20	
Simazine	1.97	2.40		ug/L		122	70 - 130	3	20	
Terbacil	1.97	2.35		ug/L		119	70 - 130	5	20	
Terbutylazine	1.97	2.31		ug/L		117	70 - 130	2	20	
Thiobencarb	1.97	2.28		ug/L		116	70 - 130	1	20	
trans-Nonachlor	1.97	1.92		ug/L		97	70 - 130	2	20	
Trifluralin	1.97	1.99		ug/L		101	70 - 130	1	20	
1-Methylnaphthalene	1.97	2.17		ug/L		110	70 - 130	2	20	
2-Methylnaphthalene	1.97	2.21		ug/L		112	70 - 130	0	20	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Nitro-m-xylene	102		70 - 130
Perylene-d12	95		70 - 130
Triphenylphosphate	106		70 - 130

Lab Sample ID: MRL 380-58414/22-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0984	0.127		ug/L		129	50 - 150
2,4'-DDE	0.0984	0.103		ug/L		105	50 - 150
2,4'-DDT	0.0984	0.109		ug/L		110	50 - 150
2,4-Dinitrotoluene	0.0984	0.115		ug/L		117	50 - 150
2,6-Dinitrotoluene	0.0984	0.0917	J	ug/L		93	50 - 150
4,4'-DDD	0.0984	0.0991		ug/L		101	50 - 150
4,4'-DDE	0.0984	0.0913	J	ug/L		93	50 - 150
4,4'-DDT	0.0984	0.131		ug/L		133	50 - 150
Acenaphthene	0.0984	0.103		ug/L		104	50 - 150
Acenaphthylene	0.0984	0.0944	J	ug/L		96	50 - 150
Acetochlor	0.0492	0.0500	J	ug/L		102	50 - 150
Alachlor	0.0492	0.0563		ug/L		114	50 - 150
alpha-BHC	0.0984	0.111		ug/L		113	50 - 150
alpha-Chlordane	0.0246	<0.029		ug/L		104	50 - 150
Anthracene	0.0197	0.0205		ug/L		104	50 - 150
Atrazine	0.0492	0.0567		ug/L		115	50 - 150
Benz(a)anthracene	0.0492	0.0490		ug/L		100	50 - 150
Benzo[a]pyrene	0.0197	0.0183	J	ug/L		93	50 - 150
Benzo[b]fluoranthene	0.0197	0.0210		ug/L		107	50 - 150
Benzo[g,h,i]perylene	0.0492	0.0424	J	ug/L		86	50 - 150
Benzo[k]fluoranthene	0.0197	0.0191	J	ug/L		97	50 - 150
beta-BHC	0.0984	0.110		ug/L		112	50 - 150
Bis(2-ethylhexyl) phthalate	0.591	0.684		ug/L		116	50 - 150
Bromacil	0.0984	0.131		ug/L		133	50 - 150
Butachlor	0.0492	0.0574		ug/L		117	50 - 150
Butylbenzylphthalate	0.148	0.151	J	ug/L		103	50 - 150
Chlorobenzilate	0.0984	0.119		ug/L		121	50 - 150
Chloroneb	0.0984	0.117		ug/L		119	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0984	0.196	^3+	ug/L		199	50 - 150
Chlorpyrifos	0.0492	0.0502		ug/L		102	50 - 150
Chrysene	0.0197	0.0214		ug/L		109	50 - 150
delta-BHC	0.0984	0.114		ug/L		116	50 - 150
Di(2-ethylhexyl)adipate	0.295	0.342	J	ug/L		116	50 - 150
Dibenz(a,h)anthracene	0.0492	0.0441	J	ug/L		90	50 - 150
Diclorvos (DDVP)	0.0492	0.0986	^3+	ug/L		200	50 - 150
Dieldrin	0.0984	0.111	J	ug/L		113	50 - 150
Diethylphthalate	0.148	0.198	J	ug/L		134	50 - 150
Dimethylphthalate	0.295	0.312	J	ug/L		106	50 - 150
Di-n-butyl phthalate	0.295	0.372	J	ug/L		126	49 - 243
Di-n-octyl phthalate	0.0984	0.114		ug/L		116	50 - 150
Endosulfan I (Alpha)	0.0984	0.0996		ug/L		101	50 - 150
Endosulfan II (Beta)	0.0984	0.117		ug/L		119	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: MRL 380-58414/22-A
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Endosulfan sulfate	0.0984	0.0961	J	ug/L		98	50 - 150
Endrin	0.0984	0.0999		ug/L		102	50 - 150
Endrin aldehyde	0.0984	0.0939	J	ug/L		95	50 - 150
EPTC	0.0984	0.107		ug/L		109	50 - 150
Fluoranthene	0.0492	0.0542	J	ug/L		110	50 - 150
Fluorene	0.0492	0.0515		ug/L		105	50 - 150
gamma-BHC (Lindane)	0.0394	0.0463		ug/L		118	50 - 150
gamma-Chlordane	0.0246	0.0264	J	ug/L		107	50 - 150
Heptachlor	0.0394	0.0453		ug/L		115	50 - 150
Heptachlor epoxide (isomer B)	0.0492	0.0508		ug/L		103	50 - 150
Hexachlorobenzene	0.0492	0.0504		ug/L		102	50 - 150
Hexachlorocyclopentadiene	0.0492	0.0587		ug/L		119	50 - 150
Indeno[1,2,3-cd]pyrene	0.0492	0.0404	J	ug/L		82	50 - 150
Isophorone	0.0984	0.112	J	ug/L		114	50 - 150
Malathion	0.0984	0.0971	J	ug/L		99	50 - 150
Methoxychlor	0.0984	0.127		ug/L		129	50 - 150
Metolachlor	0.0492	0.0545		ug/L		111	50 - 150
Molinate	0.0984	0.114		ug/L		116	50 - 150
Naphthalene	0.0984	0.115	J	ug/L		116	50 - 150
Parathion	0.0984	0.119		ug/L		121	50 - 150
Pendimethalin (Penoxaline)	0.0984	0.116		ug/L		118	50 - 150
Phenanthrene	0.0197	0.0235	J	ug/L		119	50 - 150
Propachlor	0.0492	0.0842	^3+	ug/L		171	50 - 150
Pyrene	0.0492	0.0518		ug/L		105	50 - 150
Simazine	0.0492	0.0550		ug/L		112	50 - 150
Terbacil	0.0984	0.112		ug/L		114	50 - 150
Terbutylazine	0.0984	0.108		ug/L		110	50 - 150
Thiobencarb	0.0984	0.106	J	ug/L		107	50 - 150
trans-Nonachlor	0.0246	<0.026		ug/L		102	50 - 150
Trifluralin	0.0984	0.115		ug/L		117	50 - 150
1-Methylnaphthalene	0.0984	0.117		ug/L		119	50 - 150
2-Methylnaphthalene	0.0984	0.116		ug/L		118	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	100		70 - 130
Perylene-d12	91		70 - 130
Triphenylphosphate	102		70 - 130

Lab Sample ID: 380-64951-EQ-1-A MS
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	<0.098		1.95	1.96		ug/L		100	70 - 130
2,4'-DDE	<0.098		1.95	1.97		ug/L		101	70 - 130
2,4'-DDT	<0.098		1.95	2.22		ug/L		114	70 - 130
2,4-Dinitrotoluene	<0.098		1.95	2.03		ug/L		104	70 - 130
2,6-Dinitrotoluene	<0.098		1.95	2.05		ug/L		105	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: 380-64951-EQ-1-A MS
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
4,4'-DDD	<0.098		1.95	2.08		ug/L		107	70 - 130
4,4'-DDE	<0.098		1.95	1.91		ug/L		98	70 - 130
4,4'-DDT	<0.098		1.95	2.09		ug/L		107	70 - 130
Acenaphthene	<0.098		1.95	2.07		ug/L		106	70 - 130
Acenaphthylene	<0.098		1.95	2.11		ug/L		108	70 - 130
Acetochlor	<0.098		1.95	2.09		ug/L		107	70 - 130
Alachlor	<0.049		1.95	2.09		ug/L		107	70 - 130
alpha-BHC	<0.098		1.95	2.23		ug/L		114	70 - 130
alpha-Chlordane	<0.049		1.95	1.89		ug/L		97	70 - 130
Anthracene	<0.020	F1	1.95	1.15	F1	ug/L		59	70 - 130
Atrazine	<0.049		1.95	2.39		ug/L		123	70 - 130
Benz(a)anthracene	<0.049		1.95	1.90		ug/L		97	70 - 130
Benzo[a]pyrene	<0.020		1.95	1.49		ug/L		76	70 - 130
Benzo[b]fluoranthene	<0.020		1.95	2.05		ug/L		105	70 - 130
Benzo[g,h,i]perylene	<0.049		1.95	1.95		ug/L		100	70 - 130
Benzo[k]fluoranthene	<0.020		1.95	2.11		ug/L		108	70 - 130
beta-BHC	<0.098		1.95	2.24		ug/L		115	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.95	1.96		ug/L		101	70 - 130
Bromacil	<0.098		1.95	2.19		ug/L		112	70 - 130
Butachlor	<0.049		1.95	2.33		ug/L		120	70 - 130
Butylbenzylphthalate	<0.49		1.95	2.18		ug/L		112	70 - 130
Chlorobenzilate	<0.098		1.95	2.03		ug/L		104	70 - 130
Chloroneb	<0.098		1.95	2.13		ug/L		109	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098	^3+	1.95	1.99		ug/L		102	70 - 130
Chlorpyrifos	<0.049		1.95	2.08		ug/L		106	70 - 130
Chrysene	<0.020		1.95	2.02		ug/L		103	70 - 130
delta-BHC	<0.098		1.95	2.03		ug/L		104	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.95	2.16		ug/L		111	70 - 130
Dibenz(a,h)anthracene	<0.049		1.95	2.09		ug/L		107	70 - 130
Diclorvos (DDVP)	<0.049	^3+	1.95	2.28		ug/L		117	70 - 130
Dieldrin	<0.20		1.95	1.90		ug/L		98	70 - 130
Diethylphthalate	<0.49		1.95	2.32		ug/L		119	70 - 130
Dimethylphthalate	<0.49		1.95	2.18		ug/L		112	70 - 130
Di-n-butyl phthalate	<0.98		3.90	4.16		ug/L		104	70 - 130
Di-n-octyl phthalate	<0.098		1.95	1.66		ug/L		85	70 - 130
Endosulfan I (Alpha)	<0.098		1.95	1.95		ug/L		100	70 - 130
Endosulfan II (Beta)	<0.098		1.95	2.17		ug/L		111	70 - 130
Endosulfan sulfate	<0.098		1.95	2.09		ug/L		107	70 - 130
Endrin	<0.098		1.95	2.02		ug/L		104	70 - 130
Endrin aldehyde	<0.098	F1	1.95	0.878	F1	ug/L		45	70 - 130
EPTC	<0.098		1.95	2.24		ug/L		115	70 - 130
Fluoranthene	<0.098		1.95	2.11		ug/L		108	70 - 130
Fluorene	<0.049		1.95	2.19		ug/L		112	70 - 130
gamma-BHC (Lindane)	<0.039		1.95	2.30		ug/L		118	70 - 130
gamma-Chlordane	<0.049		1.95	1.90		ug/L		97	70 - 130
Heptachlor	<0.039		1.95	2.22		ug/L		114	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.95	1.94		ug/L		100	70 - 130
Hexachlorobenzene	<0.049		1.95	2.10		ug/L		107	70 - 130
Hexachlorocyclopentadiene	<0.049	F1	1.95	2.59	F1	ug/L		133	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: 380-64951-EQ-1-A MS
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Indeno[1,2,3-cd]pyrene	<0.049		1.95	2.02		ug/L		103	70 - 130
Isophorone	<0.49		1.95	2.21		ug/L		113	70 - 130
Malathion	<0.098		1.95	2.14		ug/L		110	70 - 130
Methoxychlor	<0.098		1.95	2.14		ug/L		110	70 - 130
Metolachlor	<0.049		1.95	2.21		ug/L		113	70 - 130
Molinate	<0.098		1.95	2.31		ug/L		118	70 - 130
Naphthalene	<0.29		1.95	2.06		ug/L		106	70 - 130
Parathion	<0.098		1.95	2.17		ug/L		111	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.95	2.02		ug/L		104	70 - 130
Phenanthrene	<0.039		1.95	2.02		ug/L		104	70 - 130
Propachlor	<0.049	^3+	1.95	2.12		ug/L		109	70 - 130
Pyrene	<0.049		1.95	2.11		ug/L		108	70 - 130
Simazine	<0.049		1.95	2.36		ug/L		121	70 - 130
Terbacil	<0.098		1.95	2.27		ug/L		117	70 - 130
Terbutylazine	<0.098		1.95	2.26		ug/L		116	70 - 130
Thiobencarb	<0.20		1.95	2.26		ug/L		116	70 - 130
trans-Nonachlor	<0.049		1.95	1.85		ug/L		95	70 - 130
Trifluralin	<0.098		1.95	2.02		ug/L		104	70 - 130
1-Methylnaphthalene	<0.098		1.95	2.16		ug/L		111	70 - 130
2-Methylnaphthalene	<0.098		1.95	2.19		ug/L		112	70 - 130
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
2-Nitro-m-xylene	102		70 - 130						
Perylene-d12	92		70 - 130						
Triphenylphosphate	101		70 - 130						

Lab Sample ID: 380-65745-X-1-A DU
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
2,4'-DDD	<0.10		<0.099		ug/L		NC	20
2,4'-DDE	<0.10		<0.099		ug/L		NC	20
2,4'-DDT	<0.10		<0.099		ug/L		NC	20
2,4-Dinitrotoluene	<0.10		<0.099		ug/L		NC	20
2,6-Dinitrotoluene	<0.10		<0.099		ug/L		NC	20
4,4'-DDD	<0.10		<0.099		ug/L		NC	20
4,4'-DDE	<0.10		<0.099		ug/L		NC	20
4,4'-DDT	<0.10		<0.099		ug/L		NC	20
Acenaphthene	<0.10		<0.099		ug/L		NC	20
Acenaphthylene	<0.10		<0.099		ug/L		NC	20
Acetochlor	<0.10		<0.099		ug/L		NC	20
Alachlor	<0.050		<0.049		ug/L		NC	20
alpha-BHC	<0.10		<0.099		ug/L		NC	20
alpha-Chlordane	<0.050		<0.049		ug/L		NC	20
Anthracene	<0.020		<0.020		ug/L		NC	20
Atrazine	<0.050		<0.049		ug/L		NC	20
Benz(a)anthracene	<0.050		<0.049		ug/L		NC	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: 380-65745-X-1-A DU
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Benzo[a]pyrene	<0.020		<0.020		ug/L		NC	20
Benzo[b]fluoranthene	<0.020		<0.020		ug/L		NC	20
Benzo[g,h,i]perylene	<0.050		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.020		ug/L		NC	20
beta-BHC	<0.10		<0.099		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.60		<0.59		ug/L		NC	20
Bromacil	<0.10		<0.099		ug/L		NC	20
Butachlor	<0.050		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.50		<0.49		ug/L		NC	20
Chlorobenzilate	<0.10		<0.099		ug/L		NC	20
Chloroneb	<0.10		<0.099		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.10	^3+	<0.099		ug/L		NC	20
Chlorpyrifos	<0.050		<0.049		ug/L		NC	20
Chrysene	<0.020		<0.020		ug/L		NC	20
delta-BHC	<0.10		<0.099		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.60		<0.59		ug/L		NC	20
Dibenz(a,h)anthracene	<0.050		<0.049		ug/L		NC	20
Diclorvos (DDVP)	<0.050	^3+	<0.049		ug/L		NC	20
Dieldrin	<0.20		<0.20		ug/L		NC	20
Diethylphthalate	<0.50		<0.49		ug/L		NC	20
Dimethylphthalate	<0.50		<0.49		ug/L		NC	20
Di-n-butyl phthalate	<1.0		<0.99		ug/L		NC	20
Di-n-octyl phthalate	<0.10		<0.099		ug/L		NC	20
Endosulfan I (Alpha)	<0.10		<0.099		ug/L		NC	20
Endosulfan II (Beta)	<0.10		<0.099		ug/L		NC	20
Endosulfan sulfate	<0.10		<0.099		ug/L		NC	20
Endrin	<0.10		<0.099		ug/L		NC	20
Endrin aldehyde	<0.10		<0.099		ug/L		NC	20
EPTC	<0.10		<0.099		ug/L		NC	20
Fluoranthene	<0.10		<0.099		ug/L		NC	20
Fluorene	<0.050		<0.049		ug/L		NC	20
gamma-BHC (Lindane)	<0.040		<0.039		ug/L		NC	20
gamma-Chlordane	<0.050		<0.049		ug/L		NC	20
Heptachlor	<0.040		<0.039		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.050		<0.049		ug/L		NC	20
Hexachlorobenzene	<0.050		<0.049		ug/L		NC	20
Hexachlorocyclopentadiene	<0.050		<0.049		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.050		<0.049		ug/L		NC	20
Isophorone	<0.50		<0.49		ug/L		NC	20
Malathion	<0.10		<0.099		ug/L		NC	20
Methoxychlor	<0.10		<0.099		ug/L		NC	20
Metolachlor	<0.050		<0.049		ug/L		NC	20
Molinate	<0.10		<0.099		ug/L		NC	20
Naphthalene	<0.30		<0.30		ug/L		NC	20
Parathion	<0.10		<0.099		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.10		<0.099		ug/L		NC	20
Phenanthrene	<0.040		<0.039		ug/L		NC	20
Propachlor	<0.050	^3+	<0.049		ug/L		NC	20
Pyrene	<0.050		<0.049		ug/L		NC	20

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QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: 380-65745-X-1-A DU
Matrix: Water
Analysis Batch: 58450

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 58414

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Simazine	<0.050		<0.049		ug/L		NC	20
Terbacil	<0.10		<0.099		ug/L		NC	20
Terbutylazine	<0.10		<0.099		ug/L		NC	20
Thiobencarb	<0.20		<0.20		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.20		<0.20		ug/L		NC	20
trans-Nonachlor	<0.050		<0.049		ug/L		NC	20
Trifluralin	<0.10		<0.099		ug/L		NC	20
1-Methylnaphthalene	<0.10		<0.099		ug/L		NC	20
2-Methylnaphthalene	<0.10		<0.099		ug/L		NC	20

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	77		70 - 130
Triphenylphosphate	84		70 - 130

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC)

Lab Sample ID: MBL 380-58522/4-A
Matrix: Water
Analysis Batch: 59080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58522

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.0040		0.020	ug/L		10/09/23 11:30	10/09/23 15:13	1
1,2-Dibromo-3-Chloropropane	<0.0020		0.010	ug/L		10/09/23 11:30	10/09/23 15:13	1
1,2-Dibromoethane	<0.0040		0.010	ug/L		10/09/23 11:30	10/09/23 15:13	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane (Surr)	88		60 - 140	10/09/23 11:30	10/09/23 15:13	1

Lab Sample ID: LCS 380-58522/29-A
Matrix: Water
Analysis Batch: 59080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58522

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.200	0.227		ug/L		113	70 - 130
1,2-Dibromo-3-Chloropropane	0.200	0.205		ug/L		102	70 - 130
1,2-Dibromoethane	0.200	0.239		ug/L		120	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dibromopropane (Surr)	104		60 - 140

Lab Sample ID: MRL 380-58522/2-A
Matrix: Water
Analysis Batch: 59080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58522

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	0.0200	0.0239		ug/L		120	60 - 140

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 504.1 - EDB, DBCP and 1,2,3-TCP (GC) (Continued)

Lab Sample ID: MRL 380-58522/2-A
Matrix: Water
Analysis Batch: 59080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58522

<i>Surrogate</i>	<i>%Recovery</i>	<i>MRL MRL Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	100		60 - 140

Lab Sample ID: MRL 380-58522/3-A
Matrix: Water
Analysis Batch: 59080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58522

<i>Analyte</i>	<i>Spike Added</i>	<i>MRL MRL Result Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
1,2,3-Trichloropropane	0.0500	0.0610	ug/L		122	60 - 140
1,2-Dibromo-3-Chloropropane	0.0100	0.0124	ug/L		124	60 - 140
1,2-Dibromoethane	0.0100	0.0123	ug/L		123	60 - 140

<i>Surrogate</i>	<i>%Recovery</i>	<i>MRL MRL Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	108		60 - 140

Lab Sample ID: 380-65868-J-1-A MS
Matrix: Water
Analysis Batch: 59080

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58522

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>Spike Added</i>	<i>MS MS Result Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec Limits</i>
1,2,3-Trichloropropane	<0.020		1.26	1.31	ug/L		105	65 - 135
1,2-Dibromo-3-Chloropropane	<0.010		0.251	0.273	ug/L		109	65 - 135
1,2-Dibromoethane	<0.010		0.251	0.276	ug/L		110	65 - 135

<i>Surrogate</i>	<i>%Recovery</i>	<i>MS MS Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	112		60 - 140

Lab Sample ID: 380-65869-H-1-A DU
Matrix: Water
Analysis Batch: 59080

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 58522

<i>Analyte</i>	<i>Sample Result</i>	<i>Sample Qualifier</i>	<i>DU DU Result Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RPD</i>	<i>RPD Limit</i>
1,2,3-Trichloropropane	<0.020		<0.020	ug/L		NC	20
1,2-Dibromo-3-Chloropropane	<0.010		<0.0099	ug/L		NC	20
1,2-Dibromoethane	<0.010		<0.0099	ug/L		NC	20

<i>Surrogate</i>	<i>%Recovery</i>	<i>DU DU Qualifier</i>	<i>Limits</i>
1,2-Dibromopropane (Surr)	104		60 - 140

Method: 505 - Organochlorine Pesticides/PCBs (GC)

Lab Sample ID: MB 380-58555/3-A
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58555

<i>Analyte</i>	<i>MB MB Result Qualifier</i>	<i>RL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Aldrin	<0.010	0.010	ug/L		10/09/23 11:51	10/10/23 01:35	1
Dieldrin	<0.010	0.010	ug/L		10/09/23 11:51	10/10/23 01:35	1
Toxaphene	<0.50	0.50	ug/L		10/09/23 11:51	10/10/23 01:35	1

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QC Sample Results

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

Job ID: 380-65785-1

Method: 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Lab Sample ID: MB 380-58555/3-A
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 58555

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Alachlor	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 01:35	1
Chlordane (n.o.s.)	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 01:35	1
Endrin	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 01:35	1
Heptachlor	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 01:35	1
Heptachlor epoxide	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 01:35	1
gamma-BHC (Lindane)	<0.010		0.010	ug/L		10/09/23 11:51	10/10/23 01:35	1
Methoxychlor	<0.050		0.050	ug/L		10/09/23 11:51	10/10/23 01:35	1
PCB-1016	<0.070		0.070	ug/L		10/09/23 11:51	10/10/23 01:35	1
PCB-1221	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 01:35	1
PCB-1232	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 01:35	1
PCB-1242	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 01:35	1
PCB-1248	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 01:35	1
PCB-1254	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 01:35	1
PCB-1260	<0.070		0.070	ug/L		10/09/23 11:51	10/10/23 01:35	1
Polychlorinated biphenyls, Total	<0.10		0.10	ug/L		10/09/23 11:51	10/10/23 01:35	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	91		70 - 130	10/09/23 11:51	10/10/23 01:35	1

Lab Sample ID: MRL 380-58555/1-A
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58555

Analyte	Spike Added	MRL MRL		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Aldrin	0.0100	0.00954	J	ug/L		95	50 - 150
Dieldrin	0.0100	0.0118		ug/L		118	50 - 150
Alachlor	0.100	0.103		ug/L		103	50 - 150
Endrin	0.0100	0.0101		ug/L		101	50 - 150
Heptachlor	0.0100	0.00737	J	ug/L		74	50 - 150
Heptachlor epoxide	0.0100	0.0111		ug/L		111	50 - 150
gamma-BHC (Lindane)	0.0100	0.0101		ug/L		101	50 - 150
Methoxychlor	0.0500	0.0461	J	ug/L		92	50 - 150

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

Lab Sample ID: MRL 380-58555/2-A
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 58555

Analyte	Spike Added	MRL MRL		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Toxaphene	0.500	0.420	J	ug/L		84	50 - 150

Surrogate	MRL MRL		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	96		70 - 130

QC Sample Results

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

Job ID: 380-65785-1

Method: 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Lab Sample ID: 380-65571-C-3-A MS
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58555

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Aldrin	<0.010		0.0206	0.0194		ug/L		94		65 - 135
Dieldrin	<0.010		0.0206	0.0228		ug/L		111		65 - 135
Alachlor	<0.10		0.206	0.228		ug/L		111		65 - 135
Endrin	<0.010		0.0206	0.0213		ug/L		103		65 - 135
Heptachlor	<0.010		0.0206	0.0200		ug/L		97		65 - 135
Heptachlor epoxide	<0.010		0.0206	0.0222		ug/L		108		65 - 135
gamma-BHC (Lindane)	<0.010		0.0206	0.0210		ug/L		102		65 - 135
Methoxychlor	<0.051		0.103	0.121		ug/L		117		65 - 135
MS MS										
Surrogate	%Recovery	Qualifier	Limits							
Tetrachloro-m-xylene	95		70 - 130							

Lab Sample ID: 380-65571-D-3-A MS
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58555

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Toxaphene	<0.51		2.49	2.39		ug/L		96		65 - 135
MS MS										
Surrogate	%Recovery	Qualifier	Limits							
Tetrachloro-m-xylene	97		70 - 130							

Lab Sample ID: 380-65596-D-1-A MS
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58555

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Aldrin	<0.010		0.101	0.0964		ug/L		96		65 - 135
Dieldrin	<0.010		0.101	0.104		ug/L		104		65 - 135
Alachlor	<0.10		1.01	1.08		ug/L		107		65 - 135
Endrin	<0.010		0.101	0.0955		ug/L		95		65 - 135
Heptachlor	<0.010		0.101	0.0944		ug/L		94		65 - 135
Heptachlor epoxide	<0.010		0.101	0.102		ug/L		101		65 - 135
gamma-BHC (Lindane)	<0.010		0.101	0.102		ug/L		101		65 - 135
Methoxychlor	<0.050		0.504	0.480		ug/L		95		65 - 135
MS MS										
Surrogate	%Recovery	Qualifier	Limits							
Tetrachloro-m-xylene	94		70 - 130							

Lab Sample ID: 380-65596-G-1-A MS
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58555

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Toxaphene	<0.50		2.53	2.34		ug/L		92		65 - 135

QC Sample Results

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

Job ID: 380-65785-1

Method: 505 - Organochlorine Pesticides/PCBs (GC) (Continued)

Lab Sample ID: 380-65596-G-1-A MS
Matrix: Water
Analysis Batch: 59452

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 58555

Surrogate	%Recovery	MS MS Qualifier	Limits
Tetrachloro-m-xylene	93		70 - 130

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 380-58315/42
Matrix: Water
Analysis Batch: 58315

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

Analyte	MB MB Result Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.50	0.50	mg/L			10/06/23 01:12	1
Sulfate	<0.25	0.25	mg/L			10/06/23 01:12	1

Lab Sample ID: LCS 380-58315/45
Matrix: Water
Analysis Batch: 58315

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

Analyte	Spike Added	LCS LCS Result Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	25.5	mg/L		102	90 - 110
Sulfate	50.0	51.3	mg/L		103	90 - 110

Lab Sample ID: LCSD 380-58315/46
Matrix: Water
Analysis Batch: 58315

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

Analyte	Spike Added	LCSD LCSD Result Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	25.0	25.5	mg/L		102	90 - 110	0	20
Sulfate	50.0	51.2	mg/L		102	90 - 110	0	20

Lab Sample ID: MRL 380-58315/43
Matrix: Water
Analysis Batch: 58315

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

Analyte	Spike Added	MRL MRL Result Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.125	0.131 J	mg/L		104	50 - 150
Sulfate	0.250	0.211 J	mg/L		84	50 - 150

Lab Sample ID: MRL 380-58315/44
Matrix: Water
Analysis Batch: 58315

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

Analyte	Spike Added	MRL MRL Result Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.438 J	mg/L		88	50 - 150
Sulfate	1.00	0.753	mg/L		75	50 - 150

Lab Sample ID: 380-65576-E-1 MS
Matrix: Water
Analysis Batch: 58315

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS Result Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	94	F1	25.0	111 E F1	mg/L		66	80 - 120

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QC Sample Results

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

Job ID: 380-65785-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 380-65576-E-1 MS
Matrix: Water
Analysis Batch: 58315

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
Sulfate	230	E	50.0	273	E 4	mg/L		91	80 - 120

Lab Sample ID: 380-65576-E-1 MSD
Matrix: Water
Analysis Batch: 58315

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	94	F1	25.0	111	E F1	mg/L		66	80 - 120	0	20
Sulfate	230	E	50.0	273	E 4	mg/L		90	80 - 120	0	20

Lab Sample ID: MB 380-58316/42
Matrix: Water
Analysis Batch: 58316

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.050		0.050	mg/L			10/06/23 01:12	1
Nitrite as N	<0.050		0.050	mg/L			10/06/23 01:12	1

Lab Sample ID: LCS 380-58316/45
Matrix: Water
Analysis Batch: 58316

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.48		mg/L		99	90 - 110
Nitrite as N	1.00	0.994		mg/L		99	90 - 110

Lab Sample ID: LCSD 380-58316/46
Matrix: Water
Analysis Batch: 58316

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
Nitrate as N	2.50	2.49		mg/L		100	90 - 110	0	20
Nitrite as N	1.00	0.995		mg/L		100	90 - 110	0	20

Lab Sample ID: MRL 380-58316/43
Matrix: Water
Analysis Batch: 58316

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0125	0.0125	J	mg/L		100	50 - 150
Nitrite as N	0.0125	0.0142	J	mg/L		113	50 - 150

Lab Sample ID: MRL 380-58316/44
Matrix: Water
Analysis Batch: 58316

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0500	0.0365	J	mg/L		73	50 - 150
Nitrite as N	0.0500	0.0331	J	mg/L		66	50 - 150

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QC Sample Results

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

Job ID: 380-65785-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 380-65576-E-1 MS
Matrix: Water
Analysis Batch: 58316

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
Nitrate as N	0.78		2.50	3.27		mg/L		100	80 - 120
Nitrite as N	<0.10		1.00	0.858		mg/L		86	80 - 120

Lab Sample ID: 380-65576-E-1 MSD
Matrix: Water
Analysis Batch: 58316

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.78		2.50	3.29		mg/L		100	80 - 120	1	20
Nitrite as N	<0.10		1.00	0.862		mg/L		86	80 - 120	0	20

Lab Sample ID: MB 380-58441/39
Matrix: Water
Analysis Batch: 58441

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	<0.050		0.050	mg/L			10/07/23 01:03	1
Nitrite as N	<0.050		0.050	mg/L			10/07/23 01:03	1

Lab Sample ID: LCS 380-58441/42
Matrix: Water
Analysis Batch: 58441

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	2.50	2.53		mg/L		101	90 - 110
Nitrite as N	1.00	1.02		mg/L		102	90 - 110

Lab Sample ID: LCSD 380-58441/43
Matrix: Water
Analysis Batch: 58441

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
Nitrate as N	2.50	2.52		mg/L		101	90 - 110	0	20
Nitrite as N	1.00	1.03		mg/L		103	90 - 110	1	20

Lab Sample ID: MRL 380-58441/40
Matrix: Water
Analysis Batch: 58441

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0125	0.0142	J	mg/L		113	50 - 150
Nitrite as N	0.0125	0.0134	J	mg/L		107	50 - 150

Lab Sample ID: MRL 380-58441/41
Matrix: Water
Analysis Batch: 58441

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate as N	0.0500	0.0478	J	mg/L		96	50 - 150
Nitrite as N	0.0500	0.0486	J	mg/L		97	50 - 150

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QC Sample Results

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

Job ID: 380-65785-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 380-65912-B-1 MS
Matrix: Water
Analysis Batch: 58441

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
Nitrate as N	0.61		1.25	1.90		mg/L		103	80 - 120
Nitrite as N	<0.050		0.500	0.502		mg/L		100	80 - 120

Lab Sample ID: 380-65912-B-1 MSD
Matrix: Water
Analysis Batch: 58441

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrate as N	0.61		1.25	1.90		mg/L		103	80 - 120	0	20
Nitrite as N	<0.050		0.500	0.501		mg/L		100	80 - 120	0	20

Lab Sample ID: MB 380-58442/39
Matrix: Water
Analysis Batch: 58442

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.50		0.50	mg/L			10/07/23 01:03	1
Sulfate	<0.25		0.25	mg/L			10/07/23 01:03	1

Lab Sample ID: LCS 380-58442/42
Matrix: Water
Analysis Batch: 58442

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	25.0	26.3		mg/L		105	90 - 110
Sulfate	50.0	51.7		mg/L		104	90 - 110

Lab Sample ID: LCSD 380-58442/43
Matrix: Water
Analysis Batch: 58442

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
Chloride	25.0	26.3		mg/L		105	90 - 110	0	20
Sulfate	50.0	51.8		mg/L		104	90 - 110	0	20

Lab Sample ID: MRL 380-58442/40
Matrix: Water
Analysis Batch: 58442

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.125	0.160	J	mg/L		128	50 - 150
Sulfate	0.250	0.270		mg/L		108	50 - 150

Lab Sample ID: MRL 380-58442/41
Matrix: Water
Analysis Batch: 58442

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	0.500	0.437	J	mg/L		87	50 - 150
Sulfate	1.00	0.963		mg/L		96	50 - 150

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QC Sample Results

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

Job ID: 380-65785-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: 380-65912-B-1 MS
Matrix: Water
Analysis Batch: 58442

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
Chloride	16		12.5	29.3		mg/L		110	80 - 120
Sulfate	7.3		25.0	33.9		mg/L		106	80 - 120

Lab Sample ID: 380-65912-B-1 MSD
Matrix: Water
Analysis Batch: 58442

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	16		12.5	29.3		mg/L		110	80 - 120	0	20
Sulfate	7.3		25.0	33.8		mg/L		106	80 - 120	0	20

Lab Sample ID: MB 380-59131/12
Matrix: Water
Analysis Batch: 59131

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	<5.0		5.0	ug/L			10/11/23 19:40	1

Lab Sample ID: LCS 380-59131/13
Matrix: Water
Analysis Batch: 59131

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	100	98.2		ug/L		98	90 - 110

Lab Sample ID: LCSD 380-59131/14
Matrix: Water
Analysis Batch: 59131

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
Bromide	100	98.1		ug/L		98	90 - 110	0	10

Lab Sample ID: MRL 380-59131/11
Matrix: Water
Analysis Batch: 59131

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Bromide	5.00	4.28	J	ug/L		86	75 - 125

Lab Sample ID: 380-65710-A-5 MS
Matrix: Water
Analysis Batch: 59131

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
Bromide	<5.0		50.0	49.0		ug/L		98	80 - 120

QC Sample Results

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

Job ID: 380-65785-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 380-65710-A-5 MSD
Matrix: Water
Analysis Batch: 59131

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bromide	<5.0		50.0	48.6		ug/L		97	80 - 120	1	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 380-59673/18
Matrix: Water
Analysis Batch: 59673

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<1.0		1.0	mg/L			10/16/23 14:27	1
Magnesium	<0.10		0.10	mg/L			10/16/23 14:27	1
Potassium	<1.0		1.0	mg/L			10/16/23 14:27	1
Sodium	<1.0		1.0	mg/L			10/16/23 14:27	1

Lab Sample ID: LCS 380-59673/20
Matrix: Water
Analysis Batch: 59673

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	50.0	51.9		mg/L		104	85 - 115
Magnesium	20.0	20.1		mg/L		100	85 - 115
Potassium	20.0	20.4		mg/L		102	85 - 115
Sodium	50.0	50.3		mg/L		101	85 - 115

Lab Sample ID: LCSD 380-59673/21
Matrix: Water
Analysis Batch: 59673

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
Calcium	50.0	51.6		mg/L		103	85 - 115	0	20
Magnesium	20.0	20.1		mg/L		100	85 - 115	0	20
Potassium	20.0	20.4		mg/L		102	85 - 115	0	20
Sodium	50.0	50.0		mg/L		100	85 - 115	1	20

Lab Sample ID: LLCS 380-59673/19
Matrix: Water
Analysis Batch: 59673

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	1.00	1.05		mg/L		105	50 - 150
Magnesium	0.100	0.0990	J	mg/L		99	50 - 150
Potassium	1.00	0.784	J	mg/L		78	50 - 150
Sodium	1.00	1.10		mg/L		110	50 - 150

Lab Sample ID: 380-65409-C-2 MS
Matrix: Water
Analysis Batch: 59673

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
Calcium	190		50.0	230		mg/L		77	70 - 130

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QC Sample Results

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

Job ID: 380-65785-1

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 380-65409-C-2 MS
Matrix: Water
Analysis Batch: 59673

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
Magnesium	110		20.0	129	4	mg/L		78	70 - 130
Potassium	70		20.0	89.0		mg/L		97	70 - 130

Lab Sample ID: 380-65409-C-2 MSD
Matrix: Water
Analysis Batch: 59673

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	190		50.0	229		mg/L		74	70 - 130	1	20
Magnesium	110		20.0	128	4	mg/L		74	70 - 130	0	20
Potassium	70		20.0	88.8		mg/L		96	70 - 130	0	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 380-59054/98
Matrix: Water
Analysis Batch: 59054

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	ug/L			10/11/23 17:52	1
Arsenic	<1.0		1.0	ug/L			10/11/23 17:52	1
Beryllium	<1.0		1.0	ug/L			10/11/23 17:52	1
Cadmium	<0.50		0.50	ug/L			10/11/23 17:52	1
Chromium	<1.0		1.0	ug/L			10/11/23 17:52	1
Copper	<2.0		2.0	ug/L			10/11/23 17:52	1
Lead	<0.50		0.50	ug/L			10/11/23 17:52	1
Nickel	<5.0		5.0	ug/L			10/11/23 17:52	1
Selenium	<5.0		5.0	ug/L			10/11/23 17:52	1
Silver	<0.50		0.50	ug/L			10/11/23 17:52	1
Thallium	<1.0		1.0	ug/L			10/11/23 17:52	1
Zinc	<20		20	ug/L			10/11/23 17:52	1

Lab Sample ID: LLCS 380-59054/99
Matrix: Water
Analysis Batch: 59054

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	0.989	J	ug/L		99	50 - 150
Arsenic	1.00	0.656	J	ug/L		66	50 - 150
Beryllium	1.00	1.03		ug/L		103	50 - 150
Cadmium	0.500	0.493	J	ug/L		99	50 - 150
Chromium	1.00	0.843	J	ug/L		84	50 - 150
Copper	2.00	2.03		ug/L		101	50 - 150
Lead	0.500	0.479	J	ug/L		96	50 - 150
Nickel	5.00	4.84	J	ug/L		97	50 - 150
Selenium	5.00	4.73	J	ug/L		95	50 - 150
Silver	0.500	0.333	J	ug/L		67	50 - 150
Thallium	1.00	0.880	J	ug/L		88	50 - 150
Zinc	20.0	19.6	J	ug/L		98	50 - 150

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QC Sample Results

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

Job ID: 380-65785-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 380-58858/1-A
Matrix: Water
Analysis Batch: 58962

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 58858

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<1.0		1.0	ug/L		10/11/23 09:17	10/11/23 15:30	1
Arsenic	<1.0		1.0	ug/L		10/11/23 09:17	10/11/23 15:30	1
Cadmium	<0.50		0.50	ug/L		10/11/23 09:17	10/11/23 15:30	1
Chromium	<1.0		1.0	ug/L		10/11/23 09:17	10/11/23 15:30	1
Copper	<2.0		2.0	ug/L		10/11/23 09:17	10/11/23 15:30	1
Lead	<0.50		0.50	ug/L		10/11/23 09:17	10/11/23 15:30	1
Nickel	<5.0		5.0	ug/L		10/11/23 09:17	10/11/23 15:30	1
Selenium	<5.0		5.0	ug/L		10/11/23 09:17	10/11/23 15:30	1
Silver	<0.50		0.50	ug/L		10/11/23 09:17	10/11/23 15:30	1
Thallium	<1.0		1.0	ug/L		10/11/23 09:17	10/11/23 15:30	1
Zinc	<20		20	ug/L		10/11/23 09:17	10/11/23 15:30	1

Lab Sample ID: LCS 380-58858/3-A
Matrix: Water
Analysis Batch: 58962

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 58858

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	52.2		ug/L		104	85 - 115
Arsenic	50.0	55.2		ug/L		110	85 - 115
Cadmium	25.0	24.9		ug/L		100	85 - 115
Chromium	50.0	48.1		ug/L		96	85 - 115
Copper	50.0	50.5		ug/L		101	85 - 115
Lead	50.0	53.3		ug/L		107	85 - 115
Nickel	50.0	51.6		ug/L		103	85 - 115
Selenium	50.0	50.5		ug/L		101	85 - 115
Silver	25.0	23.5		ug/L		94	85 - 115
Thallium	50.0	52.1		ug/L		104	85 - 115
Zinc	50.0	51.2		ug/L		102	85 - 115

Lab Sample ID: LCSD 380-58858/4-A
Matrix: Water
Analysis Batch: 58962

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 58858

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	50.0	53.5		ug/L		107	85 - 115	2	20
Arsenic	50.0	55.9		ug/L		112	85 - 115	1	20
Cadmium	25.0	25.3		ug/L		101	85 - 115	1	20
Chromium	50.0	47.7		ug/L		95	85 - 115	1	20
Copper	50.0	51.0		ug/L		102	85 - 115	1	20
Lead	50.0	53.3		ug/L		107	85 - 115	0	20
Nickel	50.0	50.3		ug/L		101	85 - 115	3	20
Selenium	50.0	50.4		ug/L		101	85 - 115	0	20
Silver	25.0	24.2		ug/L		97	85 - 115	3	20
Thallium	50.0	52.8		ug/L		106	85 - 115	1	20
Zinc	50.0	52.4		ug/L		105	85 - 115	2	20

QC Sample Results

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

Job ID: 380-65785-1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LLCS 380-58858/2-A
Matrix: Water
Analysis Batch: 58962

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 58858

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	1.00	1.06		ug/L		106	50 - 150
Arsenic	1.00	1.17		ug/L		117	50 - 150
Cadmium	0.500	0.500		ug/L		100	50 - 150
Chromium	1.00	<0.80		ug/L		78	50 - 150
Copper	2.00	2.15		ug/L		108	50 - 150
Lead	0.500	0.523		ug/L		105	50 - 150
Nickel	5.00	5.10		ug/L		102	50 - 150
Selenium	5.00	5.11		ug/L		102	50 - 150
Silver	0.500	0.419	J	ug/L		84	50 - 150
Thallium	1.00	1.05		ug/L		105	50 - 150
Zinc	20.0	22.6		ug/L		113	50 - 150

Lab Sample ID: 380-65666-A-3-B MS
Matrix: Water
Analysis Batch: 58962

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 58858

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	<1.0		50.0	46.1		ug/L		92	70 - 130
Arsenic	<1.0		50.0	49.9		ug/L		100	70 - 130
Cadmium	<0.50		25.0	21.7		ug/L		87	70 - 130
Chromium	<1.0		50.0	44.8		ug/L		90	70 - 130
Copper	<2.0		50.0	46.2		ug/L		92	70 - 130
Lead	<0.50		50.0	45.6		ug/L		91	70 - 130
Nickel	<5.0		50.0	45.7		ug/L		91	70 - 130
Selenium	<5.0		50.0	44.6		ug/L		89	70 - 130
Silver	<0.50		25.0	20.5		ug/L		82	70 - 130
Thallium	<1.0		50.0	44.5		ug/L		89	70 - 130
Zinc	<20		50.0	46.3		ug/L		93	70 - 130

Lab Sample ID: 380-65666-A-3-C MSD
Matrix: Water
Analysis Batch: 58962

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 58858

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<1.0		50.0	45.4		ug/L		91	70 - 130	2	20
Arsenic	<1.0		50.0	49.4		ug/L		99	70 - 130	1	20
Cadmium	<0.50		25.0	21.6		ug/L		87	70 - 130	0	20
Chromium	<1.0		50.0	44.5		ug/L		89	70 - 130	1	20
Copper	<2.0		50.0	46.2		ug/L		92	70 - 130	0	20
Lead	<0.50		50.0	46.7		ug/L		93	70 - 130	3	20
Nickel	<5.0		50.0	45.4		ug/L		91	70 - 130	1	20
Selenium	<5.0		50.0	44.5		ug/L		89	70 - 130	0	20
Silver	<0.50		25.0	20.7		ug/L		83	70 - 130	1	20
Thallium	<1.0		50.0	46.0		ug/L		92	70 - 130	3	20
Zinc	<20		50.0	46.3		ug/L		93	70 - 130	0	20

QC Sample Results

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

Job ID: 380-65785-1

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 810-76203/1-A
Matrix: Water
Analysis Batch: 76233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 76203

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.10		0.10	ug/L		10/09/23 13:26	10/09/23 20:54	1

Lab Sample ID: LCS 810-76203/3-A
Matrix: Water
Analysis Batch: 76233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 76203

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.00	0.999		ug/L		100	85 - 115

Lab Sample ID: 380-65739-C-1-B MS
Matrix: Water
Analysis Batch: 76233

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 76203

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.10		1.00	1.03		ug/L		103	70 - 130

Lab Sample ID: 380-65739-C-1-C MSD
Matrix: Water
Analysis Batch: 76233

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 76203

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	<0.10		1.00	1.02		ug/L		102	70 - 130	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 380-58938/1
Matrix: Water
Analysis Batch: 58938

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity	<2.0		2.0	mg/L			10/10/23 13:26	1
Bicarbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			10/10/23 13:26	1
Carbonate Alkalinity as CaCO3	<2.0		2.0	mg/L			10/10/23 13:26	1

Lab Sample ID: LCS 380-58938/3
Matrix: Water
Analysis Batch: 58938

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	100	98.8		mg/L		99	90 - 110

Lab Sample ID: LCSD 380-58938/18
Matrix: Water
Analysis Batch: 58938

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
Alkalinity	100	98.9		mg/L		99	90 - 110	0	20

QC Sample Results

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

Job ID: 380-65785-1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LLCS 380-58938/4
Matrix: Water
Analysis Batch: 58938

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

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	20.0	19.6		mg/L		98	90 - 110

Lab Sample ID: MRL 380-58938/2
Matrix: Water
Analysis Batch: 58938

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity	2.00	1.82	J	mg/L		91	50 - 150

Lab Sample ID: 380-66041-K-1 MS
Matrix: Water
Analysis Batch: 58938

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
Alkalinity	2.9		100	100		mg/L		97	80 - 120

Lab Sample ID: 380-66041-K-1 MSD
Matrix: Water
Analysis Batch: 58938

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alkalinity	2.9		100	101		mg/L		98	80 - 120	1	20

Lab Sample ID: 380-66041-K-1 DU
Matrix: Water
Analysis Batch: 58938

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity	2.9		2.73		mg/L		4	20
Bicarbonate Alkalinity as CaCO3	2.9		2.73		mg/L		4	20
Carbonate Alkalinity as CaCO3	<2.0		<2.0		mg/L		NC	20

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 380-58941/2
Matrix: Water
Analysis Batch: 58941

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<2.0		2.0	umhos/cm			10/10/23 13:26	1

Lab Sample ID: LCS 380-58941/4
Matrix: Water
Analysis Batch: 58941

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1000	1000		umhos/cm		100	90 - 110

QC Sample Results

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

Job ID: 380-65785-1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: LCSD 380-58941/16
Matrix: Water
Analysis Batch: 58941

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
Specific Conductance	1000	996		umhos/cm		100	90 - 110	1	10

Lab Sample ID: MRL 380-58941/3
Matrix: Water
Analysis Batch: 58941

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Specific Conductance	2.00	2.10		umhos/cm		105	50 - 150		

Lab Sample ID: 380-66041-K-1 DU
Matrix: Water
Analysis Batch: 58941

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	16		16.0		umhos/cm		0.6	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 380-58371/1
Matrix: Water
Analysis Batch: 58371

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	mg/L			10/06/23 17:28	1

Lab Sample ID: HLCS 380-58371/5
Matrix: Water
Analysis Batch: 58371

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

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	700	696		mg/L		99	80 - 114		

Lab Sample ID: LCS 380-58371/4
Matrix: Water
Analysis Batch: 58371

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	175	166		mg/L		95	80 - 114		

Lab Sample ID: MRL 380-58371/2
Matrix: Water
Analysis Batch: 58371

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Dissolved Solids	10.0	11.0		mg/L		110	50 - 150		

QC Sample Results

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

Job ID: 380-65785-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MRL 380-58371/3
Matrix: Water
Analysis Batch: 58371

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	10.0	11.0		mg/L		110	50 - 150

Lab Sample ID: 380-61296-E-13 DU
Matrix: Water
Analysis Batch: 58371

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	24		23.0		mg/L		4	10

Method: SM 4500 F C - Fluoride

Lab Sample ID: MB 380-59072/42
Matrix: Water
Analysis Batch: 59072

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.050		0.050	mg/L			10/11/23 17:31	1

Lab Sample ID: MB 380-59072/76
Matrix: Water
Analysis Batch: 59072

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.050		0.050	mg/L			10/11/23 19:52	1

Lab Sample ID: LCS 380-59072/78
Matrix: Water
Analysis Batch: 59072

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	1.00	0.995		mg/L		99	90 - 110

Lab Sample ID: LCSD 380-59072/79
Matrix: Water
Analysis Batch: 59072

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
Fluoride	1.00	0.990		mg/L		99	90 - 110	1	10

Lab Sample ID: MRL 380-59072/43
Matrix: Water
Analysis Batch: 59072

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.0500	0.0475	J	mg/L		95	50 - 150

QC Sample Results

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

Job ID: 380-65785-1

Method: SM 4500 F C - Fluoride (Continued)

Lab Sample ID: MRL 380-59072/77
Matrix: Water
Analysis Batch: 59072

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.0500	0.0469	J	mg/L		94	50 - 150

Lab Sample ID: MRL 380-59072/9
Matrix: Water
Analysis Batch: 59072

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.0500	0.0479	J	mg/L		96	50 - 150

Lab Sample ID: 380-65785-1 MS
Matrix: Water
Analysis Batch: 59072

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.051		1.00	1.04		mg/L		99	80 - 120

Lab Sample ID: 380-65785-1 MSD
Matrix: Water
Analysis Batch: 59072

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.051		1.00	1.03		mg/L		98	80 - 120	1	20

Method: SM 4500 H+ B - pH

Lab Sample ID: MB 380-58943/4
Matrix: Water
Analysis Batch: 58943

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	5.8			SU			10/10/23 13:26	1

Lab Sample ID: LCS 380-58943/5
Matrix: Water
Analysis Batch: 58943

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	6.00	6.0		SU		100	98 - 102

Lab Sample ID: LCSD 380-58943/17
Matrix: Water
Analysis Batch: 58943

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
pH	6.00	6.0		SU		101	98 - 102	0	2

QC Sample Results

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

Job ID: 380-65785-1

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: 380-66041-K-1 DU
Matrix: Water
Analysis Batch: 58943

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.8		6.8		SU		0	2

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 380-58694/1
Matrix: Water
Analysis Batch: 58694

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.050		0.050	mg/L			10/10/23 12:26	1

Lab Sample ID: LCS 380-58694/4
Matrix: Water
Analysis Batch: 58694

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.250	0.256		mg/L		102	90 - 110

Lab Sample ID: LCSD 380-58694/22
Matrix: Water
Analysis Batch: 58694

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
Sulfide	0.250	0.269		mg/L		108	90 - 110	5	20

Lab Sample ID: MRL 380-58694/17
Matrix: Water
Analysis Batch: 58694

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.0500	0.0530		mg/L		106	50 - 150

Lab Sample ID: MRL 380-58694/2
Matrix: Water
Analysis Batch: 58694

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.0500	0.0610		mg/L		122	50 - 150

Lab Sample ID: 380-65769-A-1 MS
Matrix: Water
Analysis Batch: 58694

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
Sulfide	0.094		0.250	0.362		mg/L		107	80 - 120

QC Sample Results

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

Job ID: 380-65785-1

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 380-65769-A-1 MSD
Matrix: Water
Analysis Batch: 58694

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	0.094		0.250	0.353		mg/L		104	80 - 120	3	20

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i

Lab Sample ID: 111830-B1
Matrix: BlankMatrix
Analysis Batch: O-42142

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42142_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2-Chlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
2-Methylphenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
2-Nitroaniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
2-Nitrophenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
3-Nitroaniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
4-Chloroaniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
4-Nitroaniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
4-Nitrophenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Acenaphthene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Acenaphthylene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Aniline	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Anthracene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benzidine	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benzoic Acid	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 111830-B1
Matrix: BlankMatrix
Analysis Batch: O-42142

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-42142_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Chrysene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Dibenzofuran	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Dibenzothiophene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Fluoranthene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Fluorene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Hexachloroethane	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Naphthalene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Nitrobenzene	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Pentachlorophenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Perylene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Phenanthrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1
Phenol	ND		0.2	0.1	µg/L		10/12/23 00:00	11/09/23 19:20	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		10/12/23 00:00	11/09/23 19:20	1
Pyrene	ND		0.005	0.001	µg/L		10/12/23 00:00	11/09/23 19:20	1

Surrogate	Blank %Recovery	Blank Qualifier	Limits	Prepared	Analyzed	Dil Fac
(2,4,6-Tribromophenol)	44		30 - 130	10/12/23 00:00	11/09/23 19:20	1
(d10-Acenaphthene)	101		27 - 133	10/12/23 00:00	11/09/23 19:20	1
(d10-Phenanthrene)	100		43 - 129	10/12/23 00:00	11/09/23 19:20	1
(d12-Chrysene)	97		52 - 144	10/12/23 00:00	11/09/23 19:20	1
(d12-Perylene)	92		36 - 161	10/12/23 00:00	11/09/23 19:20	1
(d5-Phenol)	107		0 - 130	10/12/23 00:00	11/09/23 19:20	1
(d8-Naphthalene)	104		25 - 125	10/12/23 00:00	11/09/23 19:20	1

Lab Sample ID: 111830-BS1
Matrix: BlankMatrix
Analysis Batch: O-42142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42142_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.496		µg/L		99	31 - 128
1-Methylphenanthrene	0.5	0.481		µg/L		96	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.497		µg/L		99	55 - 122
2,4,5-Trichlorophenol	0.5	0.224		µg/L		45	30 - 130
2,4,6-Trichlorophenol	1	0.506		µg/L		51	30 - 130
2,4-Dichlorophenol	1	0.796		µg/L		80	51 - 117
2,4-Dinitrophenol	1	0.00308		µg/L		0	0 - 152
2,6-Dichlorophenol	0.5	0.349		µg/L		70	30 - 130
2,6-Dimethylnaphthalene	0.5	0.484		µg/L		97	48 - 120

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 111830-BS1
Matrix: BlankMatrix
Analysis Batch: O-42142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42142_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,6-Di-tert-butyl-4-methylphenol	1	0.833		µg/L		83	50 - 150
2,6-Di-tert-butylphenol	1	0.87		µg/L		87	50 - 150
2-Chloronaphthalene	1	0.933		µg/L		93	53 - 130
2-Chlorophenol	1	0.848		µg/L		85	41 - 120
2-Methyl-4,6-dinitrophenol	1	0.225		µg/L		22	0 - 141
2-Methylnaphthalene	1.5	1.59		µg/L		106	47 - 130
2-Methylphenol	1	0.923		µg/L		92	40 - 117
2-Nitroaniline	1	1.05		µg/L		105	69 - 114
2-Nitrophenol	1	0.752		µg/L		75	40 - 117
3+4-Methylphenol	1	0.947		µg/L		95	0 - 130
3-Nitroaniline	1	0.853		µg/L		85	23 - 137
4-Bromophenylphenyl ether	1	0.882		µg/L		88	61 - 132
4-Chloro-3-methylphenol	1	0.989		µg/L		99	51 - 128
4-Chloroaniline	1	0.853		µg/L		85	50 - 150
4-Chlorophenylphenyl ether	1	0.902		µg/L		90	63 - 130
4-Nitroaniline	1	1.1		µg/L		110	10 - 159
4-Nitrophenol	2	2.26		µg/L		113	10 - 164
6-tert-butyl-2,4-dimethylphenol	1	0.826		µg/L		83	50 - 150
Acenaphthene	1.5	1.64		µg/L		109	53 - 131
Acenaphthylene	1.5	1.65		µg/L		110	43 - 140
Aniline	1	0.555		µg/L		56	50 - 150
Anthracene	1.5	1.57		µg/L		105	58 - 135
Benz[a]anthracene	1.5	1.63		µg/L		109	55 - 145
Benzidine	1	0.0479		µg/L		5	0 - 125
Benzo[a]pyrene	1.5	1.4		µg/L		93	51 - 143
Benzo[b]fluoranthene	1.5	1.58		µg/L		105	46 - 165
Benzo[e]pyrene	0.5	0.508		µg/L		102	42 - 152
Benzo[g,h,i]perylene	1.5	1.47		µg/L		98	63 - 133
Benzo[k]fluoranthene	1.5	1.4		µg/L		93	56 - 145
Benzoic Acid	1	0.149		µg/L		15	2 - 145
Benzyl Alcohol	1	0.96		µg/L		96	43 - 148
Biphenyl	0.5	0.497		µg/L		99	56 - 119
Bis(2-Chloroethoxy) methane	1	1.06		µg/L		106	66 - 122
Bis(2-Chloroethyl) ether	1	0.937		µg/L		94	43 - 127
Bis(2-Chloroisopropyl) ether	1	1.06		µg/L		106	49 - 128
Chrysene	1.5	1.42		µg/L		95	56 - 141
Dibenz[a,h]anthracene	1.5	1.35		µg/L		90	55 - 150
Dibenzo[a,l]pyrene	1.5	0.786		µg/L		52	50 - 150
Dibenzofuran	0.1000000 01490116	0.135		µg/L		135	50 - 150
Dibenzothiophene	0.5	0.491		µg/L		98	46 - 126
Disalicylidenepropanediamine	25	13.3		µg/L		53	50 - 150
Fluoranthene	1.5	1.64		µg/L		109	60 - 146
Fluorene	1.5	1.6		µg/L		107	58 - 131
Hexachloroethane	1	0.73		µg/L		73	27 - 130
Indeno[1,2,3-cd]pyrene	1.5	1.31		µg/L		87	50 - 151
Naphthalene	1.5	1.57		µg/L		105	41 - 126
Nitrobenzene	1	0.877		µg/L		88	54 - 111
N-Nitrosodi-n-propylamine	1	0.887		µg/L		89	61 - 152

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 111830-BS1
Matrix: BlankMatrix
Analysis Batch: O-42142

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-42142_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
N-Nitrosodiphenylamine	1	0.905		µg/L		90	49 - 142
Perylene	0.5	0.483		µg/L		97	48 - 141
Phenanthrene	1.5	1.58		µg/L		105	67 - 127
Phenol	1	0.882		µg/L		88	29 - 114
p-tert-Butylphenol	1	1.35		µg/L		135	50 - 150
Pyrene	1.5	1.65		µg/L		110	54 - 156

Surrogate	LCS %Recovery	LCS Qualifier	Limits
(2,4,6-Tribromophenol)	59		30 - 130
(d10-Acenaphthene)	103		27 - 133
(d10-Phenanthrene)	99		43 - 129
(d12-Chrysene)	95		52 - 144
(d12-Perylene)	93		36 - 161
(d5-Phenol)	112		0 - 130
(d8-Naphthalene)	101		25 - 125

Lab Sample ID: 111830-BS2
Matrix: BlankMatrix
Analysis Batch: O-42142

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42142_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.483		µg/L		97	31 - 128	2	30
1-Methylphenanthrene	0.5	0.482		µg/L		96	66 - 127	0	30
2,3,5-Trimethylnaphthalene	0.5	0.49		µg/L		98	55 - 122	1	30
2,4,5-Trichlorophenol	0.5	0.156		µg/L		31	30 - 130	37	30
2,4,6-Trichlorophenol	1	0.378		µg/L		38	30 - 130	29	30
2,4-Dichlorophenol	1	0.705		µg/L		70	51 - 117	13	30
2,4-Dinitrophenol	1	0.000887		µg/L		0	0 - 152	0	30
2,6-Dichlorophenol	0.5	0.323		µg/L		65	30 - 130	7	30
2,6-Dimethylnaphthalene	0.5	0.479		µg/L		96	48 - 120	1	30
2,6-Di-tert-butyl-4-methylphenol	1	0.811		µg/L		81	50 - 150	2	30
2,6-Di-tert-butylphenol	1	0.842		µg/L		84	50 - 150	4	30
2-Chloronaphthalene	1	0.892		µg/L		89	53 - 130	4	30
2-Chlorophenol	1	0.789		µg/L		79	41 - 120	7	30
2-Methyl-4,6-dinitrophenol	1	0.106		µg/L		11	0 - 141	67	30
2-Methylnaphthalene	1.5	1.54		µg/L		103	47 - 130	3	30
2-Methylphenol	1	0.861		µg/L		86	40 - 117	7	30
2-Nitroaniline	1	1.03		µg/L		103	69 - 114	2	30
2-Nitrophenol	1	0.74		µg/L		74	40 - 117	1	30
3+4-Methylphenol	1	0.883		µg/L		88	0 - 130	8	30
3-Nitroaniline	1	0.86		µg/L		86	23 - 137	1	30
4-Bromophenylphenyl ether	1	0.855		µg/L		86	61 - 132	2	30
4-Chloro-3-methylphenol	1	0.952		µg/L		95	51 - 128	4	30
4-Chloroaniline	1	0.772		µg/L		77	50 - 150	10	30
4-Chlorophenylphenyl ether	1	0.88		µg/L		88	63 - 130	2	30
4-Nitroaniline	1	1.1		µg/L		110	10 - 159	0	30
4-Nitrophenol	2	2.21		µg/L		111	10 - 164	3	30
6-tert-butyl-2,4-dimethylphenol	1	0.748		µg/L		75	50 - 150	10	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 625 Acid/Base/PAH + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 111830-BS2
Matrix: BlankMatrix
Analysis Batch: O-42142

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-42142_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Acenaphthene	1.5	1.58		µg/L		105	53 - 131	4	30	
Acenaphthylene	1.5	1.59		µg/L		106	43 - 140	4	30	
Aniline	1	0.532		µg/L		53	50 - 150	6	30	
Anthracene	1.5	1.55		µg/L		103	58 - 135	2	30	
Benz[a]anthracene	1.5	1.62		µg/L		108	55 - 145	1	30	
Benzidine	1	0.034		µg/L		3	0 - 125	50	30	
Benzo[a]pyrene	1.5	1.41		µg/L		94	51 - 143	1	30	
Benzo[b]fluoranthene	1.5	1.6		µg/L		107	46 - 165	2	30	
Benzo[e]pyrene	0.5	0.498		µg/L		100	42 - 152	2	30	
Benzo[g,h,i]perylene	1.5	1.48		µg/L		99	63 - 133	1	30	
Benzo[k]fluoranthene	1.5	1.55		µg/L		103	56 - 145	10	30	
Benzoic Acid	1	0.14		µg/L		14	2 - 145	7	30	
Benzyl Alcohol	1	0.85		µg/L		85	43 - 148	12	30	
Biphenyl	0.5	0.49		µg/L		98	56 - 119	1	30	
Bis(2-Chloroethoxy) methane	1	1.02		µg/L		102	66 - 122	4	30	
Bis(2-Chloroethyl) ether	1	0.88		µg/L		88	43 - 127	7	30	
Bis(2-Chloroisopropyl) ether	1	1		µg/L		100	49 - 128	6	30	
Chrysene	1.5	1.5		µg/L		100	56 - 141	5	30	
Dibenz[a,h]anthracene	1.5	1.32		µg/L		88	55 - 150	2	30	
Dibenz[a,l]pyrene	1.5	0.761		µg/L		51	50 - 150	2	30	
Dibenzofuran	0.1000000 01490116	0.106		µg/L		106	50 - 150	24	30	
Dibenzothiophene	0.5	0.493		µg/L		99	46 - 126	1	30	
Disalicylidenepropanediamine	25	21		µg/L		84	50 - 150	45	30	
Fluoranthene	1.5	1.63		µg/L		109	60 - 146	0	30	
Fluorene	1.5	1.58		µg/L		105	58 - 131	2	30	
Hexachloroethane	1	0.683		µg/L		68	27 - 130	7	30	
Indeno[1,2,3-cd]pyrene	1.5	1.32		µg/L		88	50 - 151	1	30	
Naphthalene	1.5	1.51		µg/L		101	41 - 126	4	30	
Nitrobenzene	1	0.848		µg/L		85	54 - 111	3	30	
N-Nitrosodi-n-propylamine	1	0.78		µg/L		78	61 - 152	13	30	
N-Nitrosodiphenylamine	1	0.745		µg/L		75	49 - 142	20	30	
Perylene	0.5	0.462		µg/L		92	48 - 141	5	30	
Phenanthrene	1.5	1.56		µg/L		104	67 - 127	1	30	
Phenol	1	0.801		µg/L		80	29 - 114	10	30	
p-tert-Butylphenol	1	1.32		µg/L		132	50 - 150	2	30	
Pyrene	1.5	1.65		µg/L		110	54 - 156	0	30	

Surrogate	LCS DUP		Limits
	%Recovery	Qualifier	
(2,4,6-Tribromophenol)	55		30 - 130
(d10-Acenaphthene)	97		27 - 133
(d10-Phenanthrene)	96		43 - 129
(d12-Chrysene)	94		52 - 144
(d12-Perylene)	89		36 - 161
(d5-Phenol)	103		0 - 130
(d8-Naphthalene)	96		25 - 125

QC Sample Results

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

Job ID: 380-65785-1

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Lab Sample ID: 23MEJ002WB
Matrix: WATER
Analysis Batch: 23MEJ002W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ETHANOL	ND	U	2000		ug/L			10/09/23 14:31	1

Lab Sample ID: 23MEJ002WL
Matrix: WATER
Analysis Batch: 23MEJ002W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
ETHANOL	10000	10800		ug/L		108	60 - 130

Lab Sample ID: 23J065-01M
Matrix: WATER
Analysis Batch: 23MEJ002W

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
ETHANOL	ND		10000	10900		ug/L		109	60 - 130

Lab Sample ID: 23J065-01S
Matrix: WATER
Analysis Batch: 23MEJ002W

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
ETHANOL	ND		10000	10200		ug/L		102	60 - 130	7	30

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

Lab Sample ID: 23VGH7J01B
Matrix: WATER
Analysis Batch: 23VGH7J01

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			10/10/23 14:05	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE					10/10/23 14:05	1

Lab Sample ID: 23VGH7J01L
Matrix: WATER
Analysis Batch: 23VGH7J01

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.5	0.449		mg/L		90	60 - 130

Surrogate	%Recovery	LCS Qualifier	Limits
BROMOFLUOROBENZENE	102		70 - 130

QC Sample Results

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

Job ID: 380-65785-1

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

Lab Sample ID: 23J065-01M
Matrix: WATER
Analysis Batch: 23VGH7J01

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	ND		0.5	0.47		mg/L		94	50 - 130
Surrogate	%Recovery	MS Qualifier	MS Limits						
BROMOFLUOROBENZENE	112		60 - 140						

Lab Sample ID: 23J065-01S
Matrix: WATER
Analysis Batch: 23VGH7J01

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
GASOLINE	ND		0.5	0.476		mg/L		95	50 - 130	1	30
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
BROMOFLUOROBENZENE	116		60 - 140								

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Lab Sample ID: 23DSJ014WB
Matrix: WATER
Analysis Batch: 23DSJ014W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			10/14/23 10:29	1
JP5	ND	U	0.05		mg/L			10/14/23 10:29	1
JP8	ND	U	0.05		mg/L			10/14/23 10:29	1
MOTOR OIL	ND	U	0.05		mg/L			10/14/23 10:29	1
Surrogate	%Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE								10/14/23 10:29	1
HEXACOSANE								10/14/23 10:29	1

Lab Sample ID: 23DSJ014WL
Matrix: WATER
Analysis Batch: 23DSJ014W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DIESEL	2.5	2.09		mg/L		84	50 - 130
Surrogate	%Recovery	LCS Qualifier	LCS Limits				
BROMOBENZENE	68		60 - 130				
HEXACOSANE	99		60 - 130				

Lab Sample ID: 23J5J014WL
Matrix: WATER
Analysis Batch: 23DSJ014W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP5	2.5	1.54		mg/L		62	30 - 160

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-65785-1

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO (Continued)

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
BROMOBENZENE	66		60 - 130
HEXACOSANE	97		60 - 130

Lab Sample ID: 23J8J014WL
Matrix: WATER
Analysis Batch: 23DSJ014W

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

<i>Analyte</i>	<i>Spike</i> <i>Added</i>	<i>LCS</i> <i>Result</i>	<i>LCS</i> <i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i> <i>Limits</i>
JP8	2.5	1.78		mg/L		71	30 - 160

<i>Surrogate</i>	<i>LCS</i> <i>%Recovery</i>	<i>LCS</i> <i>Qualifier</i>	<i>Limits</i>
BROMOBENZENE	90		60 - 130
HEXACOSANE	102		60 - 130

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QC Association Summary

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

Job ID: 380-65785-1

GC/MS VOA

Analysis Batch: 58681

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-58681/8	Method Blank	Total/NA	Water	524.2	
LCS 380-58681/5	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-58681/6	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-58681/3	Lab Control Sample	Total/NA	Water	524.2	
MRL 380-58681/4	Lab Control Sample	Total/NA	Water	524.2	

Analysis Batch: 58698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	524.2	
380-65785-2	TRAVEL BLANK	Total/NA	Water	524.2	
MB 380-58698/5	Method Blank	Total/NA	Water	524.2	
LCS 380-58698/3	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-58698/4	Lab Control Sample Dup	Total/NA	Water	524.2	

Analysis Batch: 58700

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	524.2	
380-65785-2	TRAVEL BLANK	Total/NA	Water	524.2	
MB 380-58700/5	Method Blank	Total/NA	Water	524.2	
LCS 380-58700/2	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-58700/3	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-58700/4	Lab Control Sample	Total/NA	Water	524.2	

Analysis Batch: 58904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	524.2	
380-65785-2	TRAVEL BLANK	Total/NA	Water	524.2	
MB 380-58904/8	Method Blank	Total/NA	Water	524.2	
LCS 380-58904/4	Lab Control Sample	Total/NA	Water	524.2	
LCSD 380-58904/5	Lab Control Sample Dup	Total/NA	Water	524.2	
MRL 380-58904/6	Lab Control Sample	Total/NA	Water	524.2	
MRL 380-58904/7	Lab Control Sample	Total/NA	Water	524.2	

GC/MS Semi VOA

Prep Batch: 58414

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	525.2	
MB 380-58414/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-58414/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-58414/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-58414/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-64951-EQ-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-65745-X-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 58450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	525.2	58414
MB 380-58414/21-A	Method Blank	Total/NA	Water	525.2	58414
LCS 380-58414/23-A	Lab Control Sample	Total/NA	Water	525.2	58414
LCSD 380-58414/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	58414

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-65785-1

GC/MS Semi VOA (Continued)

Analysis Batch: 58450 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 380-58414/22-A	Lab Control Sample	Total/NA	Water	525.2	58414
380-64951-EQ-1-A MS	Matrix Spike	Total/NA	Water	525.2	58414
380-65745-X-1-A DU	Duplicate	Total/NA	Water	525.2	58414

GC Semi VOA

Prep Batch: 58522

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	504.1	
380-65785-2	TRAVEL BLANK	Total/NA	Water	504.1	
MBL 380-58522/4-A	Method Blank	Total/NA	Water	504.1	
LCS 380-58522/29-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-58522/2-A	Lab Control Sample	Total/NA	Water	504.1	
MRL 380-58522/3-A	Lab Control Sample	Total/NA	Water	504.1	
380-65868-J-1-A MS	Matrix Spike	Total/NA	Water	504.1	
380-65869-H-1-A DU	Duplicate	Total/NA	Water	504.1	

Prep Batch: 58555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	505	
MB 380-58555/3-A	Method Blank	Total/NA	Water	505	
MRL 380-58555/1-A	Lab Control Sample	Total/NA	Water	505	
MRL 380-58555/2-A	Lab Control Sample	Total/NA	Water	505	
380-65571-C-3-A MS	Matrix Spike	Total/NA	Water	505	
380-65571-D-3-A MS	Matrix Spike	Total/NA	Water	505	
380-65596-D-1-A MS	Matrix Spike	Total/NA	Water	505	
380-65596-G-1-A MS	Matrix Spike	Total/NA	Water	505	

Analysis Batch: 59080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	504.1	58522
380-65785-2	TRAVEL BLANK	Total/NA	Water	504.1	58522
MBL 380-58522/4-A	Method Blank	Total/NA	Water	504.1	58522
LCS 380-58522/29-A	Lab Control Sample	Total/NA	Water	504.1	58522
MRL 380-58522/2-A	Lab Control Sample	Total/NA	Water	504.1	58522
MRL 380-58522/3-A	Lab Control Sample	Total/NA	Water	504.1	58522
380-65868-J-1-A MS	Matrix Spike	Total/NA	Water	504.1	58522
380-65869-H-1-A DU	Duplicate	Total/NA	Water	504.1	58522

Analysis Batch: 59452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	505	58555
MB 380-58555/3-A	Method Blank	Total/NA	Water	505	58555
MRL 380-58555/1-A	Lab Control Sample	Total/NA	Water	505	58555
MRL 380-58555/2-A	Lab Control Sample	Total/NA	Water	505	58555
380-65571-C-3-A MS	Matrix Spike	Total/NA	Water	505	58555
380-65571-D-3-A MS	Matrix Spike	Total/NA	Water	505	58555
380-65596-D-1-A MS	Matrix Spike	Total/NA	Water	505	58555
380-65596-G-1-A MS	Matrix Spike	Total/NA	Water	505	58555

QC Association Summary

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

Job ID: 380-65785-1

HPLC/IC

Analysis Batch: 58315

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	300.0	
MB 380-58315/42	Method Blank	Total/NA	Water	300.0	
LCS 380-58315/45	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-58315/46	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-58315/43	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-58315/44	Lab Control Sample	Total/NA	Water	300.0	
380-65576-E-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-65576-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 58316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	300.0	
MB 380-58316/42	Method Blank	Total/NA	Water	300.0	
LCS 380-58316/45	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-58316/46	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-58316/43	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-58316/44	Lab Control Sample	Total/NA	Water	300.0	
380-65576-E-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-65576-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 58441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-58441/39	Method Blank	Total/NA	Water	300.0	
LCS 380-58441/42	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-58441/43	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-58441/40	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-58441/41	Lab Control Sample	Total/NA	Water	300.0	
380-65912-B-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-65912-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 58442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	300.0	
MB 380-58442/39	Method Blank	Total/NA	Water	300.0	
LCS 380-58442/42	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-58442/43	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-58442/40	Lab Control Sample	Total/NA	Water	300.0	
MRL 380-58442/41	Lab Control Sample	Total/NA	Water	300.0	
380-65912-B-1 MS	Matrix Spike	Total/NA	Water	300.0	
380-65912-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 59131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	300.0	
MB 380-59131/12	Method Blank	Total/NA	Water	300.0	
LCS 380-59131/13	Lab Control Sample	Total/NA	Water	300.0	
LCSD 380-59131/14	Lab Control Sample Dup	Total/NA	Water	300.0	
MRL 380-59131/11	Lab Control Sample	Total/NA	Water	300.0	
380-65710-A-5 MS	Matrix Spike	Total/NA	Water	300.0	
380-65710-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

QC Association Summary

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

Job ID: 380-65785-1

Metals

Prep Batch: 58858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total Recoverable	Water	200.8	
MB 380-58858/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 380-58858/3-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 380-58858/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	
LLCS 380-58858/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
380-65666-A-3-B MS	Matrix Spike	Total Recoverable	Water	200.8	
380-65666-A-3-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	

Analysis Batch: 58962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total Recoverable	Water	200.8	58858
MB 380-58858/1-A	Method Blank	Total Recoverable	Water	200.8	58858
LCS 380-58858/3-A	Lab Control Sample	Total Recoverable	Water	200.8	58858
LCSD 380-58858/4-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	58858
LLCS 380-58858/2-A	Lab Control Sample	Total Recoverable	Water	200.8	58858
380-65666-A-3-B MS	Matrix Spike	Total Recoverable	Water	200.8	58858
380-65666-A-3-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	200.8	58858

Analysis Batch: 59054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total Recoverable	Water	200.8	58858
MB 380-59054/98	Method Blank	Total/NA	Water	200.8	
LLCS 380-59054/99	Lab Control Sample	Total/NA	Water	200.8	

Analysis Batch: 59673

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	200.7 Rev 4.4	
MB 380-59673/18	Method Blank	Total/NA	Water	200.7 Rev 4.4	
LCS 380-59673/20	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
LCSD 380-59673/21	Lab Control Sample Dup	Total/NA	Water	200.7 Rev 4.4	
LLCS 380-59673/19	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	
380-65409-C-2 MS	Matrix Spike	Total/NA	Water	200.7 Rev 4.4	
380-65409-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	200.7 Rev 4.4	

Prep Batch: 76203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	245.1	
MB 810-76203/1-A	Method Blank	Total/NA	Water	245.1	
LCS 810-76203/3-A	Lab Control Sample	Total/NA	Water	245.1	
380-65739-C-1-B MS	Matrix Spike	Total/NA	Water	245.1	
380-65739-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	

Analysis Batch: 76233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	245.1	76203
MB 810-76203/1-A	Method Blank	Total/NA	Water	245.1	76203
LCS 810-76203/3-A	Lab Control Sample	Total/NA	Water	245.1	76203
380-65739-C-1-B MS	Matrix Spike	Total/NA	Water	245.1	76203
380-65739-C-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	245.1	76203

QC Association Summary

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

Job ID: 380-65785-1

General Chemistry

Analysis Batch: 58371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	SM 2540C	
MB 380-58371/1	Method Blank	Total/NA	Water	SM 2540C	
HLCS 380-58371/5	Lab Control Sample	Total/NA	Water	SM 2540C	
LCS 380-58371/4	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-58371/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MRL 380-58371/3	Lab Control Sample	Total/NA	Water	SM 2540C	
380-61296-E-13 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 58694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	SM 4500 S2 D	
MB 380-58694/1	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 380-58694/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 380-58694/22	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
MRL 380-58694/17	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
MRL 380-58694/2	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
380-65769-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
380-65769-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 58938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	SM 2320B	
MB 380-58938/1	Method Blank	Total/NA	Water	SM 2320B	
LCS 380-58938/3	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 380-58938/18	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
LLCS 380-58938/4	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 380-58938/2	Lab Control Sample	Total/NA	Water	SM 2320B	
380-66041-K-1 MS	Matrix Spike	Total/NA	Water	SM 2320B	
380-66041-K-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 2320B	
380-66041-K-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 58941

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	SM 2510B	
MB 380-58941/2	Method Blank	Total/NA	Water	SM 2510B	
LCS 380-58941/4	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 380-58941/16	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MRL 380-58941/3	Lab Control Sample	Total/NA	Water	SM 2510B	
380-66041-K-1 DU	Duplicate	Total/NA	Water	SM 2510B	

Analysis Batch: 58943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	SM 4500 H+ B	
MB 380-58943/4	Method Blank	Total/NA	Water	SM 4500 H+ B	
LCS 380-58943/5	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSD 380-58943/17	Lab Control Sample Dup	Total/NA	Water	SM 4500 H+ B	
380-66041-K-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 59072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	SM 4500 F C	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-65785-1

General Chemistry (Continued)

Analysis Batch: 59072 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-59072/42	Method Blank	Total/NA	Water	SM 4500 F C	
MB 380-59072/76	Method Blank	Total/NA	Water	SM 4500 F C	
LCS 380-59072/78	Lab Control Sample	Total/NA	Water	SM 4500 F C	
LCSD 380-59072/79	Lab Control Sample Dup	Total/NA	Water	SM 4500 F C	
MRL 380-59072/43	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 380-59072/77	Lab Control Sample	Total/NA	Water	SM 4500 F C	
MRL 380-59072/9	Lab Control Sample	Total/NA	Water	SM 4500 F C	
380-65785-1 MS	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	SM 4500 F C	
380-65785-1 MSD	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	SM 4500 F C	

Subcontract

Analysis Batch: O-42142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	625 Acid/Base/PAH + TICs	O-42142_P
111830-B1	Method Blank	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42142_P
111830-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42142_P
111830-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 Acid/Base/PAH + TICs	O-42142_P

Analysis Batch: 23DSJ014W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	8015 LL DRO/MRO/JP5/J P8	
23DSJ014WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23DSJ014WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J5J014WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	
23J8J014WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/J P8	

Analysis Batch: 23MEJ002W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	8015 Ethanol	
23MEJ002WB	Method Blank	Total/NA	WATER	8015 Ethanol	
23MEJ002WL	Lab Control Sample	Total/NA	WATER	8015 Ethanol	
23J065-01M	Matrix Spike	Total/NA	WATER	8015 Ethanol	
23J065-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Ethanol	

QC Association Summary

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

Job ID: 380-65785-1

Subcontract

Analysis Batch: 23VGH7J01

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-65785-2	TRAVEL BLANK	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
23VGH7J01B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23VGH7J01L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23J065-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23J065-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-42142_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Total/NA	Water	EPA_625	
111830-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
111830-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
111830-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

Lab Chronicle

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

Job ID: 380-65785-1

Client Sample ID: Aiea Wells Pumps 1&2 (260) P2

Lab Sample ID: 380-65785-1

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	58700	P3EE	EA POM	10/10/23 18:14
Total/NA	Analysis	524.2		1	58698	Q6AD	EA POM	10/11/23 03:02
Total/NA	Analysis	524.2		1	58904	P3EE	EA POM	10/11/23 23:29
Total/NA	Prep	525.2			58414	N8NE	EA POM	10/07/23 14:37
Total/NA	Analysis	525.2		1	58450	Q8LA	EA POM	10/08/23 15:13
Total/NA	Prep	504.1			58522	K9GY	EA POM	10/09/23 11:30 - 10/09/23 12:18 ¹
Total/NA	Analysis	504.1		1	59080	K9GY	EA POM	10/09/23 19:14
Total/NA	Prep	505			58555	DR5R	EA POM	10/09/23 11:51 - 10/09/23 13:48 ¹
Total/NA	Analysis	505		1	59452	ULRL	EA POM	10/10/23 04:03
Total/NA	Analysis	300.0		1	58315	VB9B	EA POM	10/06/23 05:51
Total/NA	Analysis	300.0		1	58316	VB9B	EA POM	10/06/23 05:51
Total/NA	Analysis	300.0		2	58442	VB9B	EA POM	10/07/23 07:42
Total/NA	Analysis	300.0		1	59131	UNJR	EA POM	10/12/23 05:05
Total/NA	Analysis	200.7 Rev 4.4		1	59673	J9ZD	EA POM	10/16/23 14:39
Total Recoverable	Prep	200.8			58858	Z45W	EA POM	10/11/23 09:17
Total Recoverable	Analysis	200.8		1	58962	AAE8	EA POM	10/11/23 16:07
Total Recoverable	Prep	200.8			58858	Z45W	EA POM	10/11/23 09:17
Total Recoverable	Analysis	200.8		1	59054	AAE8	EA POM	10/11/23 19:20
Total/NA	Prep	245.1			76203	AC	EA SB	10/09/23 13:26
Total/NA	Analysis	245.1		1	76233	AC	EA SB	10/09/23 21:39
Total/NA	Analysis	SM 2320B		1	58938	D5MQ	EA POM	10/10/23 16:14
Total/NA	Analysis	SM 2510B		1	58941	D5MQ	EA POM	10/10/23 16:14
Total/NA	Analysis	SM 2540C		1	58371	UJRF	EA POM	10/06/23 17:28
Total/NA	Analysis	SM 4500 F C		1	59072	D5MQ	EA POM	10/11/23 20:11
Total/NA	Analysis	SM 4500 H+ B		1	58943	D5MQ	EA POM	10/10/23 16:14
Total/NA	Analysis	SM 4500 S2 D		1	58694	MH2L	EA POM	10/10/23 12:26
Total/NA	Prep	EPA_625		1	O-42142_P			10/12/23 00:00
Total/NA	Analysis	625 Acid/Base/PAH + TICs		1	O-42142_YC			11/10/23 00:36
Total/NA	Analysis	8015 Ethanol		1	23MEJ002W	DBaren		10/09/23 15:33
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7J01	CMpang		10/10/23 17:28
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	23DSJ014W	SDees		10/14/23 15:28

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65785-2

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	524.2		1	58700	P3EE	EA POM	10/10/23 18:38
Total/NA	Analysis	524.2		1	58698	Q6AD	EA POM	10/11/23 03:26
Total/NA	Analysis	524.2		1	58904	P3EE	EA POM	10/11/23 19:46

Eurofins Eaton Analytical Pomona

Lab Chronicle

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

Job ID: 380-65785-1

Client Sample ID: TRAVEL BLANK

Lab Sample ID: 380-65785-2

Date Collected: 10/04/23 10:01

Matrix: Water

Date Received: 10/05/23 10:20

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Total/NA	Prep	504.1			58522	K9GY	EA POM	10/09/23 11:30 - 10/09/23 12:18 ¹
Total/NA	Analysis	504.1		1	59080	K9GY	EA POM	10/09/23 19:48
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7J01	CMpang		10/10/23 19:29

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

= Physis Environmental Laboratories, 1904 Wright Circle, Anaheim, CA 92806

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

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Accreditation/Certification Summary

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

Job ID: 380-65785-1

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	01-31-24

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
505	505	Water	Polychlorinated biphenyls, Total
524.2		Water	1,1,1,2-Tetrachloroethane
524.2		Water	1,1,2,2-Tetrachloroethane
524.2		Water	1,1-Dichloroethane
524.2		Water	1,1-Dichloropropene
524.2		Water	1,2,3-Trichlorobenzene
524.2		Water	1,2,3-Trichloropropane
524.2		Water	1,2,4-Trimethylbenzene
524.2		Water	1,3,5-Trimethylbenzene
524.2		Water	1,3-Dichloropropane
524.2		Water	1,3-Dichloropropene, Total
524.2		Water	2,2-Dichloropropane
524.2		Water	2-Butanone (MEK)
524.2		Water	4-Methyl-2-pentanone (MIBK)
524.2		Water	Acetone
524.2		Water	Bromobenzene
524.2		Water	Bromochloromethane
524.2		Water	Bromoethane
524.2		Water	Bromomethane (Methyl Bromide)
524.2		Water	Carbon disulfide
524.2		Water	Chloroethane
524.2		Water	Chloromethane (methyl chloride)
524.2		Water	cis-1,3-Dichloropropene
524.2		Water	Dibromomethane
524.2		Water	Dichlorodifluoromethane
524.2		Water	Diisopropyl ether
524.2		Water	Hexachlorobutadiene
524.2		Water	Isopropylbenzene
524.2		Water	m,p-Xylenes
524.2		Water	m-Dichlorobenzene (1,3-DCB)
524.2		Water	Naphthalene
524.2		Water	n-Butylbenzene
524.2		Water	N-Propylbenzene
524.2		Water	o-Chlorotoluene
524.2		Water	o-Xylene
524.2		Water	p-Chlorotoluene
524.2		Water	p-Isopropyltoluene
524.2		Water	sec-Butylbenzene
524.2		Water	tert-Butylbenzene
524.2		Water	Tertiary Butyl Alcohol (TBA)
524.2		Water	trans-1,3-Dichloropropene
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

Accreditation/Certification Summary

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

Job ID: 380-65785-1

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date
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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	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	Acenaphthene
525.2	525.2	Water	Acenaphthylene
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	Anthracene
525.2	525.2	Water	Benz(a)anthracene
525.2	525.2	Water	Benzo[b]fluoranthene
525.2	525.2	Water	Benzo[g,h,i]perylene
525.2	525.2	Water	Benzo[k]fluoranthene
525.2	525.2	Water	beta-BHC
525.2	525.2	Water	Bromacil
525.2	525.2	Water	Butylbenzylphthalate
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	Chrysene
525.2	525.2	Water	delta-BHC
525.2	525.2	Water	Dibenz(a,h)anthracene
525.2	525.2	Water	Diclorvos (DDVP)
525.2	525.2	Water	Diethylphthalate
525.2	525.2	Water	Dimethylphthalate
525.2	525.2	Water	Di-n-butyl phthalate
525.2	525.2	Water	Di-n-octyl phthalate
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	Fluoranthene
525.2	525.2	Water	Fluorene
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Indeno[1,2,3-cd]pyrene
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Molinate
525.2	525.2	Water	Naphthalene
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Phenanthrene

Accreditation/Certification Summary

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

Job ID: 380-65785-1

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Water	Pyrene
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbutylazine
525.2	525.2	Water	Thiobencarb
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	Water	trans-Nonachlor
525.2	525.2	Water	Trifluralin
SM 2320B		Water	Bicarbonate Alkalinity as CaCO ₃
SM 2320B		Water	Carbonate Alkalinity as CaCO ₃
SM 4500 S2 D		Water	Sulfide

Laboratory: Eurofins Eaton Analytical South Bend

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	ISO/IEC 17025	5794.01	07-31-24
Alabama	State	40700	06-30-24
Alaska	State	IN00035	06-30-24
Arizona	State	AZ0432	07-26-24
Arkansas (DW)	State	EPA IN00035	06-30-23 *
California	State	2920	06-30-24
Colorado	State	IN00035	02-29-24
Connecticut	State	PH-0132	03-31-24
Delaware (DW)	State	IN00035	06-30-24
Florida	NELAP	E87775	06-30-24
Georgia (DW)	State	929	06-30-24
Guam	State	23-011R	07-15-24
Hawaii	State	IN035	06-30-24
Idaho (DW)	State	IN00035	12-31-23
IL Dept. of Public Health (Micro)	State	17767	07-01-24
Illinois	NELAP	200001	09-19-24
Indiana	State	C-71-01	12-31-25
Indiana (Micro)	State	M-76-07	12-31-25
Iowa	State	IA Lab #098	10-31-23
Kansas	NELAP	E-10233	10-31-23
Kentucky (DW)	State	KY90056	12-31-23
Louisiana (DW)	State	LA014	12-31-23
Maine	State	IN00035	05-01-25
Maryland	State	209	06-30-24
Massachusetts	State	M-IN035	06-30-24
MI - RadChem Recognition	State	9926	06-30-24
Michigan	State	9926	06-30-24
Minnesota	NELAP	1989807	12-31-23
Mississippi	State	IN00035	06-30-24
Missouri	State	880	09-30-24
Montana (DW)	State	CERT0026	01-02-24
Nebraska	State	NE-OS-05-04	06-30-24

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

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

Job ID: 380-65785-1

Laboratory: Eurofins Eaton Analytical South Bend (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
Nevada	State	IN000352024-01	07-31-24
New Hampshire	NELAP	2124	11-05-23
New Jersey	NELAP	IN598	06-30-24
New Mexico	State	IN00035	06-30-24
New York	NELAP	11398	04-01-24
North Carolina (DW)	State	18700	07-31-24
North Dakota	State	R-035	06-30-24
Northern Mariana Islands (DW)	State	IN00035	06-30-24
Ohio	State	87775	06-30-24
Oklahoma	NELAP	D9508	08-31-24
Oregon	NELAP	4156	09-16-24
Pennsylvania	NELAP	68-00466	04-30-24
Puerto Rico	State	IN00035	04-01-24
Rhode Island	State	LAO00343	12-30-23
South Carolina	State	95005001	06-30-23 *
South Dakota (DW)	State	IN00035	06-30-24
Tennessee	State	TN02973	06-30-24
Texas	NELAP	T104704187-22-16	12-31-23
Texas	TCEQ Water Supply	TX207	06-30-24
USEPA Reg X SDWA	US Federal Programs	IN00035	08-24-24
USEPA UCMR 5	US Federal Programs	IN00035	12-31-25
Utah	NELAP	IN00035	07-31-24
Vermont	State	VT-8775	11-15-23
Virginia	NELAP	460275	03-14-24
Washington	State	C837	01-01-24
West Virginia (DW)	State	9927 C	12-31-23
Wisconsin	State	999766900	08-31-24
Wisconsin (Micro)	State	10121	12-31-23
Wyoming	State	8TMS-L	06-30-23 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



Method Summary

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

Job ID: 380-65785-1

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS SIM)	EPA-DW	EA POM
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	EA POM
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
504.1	EDB, DBCP and 1,2,3-TCP (GC)	EPA-DW2	EA POM
505	Organochlorine Pesticides/PCBs (GC)	EPA	EA POM
300.0	Anions, Ion Chromatography	EPA	EA POM
200.7 Rev 4.4	Metals (ICP)	EPA	EA POM
200.8	Metals (ICP/MS)	EPA	EA POM
245.1	Mercury (CVAA)	EPA	EA SB
SM 2320B	Alkalinity	SM	EA POM
SM 2510B	Conductivity, Specific Conductance	SM	EA POM
SM 2540C	Solids, Total Dissolved (TDS)	SM	EA POM
SM 4500 F C	Fluoride	SM	EA POM
SM 4500 H+ B	pH	SM	EA POM
SM 4500 S2 D	Sulfide, Total	SM	EA POM
625	EPA 625 Base/Neutral and Acid Organics i	EPA	
8015	8015 - TPH DRO/ORO	EPA	
8015B	SW846 8015B Gasoline Range Organics	SW846	
200.8	Preparation, Total Recoverable Metals	EPA	EA POM
245.1	Preparation, Mercury	EPA	EA SB
504.1	Microextraction	EPA-DW	EA POM
505	Extraction, Organochlorine Pesticides/PCBs	EPA	EA POM
525.2	Extraction of Semivolatile Compounds	EPA	EA POM
None	Autocomplete Prep - Metals - No Digestion required	None	EA POM

Protocol References:

EPA = US Environmental Protection Agency

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

EPA-DW2 = "Methods For The Determination of Organic Compounds in Drinking Water - Supplement III ", EPA/600/R-95-131, August 1995

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

= Physis Environmental Laboratories, 1904 Wright Circle, Anaheim, CA 92806

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

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777

Sample Summary

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

Job ID: 380-65785-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-65785-1	Aiea Wells Pumps 1&2 (260) P2	Water	10/04/23 10:01	10/05/23 10:20
380-65785-2	TRAVEL BLANK	Water	10/04/23 10:01	10/05/23 10:20

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



Date: 10-25-2023
EMAX Batch No.: 23J065

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-65785

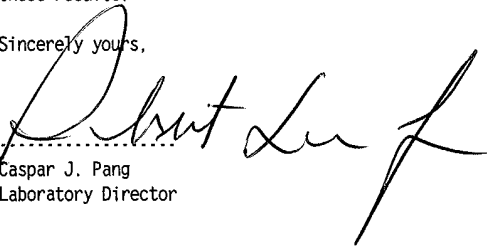
Enclosed is the Laboratory report for samples received on 10/06/23.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-65785-1	J065-01	10/04/23	WATER	TPH GASOLINE TPH ETHANOL
380-65785-2	J065-02	10/04/23	WATER	TPH GASOLINE
380-65785-1MS	J065-01M	10/04/23	WATER	TPH GASOLINE ETHANOL
380-65785-1MSD	J065-01S	10/04/23	WATER	TPH GASOLINE ETHANOL

The results are summarized on the following pages.

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

Sincerely yours,


Caspar J. Pang
Laboratory Director

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

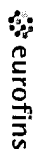
EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912023-25
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672



Chain of Custody Record

23J065



Environment Testing

EMAX Laboratories Inc

3051 Fujita Street,
Torrance
CA, 90505

Phone: 626-386-1100

Due Date Requested:
10/17/2023

TAT Requested (days):

City: Torrance

State/Zip: CA, 90505

Phone:

PO #:

WO #:

Project #:
38001111

Project Name:
RED-HILL

Site:
Honolulu BWS Sites

Sampler:

Phone:

Lab P/N:
Arada, Rachelle

E-Mail:
Rachelle.Arada@et.eurofins.com

Accreditations Required (See note):
State - Hawaii

Carrier Tracking No(s):

State of Origin:
Hawaii

COC No:
380-82868-1

Page:
Page 1 of 1

Job #:
380-65795-1

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Anchor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2CO3
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4.5
Y - Trizma
Z - other (specify)

Analysis Requested

Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SUB (8015 Ethanol)/ 8015 Ethanol	
SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	
SUB (8015 LL DRO/MRO/JP5/JP8)/ 8015 LL DRO/MRO/JP5/JP8	

Special Instructions/Note:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Seawater, Overhaul, Br-Trawl, A-M)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note
Aiea Wells Pumps 1&2 (260) P2 (380-65785-1)	10/4/23	10:01		Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	13	See Attached Instructions
TRAVEL BLANK (380-65785-2)	10/4/23	10:01		Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2	See Attached Instructions

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analysis & 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/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other institutions 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

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

Primary Deliverable Rank: 2

Empty Kit Relinquished by:

Relinquished by: *[Signature]*

Relinquished by: *[Signature]*

Custody Seals Intact: A Yes Δ No

Custody Seal No.:

REPORT ID: 23J065

Date:

Time:

Date/Time: 10/6/23 10:26

Date/Time: 10/6/23 10:26

Date/Time:

Date/Time:

Date/Time:

Method of Shipment:

Received by: *[Signature]*

Received by: *[Signature]*

Received by:

Received by:

Received by:

Received by:

Special Instructions/QC Requirements:

Return To Client Disposal By Lab Archive For

Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Cooler Temperature(s) °C and Other Remarks: 4-7/45 CF=-0.2

Company: EMAX

Company: EMAX

SAMPLE RECEIPT FORM 1



ECN 23J065	Recipient <u>John Zamora</u>	Date <u>10/04/23</u>	Time <u>1026</u>
ECN 23J065	Recipient <u>John Zamora</u>	Date <u>10/04/23</u>	Time <u>1026</u>

COC INSPECTION

Client Name
 Client PM/F/C
 Sampling Date/Time
 Analysis Required
 Rad screening required
 Sample ID
 Preservative (if any)
 TAT
 Matrix

Address
 Tel # / Fax #
 Courier Signature
 From Superfund Site
 High concentrations expected
 Safety Issues (if any)

Note: _____

PACKAGING INSPECTION

Cooler
 Box
 Other
 Damaged
 Popcorn
 Sufficient

Condition correction
 Custody Seal
 Intact
 Broken

Packaging factor: -0.2
 Bubble Pack
 Styrofoam

Temperatures
 Cool, 56 °C (but not frozen)

Thermometer:
 A - S/N 221852708 Cooler 6 °C
 B - S/N 22142579 Cooler 7 °C
 C - S/N 23004487 Cooler 8 °C
 D - S/N 21076237 Cooler 9 °C
 Cooler 10 °C

Comments: Temperature is out of range. PM was informed IMMEDIATELY.

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1	7-12	D3	ID: AIEA WELLS P	R1
1	1-12	D11	received only 12 containers (6 vials and 6 amples); all analyses are accounted for.	R8
2	13, 14	D14		R4

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

SAMPLE MATRIX IS DRINKING WATER? YES NO

Continue to next page.

Code Description-Sample Management
 Proceed as indicated in COC Label

LEGEND:

D1 Analysis is not indicated in _____
 D2 Analysis mismatch COC vs label _____
 D3 Sample ID mismatch COC vs label _____
 D4 Sample ID is not indicated in _____
 D5 Container [improper] [leaking] [broken]
 D6 Date/Time is not indicated in _____
 D7 Date/Time mismatch COC vs label _____
 D8 Sample listed in COC is not received
 D9 Sample received is not listed in COC
 D10 No initial/date on corrections in COC/label
 D11 Container count mismatch COC vs received
 D12 Container size mismatch COC vs received

Code Description-Sample Management
 D13 Out of Holding Time
 D14 Bubble is >6mm
 D15 No trip blank in cooler
 D16 Preservation not indicated in _____
 D17 Preservation mismatch COC vs label
 D18 Insufficient chemical preservative
 D19 Insufficient Sample
 D20 No filtration info for dissolved analysis
 D21 No sample for moisture determination

Date 10/06/23 SRF [Signature] Date 10/06/23
 Sample Labeling Nacama Nadkem
 REPORT ID: 23J065

REPORTING CONVENTIONS

DATA QUALIFIERS:

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

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

ACRONYMS AND ABBREVIATIONS:

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

DATES

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-65785

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

SDG#: 23J065



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65785

SDG : 23J065

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

A total of two(2) water samples were received on 10/06/23 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time

Samples were analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7J01B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VGH7J01L/VGH7J01C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Gasoline was within MS QC limits in J065-01M/J065-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL
Project : 380-65785

SDG NO. : 23J065
Instrument ID : H7

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Prep. Data FN	Notes
								WATER
MBLK1W	VGH7J01B	1	NA	10/10/2314:05	10/10/2314:05	AJ10005A	AJ10004A	23VGH7J01 Method Blank
LCS1W	VGH7J01L	1	NA	10/10/2316:07	10/10/2316:07	AJ10008A	AJ10004A	23VGH7J01 Lab Control Sample (LCS)
LCD1W	VGH7J01C	1	NA	10/10/2316:47	10/10/2316:47	AJ10009A	AJ10004A	23VGH7J01 LCS Duplicate
380-65785-1	J065-01	1	NA	10/10/2317:28	10/10/2317:28	AJ10010A	AJ10004A	23VGH7J01 Field Sample
380-65785-1MS	J065-01M	1	NA	10/10/2318:08	10/10/2318:08	AJ10011A	AJ10004A	23VGH7J01 Matrix Spike Sample (MS)
380-65785-1MSD	J065-01S	1	NA	10/10/2318:49	10/10/2318:49	AJ10012A	AJ10004A	23VGH7J01 MS Duplicate (MSD)
380-65785-2	J065-02	1	NA	10/10/2319:29	10/10/2319:29	AJ10013A	AJ10004A	23VGH7J01 Field Sample

FN - Filename
% Moist - Percent Moisture



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SAMPLE RESULTS

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

Client	: EUROFINs EATON ANALYTICAL	Date Collected:	10/04/23 10:01
Project	: 380-65785	Date Received:	10/06/23
Batch No.	: 23J065	Date Extracted:	10/10/23 17:28
Sample ID	: 380-65785-1	Date Analyzed:	10/10/23 17:28
Lab Samp ID:	J065-01	Dilution Factor:	1
Lab File ID:	AJ10010A	Matrix:	WATER
Ext Btch ID:	23VGH7J01	% Moisture:	NA
Calib. Ref.:	AJ10004A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0359	0.0400	90	60-140

Notes:

Parameter H-C Range
Gasoline C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/04/23 10:01
Project     : 380-65785                 Date Received: 10/06/23
Batch No.   : 23J065                   Date Extracted: 10/10/23 19:29
Sample ID   : 380-65785-2              Date Analyzed: 10/10/23 19:29
Lab Samp ID: J065-02                   Dilution Factor: 1
Lab File ID: AJ10013A                  Matrix: WATER
Ext Btch ID: 23VGH7J01                 % Moisture: NA
Calib. Ref.: AJ10004A                  Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0355	0.0400	89	60-140

Notes:

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

Detection limits are reported relative to sample result significant figures.

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

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QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/10/23 14:05
Project     : 380-65785                   Date Received: 10/10/23
Batch No.   : 23J065                       Date Extracted: 10/10/23 14:05
Sample ID   : MBLK1W                       Date Analyzed: 10/10/23 14:05
Lab Samp ID: VGH7J01B                     Dilution Factor: 1
Lab File ID: AJ10005A                      Matrix: WATER
Ext Btch ID: 23VGH7J01                    % Moisture: NA
Calib. Ref.: AJ10004A                     Instrument ID: H7
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0327	0.0400	82	60-140

Notes:

Parameter H-C Range

Gasoline C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 5ml

Final Volume : 5ml

Prepared by : SCerva

Analyzed by : SCerva

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65785
BATCH NO. : 23J065
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7J01B	VGH7J01L	VGH7J01C
LAB FILE ID	: AJ10005A	AJ10008A	AJ10009A
DATE PREPARED	: 10/10/23 14:05	10/10/23 16:07	10/10/23 16:47
DATE ANALYZED	: 10/10/23 14:05	10/10/23 16:07	10/10/23 16:47
PREP BATCH	: 23VGH7J01	23VGH7J01	23VGH7J01
CALIBRATION REF:	AJ10004A	AJ10004A	AJ10004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.449	90	0.500	0.444	89	1	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0409	102	0.0400	0.0413	103	70-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65785
BATCH NO. : 23J065
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-65785-1	380-65785-1MS	380-65785-1MSD
LAB SAMPLE ID	: J065-01	J065-01M	J065-01S
LAB FILE ID	: AJ10010A	AJ10011A	AJ10012A
DATE PREPARED	: 10/10/23 17:28	10/10/23 18:08	10/10/23 18:49
DATE ANALYZED	: 10/10/23 17:28	10/10/23 18:08	10/10/23 18:49
PREP BATCH	: 23VGH7J01	23VGH7J01	23VGH7J01
CALIBRATION REF:	AJ10004A	AJ10004A	AJ10004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.470	94	0.500	0.476	95	1	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0447	112	0.0400	0.0463	116	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-65785

METHOD 3520C / 8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23J065



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65785

SDG : 23J065

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/06/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ014WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for JP5 was within LCS QC limits in J5J014WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP5 was within MS QC limits in 23J047-01M/23J047-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65785

SDG : 23J065

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/06/23 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ014WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for Diesel was within LCS QC limits in DSJ014WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 23J047-01M/23J047-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65785

SDG : 23J065

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 10/06/23 to be analyzed for Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSJ014WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for JP8 was within LCS QC limits in J8J014WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP8 was within MS QC limits in 23J047-02M/23J047-02S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-65785

SDG NO. : 23J065
Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSJ014WB	1	NA	10/14/2310:29	10/13/2311:30	LJ13037A	LJ13034A	23DSJ014W	Method Blank
LCS1W	DSJ014WL	1	NA	10/14/2310:48	10/13/2311:30	LJ13038A	LJ13034A	23DSJ014W	Lab Control Sample (LCS)
380-65785-1	J065-01	1	NA	10/14/2315:28	10/13/2311:30	LJ13053A	LJ13034A	23DSJ014W	Field Sample

FN - Filename
% Moist - Percent Moisture



LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-65785

SDG NO. : 23J065
Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Prep. Data FN	Notes
MBLK1W	DSJ014WB	1	NA	10/14/2310:29	10/13/2311:30	LJ13037A	LJ13035A	23DSJ014W Method Blank
LCS1W	J5J014WL	1	NA	10/14/2311:06	10/13/2311:30	LJ13039A	LJ13035A	23DSJ014W Lab Control Sample (LCS)
380-65785-1	J065-01	1	NA	10/14/2315:28	10/13/2311:30	LJ13053A	LJ13035A	23DSJ014W Field Sample

FN - Filename
% Moist - Percent Moisture



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SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/04/23 10:01
Project : 380-65785	Date Received: 10/06/23
Batch No. : 23J065	Date Extracted: 10/13/23 11:30
Sample ID : 380-65785-1	Date Analyzed: 10/14/23 15:28
Lab Samp ID: 23J065-01	Dilution Factor: 1
Lab File ID: LJ13053A	Matrix: WATER
Ext Btch ID: 23DSJ014W	% Moisture: NA
Calib. Ref.: LJ13034A	Instrument ID: D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.028	0.014
Motor Oil	ND	0.057	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.390	0.570	68	60-130
Hexacosane	0.137	0.142	96	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 880ml	Final Volume : 5ml
Prepared by : RGalan	Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/04/23 10:01
Project     : 380-65785                 Date Received: 10/06/23
Batch No.   : 23J065                   Date Extracted: 10/13/23 11:30
Sample ID   : 380-65785-1              Date Analyzed: 10/14/23 15:28
Lab Samp ID: 23J065-01                 Dilution Factor: 1
Lab File ID: LJ13053A                  Matrix: WATER
Ext Btch ID: 23DSJ014W                 % Moisture: NA
Calib. Ref.: LJ13035A                  Instrument ID: D5
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```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.057	0.028	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.390	0.570	68	60-130
Hexacosane	0.137	0.142	96	60-130

Notes:

RL : Reporting Limit
 Parameter H-C Range
 JP5 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 880ml Final Volume : 5ml
 Prepared by : RGalán Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL Date Collected: 10/04/23 10:01
 Project : 380-65785 Date Received: 10/06/23
 Batch No. : 23J065 Date Extracted: 10/13/23 11:30
 Sample ID : 380-65785-1 Date Analyzed: 10/14/23 15:28
 Lab Samp ID: 23J065-01 Dilution Factor: 1
 Lab File ID: LJ13053A Matrix: WATER
 Ext Btch ID: 23DSJ014W % Moisture: NA
 Calib. Ref.: LJ13036A Instrument ID: D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.057	0.028	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.390	0.570	68	60-130
Hexacosane	0.137	0.142	96	60-130

Notes:

RL : Reporting Limit
 Parameter H-C Range
 JP8 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 880ml Final Volume : 5ml
 Prepared by : RGalán Analyzed by : SDeeso

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QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/13/23 11:30
Project     : 380-65785                  Date Received: 10/13/23
Batch No.   : 23J065                     Date Extracted: 10/13/23 11:30
Sample ID   : MBLK1W                     Date Analyzed: 10/14/23 10:29
Lab Samp ID: DSJ014WB                    Dilution Factor: 1
Lab File ID: LJ13037A                    Matrix: WATER
Ext Btch ID: 23DSJ014W                   % Moisture: NA
Calib. Ref.: LJ13034A                    Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.025	0.012	
Motor Oil	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.336	0.500	67	60-130
Hexacosane	0.117	0.125	94	60-130

Notes:

```

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

```

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

```

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

```

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65785
BATCH NO. : 23J065
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ014WB DSJ014WL
LAB FILE ID : LJ13037A LJ13038A
DATE PREPARED : 10/13/23 11:30 10/13/23 11:30
DATE ANALYZED : 10/14/23 10:29 10/14/23 10:48
PREP BATCH : 23DSJ014W 23DSJ014W
CALIBRATION REF: LJ13034A LJ13034A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.09	84	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.339	68	60-130
Hexacosane	0.125	0.124	99	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65446
BATCH NO. : 23J047
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-65446-1	380-65446-1MS	380-65446-1MSD
LAB SAMPLE ID	: 23J047-01	23J047-01M	23J047-01S
LAB FILE ID	: LJ13041A	LJ13042A	LJ13043A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 11:44	10/14/23 12:02	10/14/23 12:21
PREP BATCH	: 23DSJ014W	23DSJ014W	23DSJ014W
CALIBRATION REF:	LJ13034A	LJ13034A	LJ13034A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.88	2.42	84	2.72	2.45	90	1	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.575	0.352	61	0.545	0.395	72	60-130
Hexacosane	0.144	0.148	103	0.136	0.147	108	60-130

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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/13/23 11:30
Project     : 380-65785                      Date Received: 10/13/23
Batch No.   : 23J065                          Date Extracted: 10/13/23 11:30
Sample ID   : MBLK1W                           Date Analyzed: 10/14/23 10:29
Lab Samp ID: DSJ014WB                          Dilution Factor: 1
Lab File ID: LJ13037A                           Matrix: WATER
Ext Btch ID: 23DSJ014W                          % Moisture: NA
Calib. Ref.: LJ13035A                          Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.336	0.500	67	60-130
Hexacosane	0.117	0.125	94	60-130

Notes:

RL : Reporting Limit

Parameter H-C Range

JP5 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml

Final Volume : 5ml

Prepared by : RGalan

Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65785
BATCH NO. : 23J065
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ014WB J5J014WL
LAB FILE ID : LJ13037A LJ13039A
DATE PREPARED : 10/13/23 11:30 10/13/23 11:30
DATE ANALYZED : 10/14/23 10:29 10/14/23 11:06
PREP BATCH : 23DSJ014W 23DSJ014W
CALIBRATION REF: LJ13035A LJ13035A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	1.54	62	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.330	66	60-130
Hexacosane	0.125	0.121	97	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65446
BATCH NO. : 23J047
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1		1
SAMPLE ID	: 380-65446-1	380-65446-1MS	380-65446-1MSD
LAB SAMPLE ID	: 23J047-01	23J047-01M	23J047-01S
LAB FILE ID	: LJ13041A	LJ13044A	LJ13045A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 11:44	10/14/23 12:40	10/14/23 12:58
PREP BATCH	: 23DSJ014W	23DSJ014W	23DSJ014W
CALIBRATION REF:	LJ13035A	LJ13035A	LJ13035A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.70	1.73	64	2.62	2.17	83	23	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.540	0.352	65	0.525	0.404	77	60-130
Hexacosane	0.135	0.127	94	0.131	0.122	93	60-130

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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/13/23 11:30
Project    : 380-65785                   Date Received: 10/13/23
Batch No.  : 23J065                       Date Extracted: 10/13/23 11:30
Sample ID  : MBLK1W                       Date Analyzed: 10/14/23 10:29
Lab Samp ID: DSJ014WB                     Dilution Factor: 1
Lab File ID: LJ13037A                     Matrix: WATER
Ext Btch ID: 23DSJ014W                   % Moisture: NA
Calib. Ref.: LJ13036A                    Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.336	0.500	67	60-130
Hexacosane	0.117	0.125	94	60-130

Notes:

RL : Reporting Limit

Parameter H-C Range

JP8 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml

Final Volume : 5ml

Prepared by : RGalan

Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65785
BATCH NO. : 23J065
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSJ014WB J8J014WL
LAB FILE ID : LJ13037A LJ13040A
DATE PREPARED : 10/13/23 11:30 10/13/23 11:30
DATE ANALYZED : 10/14/23 10:29 10/14/23 11:25
PREP BATCH : 23DSJ014W 23DSJ014W
CALIBRATION REF: LJ13036A LJ13036A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	1.78	71	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.452	90	60-130
Hexacosane	0.125	0.127	102	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-65446
BATCH NO. : 23J047
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1		1
SAMPLE ID	: 380-65446-2	380-65446-2MS	380-65446-2MSD
LAB SAMPLE ID	: 23J047-02	23J047-02M	23J047-02S
LAB FILE ID	: LJ13046A	LJ13047A	LJ13048A
DATE PREPARED	: 10/13/23 11:30	10/13/23 11:30	10/13/23 11:30
DATE ANALYZED	: 10/14/23 13:17	10/14/23 13:36	10/14/23 13:55
PREP BATCH	: 23DSJ014W	23DSJ014W	23DSJ014W
CALIBRATION REF:	LJ13036A	LJ13036A	LJ13036A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.75	1.88	68	2.78	2.40	86	24	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.550	0.393	71	0.555	0.503	91	60-130
Hexacosane	0.138	0.133	97	0.139	0.136	98	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-65785

METHOD SW8015C
ALCOHOLS BY IC

SDG#: 23J065



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-65785

SDG : 23J065

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 10/06/23 to be analyzed for Alcohols by GC in accordance with Method SW8015C and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. MEJ002WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample

Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. MEJ002WL/MEJ002WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Ethanol was within MS QC limits in J065-01M/J065-01S. Refer to Matrix QC summary form for details.

Sample Analysis

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

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SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	10/04/23
Project	: 380-65785	Date Received:	10/06/23
Batch No.	: 23J065	Date Extracted:	NA
Sample ID:	380-65785-1	Date Analyzed:	10/09/23 15:33
Lab Samp ID:	J065-01	Dilution Factor:	1
Lab File ID:	TJ09007A	Matrix	: WATER
Ext Btch ID:	MEJ002W	% Moisture	: NA
Calib. Ref.:	TJ09002A	Instrument ID	: GCT050

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANOL	ND	2000	500

RL : Reporting Limit

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QC SUMMARIES

METHOD SW8015C
ALCOHOLS BY GC

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	NA
Project	: 380-65785	Date Received:	NA
Batch No.	: 23J065	Date Extracted:	NA
Sample ID:	MBLK1W	Date Analyzed:	10/09/23 14:31
Lab Samp ID:	MEJ002WB	Dilution Factor:	1
Lab File ID:	TJ09004A	Matrix	: WATER
Ext Btch ID:	MEJ002W	% Moisture	: NA
Calib. Ref.:	TJ09002A	Instrument ID	: GCT050

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
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ETHANOL	ND	2000	500

RL : Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-65785
BATCH NO.: 23J065
METHOD: METHOD SW8015C

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: MEJ002WB MEJ002WL MEJ002WC
LAB FILE ID: TJ09004A TJ09005A TJ09006A
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA
DATE ANALYZED: 10/09/2314:31 10/09/2314:49 10/09/2315:17 DATE RECEIVED: NA
PREP. BATCH: MEJ002W MEJ002W MEJ002W
CALIB. REF: TJ09002A TJ09002A TJ09002A

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	10800	108	10000	10200	102	6	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-65785
BATCH NO.: 23J065
METHOD: METHOD SW8015C

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1
SAMPLE ID: 380-65785-1
LAB SAMP ID: J065-01 J065-01M J065-01S
LAB FILE ID: TJ09007A TJ09008A TJ09009A
DATE EXTRACTED: NA NA NA DATE COLLECTED: 10/04/23
DATE ANALYZED: 10/09/2315:33 10/09/2315:47 10/09/2316:03 DATE RECEIVED: 10/06/23
PREP. BATCH: MEJ002W MEJ002W MEJ002W
CALIB. REF: TJ09002A TJ09002A TJ09002A

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	10900	109	10000	10200	102	7	60-130	30

November 21, 2023

Rachelle Arada
 Eurofins Eaton Analytical
 750 Royal Oaks Drive
 Suite 100
 Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-65785-1
 Physis Project ID: 1407003-451

Dear Rachelle,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/6/2023. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

Organics
Polynuclear Aromatic Hydrocarbons by EPA 625.1
Disalicylidenepropanediamine by EPA 625.1
Dibenzo [a,l] Pyrene w/ PAHs by EPA 625.1
Base/Neutral Extractable Compounds by EPA 625.1
Acid Extractable Compounds w/ PAHs by EPA 625.1
6-tert-Butyl-2,4-dimethylphenol by EPA 625.1
2,6-Di-tert-butylphenol by EPA 625.1
2,6-Di-tert-butyl-4-methylphenol by EPA 625.1
p-tert-Butylphenol by EPA 625.1

Analytical results in this report apply only to samples submitted to PHYSIS in accordance with the COC and are intended to be considered in their entirety.

Please feel free to contact me at any time with any questions. PHYSIS appreciates the opportunity to provide you with our analytical and support services.

Regards,

Misty Mercier
 714 602-5320
 Extension 202
 mistymercier@physislabs.com

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-451

RED-HILL Project # 38001111 Job # 380-65785-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
111831	Aiea Wells Pumps 1&2 (260) P2	380-65785-1	10/5/2023	10:01	Samplewater	Not Specified



ABBREVIATIONS and ACRONYMS

QM	Quality Manual
QA	Quality Assurance
QC	Quality Control
MDL	method detection limit
RL	reporting limit
R1	project sample
R2	project sample replicate
MS1	matrix spike
MS2	matrix spike replicate
B1	procedural blank
B2	procedural blank replicate
BS1	blank spike
BS2	blank spike replicate
LCS1	laboratory control spike
LCS2	laboratory control spike replicate
LCM1	laboratory control material
LCM2	laboratory control material replicate
CRM1	certified reference material
CRM2	certified reference material replicate
RPD	relative percent difference
LMW	low molecular weight
HMW	high molecular weight

QUALITY ASSURANCE SUMMARY

LABORATORY BATCH: Physis' QM defines a laboratory batch as a group of 20 or fewer project samples of similar matrix, processed together under the same conditions and with the same reagents. QC samples are associated with each batch and were used to assess the validity of the sample analyses.

PROCEDURAL BLANK: Laboratory contamination introduced during method use is assessed through the preparation and analysis of procedural blanks is provided at a minimum frequency of one per batch.

ACCURACY: Accuracy of analytical measurements is the degree of closeness based on percent recovery calculations between measured values and the actual or true value and includes a combination of reproducibility error and systematic bias due to sampling and analytical operations. Accuracy of the project data was indicated by analysis of MS, BS, LCS, LCM, CRM, and/or surrogate spikes on a minimum frequency of one per batch. Physis' QM requires that 95% of the target compounds greater than 10 times the MDL be within the specified acceptance limits.

PRECISION: Precision is the agreement among a set of replicate measurements without assumption of knowledge of the true value and is based on RPD calculations between repeated values. Precision of the project data was determined by analysis of replicate MS₁/MS₂, BS₁/BS₂, LCS₁/LCS₂, LCM₁/LCM₂, CRM₁/CRM₂, surrogate spikes and/or replicate project sample analysis (R₁/R₂) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

BLANK SPIKES: BS is the introduction of a known concentration of analyte into the procedural blank. BS demonstrates performance of the preparation and analytical methods on a clean matrix void of potential matrix related interferences. The BS is performed in laboratory deionized water, making these recoveries a better indicator of the efficiency of the laboratory method per se.

MATRIX SPIKES: MS is the introduction of a known concentration of analyte into a sample. MS samples demonstrate the effect a particular project sample matrix has on the accuracy of a measurement. Individually, MS samples also indicate the bias of analytical measurements due to chemical interferences inherent in the in the specific project sample spiked. Intrinsic target analyte concentration in the specific project sample can also significantly impact MS recovery.

CERTIFIED REFERENCE MATERIALS: CRMs are materials of various matrices for which analytical information has been determined and certified by a recognized authority. These are used to provide a quantitative assessment of the accuracy of an analytical method. CRMs provide evidence that the laboratory preparation and analysis produces results that are comparable to those obtained by an independent organization.

LABORATORY CONTROL MATERIAL: LCM is provided because a suitable natural seawater CRM is not available and can be used to indicate accuracy of the method. Physis' internal LCM is seawater collected at ~800 meters in the Southern California San Pedro Basin and can be used as a reference for background concentrations in clean, natural seawater for comparison to project samples.

LABORATORY CONTROL SPIKES: LCS is the introduction of a known concentration of analyte into Physis' LCM. LCS samples were employed to assess the effect the seawater matrix has on the accuracy of a measurement. LCS also indicate the bias of this method due to chemical interferences inherent in the in the seawater matrix. Intrinsic LCM concentration can also significantly impact LCS recovery.

SURROGATES: A surrogate is a pure analyte unlikely to be found in any project sample, behaves similarly to

the target analyte and most often used with organic analytical procedures. Surrogates are added in known concentration to all samples and are measured to indicate overall efficiency of the method including processing and analyses.

HOLDING TIME: Method recommended holding times are the length of time a project sample can be stored under specific conditions after collection and prior to analysis without significantly affecting the analyte's concentration. Holding times can be extended if preservation techniques are employed to reduce biodegradation, volatilization, oxidation, sorption, precipitation, and other physical and chemical processes.

SAMPLE STORAGE/RETENTION: In order to maintain chemical integrity prior to analysis, all samples submitted to Physis are refrigerated (liquids) or frozen (solids) upon receipt unless otherwise recommended by applicable methods. Solid samples are retained for 1 year from collection while liquid samples are retained until method recommended holding times elapse.

TOTAL/DISSOLVED FRACTION: In some instances, the results for the dissolved fraction may be higher than the total fraction for a particular analyte (e.g. trace metals). This is typically caused by the analytical variation for each result and indicates that the target analyte is primarily in the dissolved phase, within the sample.

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PHYSIS QUALIFIER CODES

CODE	DEFINITION
#	see Case Narrative
ND	analyte not detected at or above the MDL
B	analyte was detected in the procedural blank greater than 10 times the MDL
E	analyte concentration exceeds the upper limit of the linear calibration range, reported value is estimated
H	sample received and/or analyzed past the recommended holding time
J	analyte was detected at a concentration below the RL and above the MDL, reported value is estimated
N	insufficient sample, analysis could not be performed
M	analyte was outside the specified accuracy and/or precision acceptance limits due to matrix interference. The associated B/BS were within limits, therefore the sample data was reported without further clarification
SH	analyte concentration in the project sample exceeded the spike concentration, therefore accuracy and/or precision acceptance limits do not apply
SL	analyte results were lower than 10 times the MDL, therefore accuracy and/or precision acceptance limits do not apply
NH	project sample was heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices, therefore accuracy and/or precision acceptance limits do not apply
Q	analyte was outside the specified QAPP acceptance limits for precision and/or accuracy but within Physis derived acceptance limits, therefore the sample data was reported without further clarification
R	Physis' QM allows for 5% of the target compounds greater than 10 times the MDL to be outside the specified acceptance limits for precision and/or accuracy. This is often due to random error and does not indicate any significant problems with the analysis of these project samples

CASE NARRATIVE

QUALIFIER NOTES

In addition to the use of analyte specific Physis Qualifier Codes where applicable, the following were also noted.

ND

MDL is listed due to report format restrictions; it is not used in reporting. Analytical results reported are ND at the RL.

ANALYTICAL REPORT

TERRA AURA
ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

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Acid Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111831-R1	Aiea Wells Pumps 1&2 (260) P2 380 Matrix: Samplewater						Sampled:	05-Oct-23 10:01	Received:	06-Oct-23	
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	34	1			Total	O-42142		12-Oct-23	10-Nov-23
(d5-Phenol)	EPA 625.1	% Recovery	40	1			Total	O-42142		12-Oct-23	10-Nov-23
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-42142		12-Oct-23	10-Nov-23
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142		12-Oct-23	10-Nov-23

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111831-R1	Aiea Wells Pumps 1&2 (260) P2 380 Matrix: Samplewater						Sampled:	05-Oct-23 10:01	Received:	06-Oct-23	
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Dibenzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-42142	12-Oct-23	10-Nov-23	

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 111831-R1	Aiea Wells Pumps 1&2 (260) P2 380 Matrix: Samplewater						Sampled: 05-Oct-23 10:01		Received: 06-Oct-23		
(d10-Acenaphthene)	EPA 625.1	% Recovery	73	1			Total		O-42142	12-Oct-23	10-Nov-23
(d10-Phenanthrene)	EPA 625.1	% Recovery	77	1			Total		O-42142	12-Oct-23	10-Nov-23
(d12-Chrysene)	EPA 625.1	% Recovery	90	1			Total		O-42142	12-Oct-23	10-Nov-23
(d12-Perylene)	EPA 625.1	% Recovery	87	1			Total		O-42142	12-Oct-23	10-Nov-23
(d8-Naphthalene)	EPA 625.1	% Recovery	68	1			Total		O-42142	12-Oct-23	10-Nov-23
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-42142	12-Oct-23	10-Nov-23



QUALITY CONTROL REPORT

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%
Sample ID: 111830-B1		QAQC Procedural Blank			Matrix: BlankMatrix		Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42142			Prepared: 12-Oct-23		Analyzed: 09-Nov-23				
(2,4,6-Tribromophenol)	Total	44	1			% Recovery	100	44	30 - 130%	PASS	
(d5-Phenol)	Total	107	1			% Recovery	100	107	0 - 130%	PASS	
2,4,5-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L					
2,4,6-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L					
2,4-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L					
2,4-Dinitrophenol	Total	ND	1	0.1	0.2	µg/L					
2,6-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L					
2,6-Di-tert-butyl-4-methylphenol	Total	ND	1	0.05	0.1	µg/L					
2,6-Di-tert-butylphenol	Total	ND	1	0.05	0.1	µg/L					
2-Chlorophenol	Total	ND	1	0.05	0.1	µg/L					
2-Methyl-4,6-dinitrophenol	Total	ND	1	0.1	0.2	µg/L					
2-Methylphenol	Total	ND	1	0.1	0.2	µg/L					
2-Nitrophenol	Total	ND	1	0.1	0.2	µg/L					
3+4-Methylphenol	Total	ND	1	0.1	0.2	µg/L					
4-Chloro-3-methylphenol	Total	ND	1	0.1	0.2	µg/L					
4-Nitrophenol	Total	ND	1	0.1	0.2	µg/L					
6-tert-butyl-2,4-dimethylphenol	Total	ND	1	0.05	0.1	µg/L					
Benzoic Acid	Total	ND	1	0.1	0.2	µg/L					
Benzyl Alcohol	Total	ND	1	0.1	0.2	µg/L					
Pentachlorophenol	Total	ND	1	0.05	0.1	µg/L					
Phenol	Total	ND	1	0.1	0.2	µg/L					
p-tert-Butylphenol	Total	ND	1	0.05	0.1	µg/L					

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION	QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 111830-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42142			Prepared: 12-Oct-23		Analyzed: 09-Nov-23					
(2,4,6-Tribromophenol)	Total	59	1			% Recovery	100	0	59	30 - 130%	PASS	
(d5-Phenol)	Total	112	1			% Recovery	100	0	112	0 - 130%	PASS	
2,4,5-Trichlorophenol	Total	0.224	1	0.05	0.1	µg/L	0.5	0	45	30 - 130%	PASS	
2,4,6-Trichlorophenol	Total	0.506	1	0.05	0.1	µg/L	1	0	51	56 - 118%	PASS	
2,4-Dichlorophenol	Total	0.796	1	0.05	0.1	µg/L	1	0	80	51 - 117%	PASS	
2,4-Dinitrophenol	Total	0.00308	1	0.1	0.2	µg/L	1	0	0	0 - 152%	PASS	
2,6-Dichlorophenol	Total	0.349	1	0.05	0.1	µg/L	0.5	0	70	30 - 130%	PASS	
2,6-Di-tert-butyl-4-methylphenol	Total	0.833	1	0.05	0.1	µg/L	1	0	83	50 - 150%	PASS	
2,6-Di-tert-butylphenol	Total	0.87	1	0.05	0.1	µg/L	1	0	87	50 - 150%	PASS	
2-Chlorophenol	Total	0.848	1	0.05	0.1	µg/L	1	0	85	41 - 110%	PASS	
2-Methyl-4,6-dinitrophenol	Total	0.225	1	0.1	0.2	µg/L	1	0	22	0 - 141%	PASS	
2-Methylphenol	Total	0.923	1	0.1	0.2	µg/L	1	0	92	40 - 117%	PASS	
2-Nitrophenol	Total	0.752	1	0.1	0.2	µg/L	1	0	75	40 - 117%	PASS	
3+4-Methylphenol	Total	0.947	1	0.1	0.2	µg/L	1	0	95	0 - 130%	PASS	
4-Chloro-3-methylphenol	Total	0.989	1	0.1	0.2	µg/L	1	0	99	51 - 128%	PASS	
4-Nitrophenol	Total	2.26	1	0.1	0.2	µg/L	2	0	113	10 - 164%	PASS	
6-tert-butyl-2,4-dimethylphenol	Total	0.826	1	0.05	0.1	µg/L	1	0	83	50 - 150%	PASS	
Benzoic Acid	Total	0.149	1	0.1	0.2	µg/L	1	0	15	2 - 145%	PASS	
Benzyl Alcohol	Total	0.96	1	0.1	0.2	µg/L	1	0	96	43 - 148%	PASS	
Phenol	Total	0.882	1	0.1	0.2	µg/L	1	0	88	29 - 114%	PASS	
p-tert-Butylphenol	Total	1.35	1	0.05	0.1	µg/L	1	0	135	50 - 150%	PASS	

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE			
							LEVEL	RESULT	%	LIMITS	%	LIMITS				
Sample ID: 111830-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:					
		Method: EPA 625.1			Batch ID: O-42142			Prepared: 12-Oct-23			Analyzed: 09-Nov-23					
(2,4,6-Tribromophenol)	Total	55	1				% Recovery	100	0	55	30 - 130%	PASS	7	30	PASS	
(d5-Phenol)	Total	103	1				% Recovery	100	0	103	0 - 130%	PASS	8	30	PASS	
2,4,5-Trichlorophenol	Total	0.156	1	0.05	0.1	µg/L	0.5	0	31	30 - 130%	PASS	37	30	FAIL	R	
2,4,6-Trichlorophenol	Total	0.378	1	0.05	0.1	µg/L	1	0	38	56 - 118%	PASS	29	30	PASS		
2,4-Dichlorophenol	Total	0.705	1	0.05	0.1	µg/L	1	0	70	51 - 117%	PASS	13	30	PASS		
2,4-Dinitrophenol	Total	0.000887	1	0.1	0.2	µg/L	1	0	0	0 - 152%	PASS	0	30	PASS		
2,6-Dichlorophenol	Total	0.323	1	0.05	0.1	µg/L	0.5	0	65	30 - 130%	PASS	7	30	PASS		
2,6-Di-tert-butyl-4-methylphenol	Total	0.811	1	0.05	0.1	µg/L	1	0	81	50 - 150%	PASS	2	30	PASS		
2,6-Di-tert-butylphenol	Total	0.842	1	0.05	0.1	µg/L	1	0	84	50 - 150%	PASS	4	30	PASS		
2-Chlorophenol	Total	0.789	1	0.05	0.1	µg/L	1	0	79	41 - 110%	PASS	7	30	PASS		
2-Methyl-4,6-dinitrophenol	Total	0.106	1	0.1	0.2	µg/L	1	0	11	0 - 141%	PASS	67	30	FAIL	R	
2-Methylphenol	Total	0.861	1	0.1	0.2	µg/L	1	0	86	40 - 117%	PASS	7	30	PASS		
2-Nitrophenol	Total	0.74	1	0.1	0.2	µg/L	1	0	74	40 - 117%	PASS	1	30	PASS		
3+4-Methylphenol	Total	0.883	1	0.1	0.2	µg/L	1	0	88	0 - 130%	PASS	8	30	PASS		
4-Chloro-3-methylphenol	Total	0.952	1	0.1	0.2	µg/L	1	0	95	51 - 128%	PASS	4	30	PASS		
4-Nitrophenol	Total	2.21	1	0.1	0.2	µg/L	2	0	111	10 - 164%	PASS	3	30	PASS		
6-tert-butyl-2,4-dimethylphenol	Total	0.748	1	0.05	0.1	µg/L	1	0	75	50 - 150%	PASS	10	30	PASS		
Benzoic Acid	Total	0.14	1	0.1	0.2	µg/L	1	0	14	2 - 145%	PASS	7	30	PASS		
Benzyl Alcohol	Total	0.85	1	0.1	0.2	µg/L	1	0	85	43 - 148%	PASS	12	30	PASS		
Phenol	Total	0.801	1	0.1	0.2	µg/L	1	0	80	29 - 114%	PASS	10	30	PASS		
p-tert-Butylphenol	Total	1.32	1	0.05	0.1	µg/L	1	0	132	50 - 150%	PASS	2	30	PASS		

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE
							LEVEL	RESULT	%	LIMITS	%
Sample ID: 111830-B1		QAQC Procedural Blank			Matrix: BlankMatrix		Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42142		Prepared: 12-Oct-23		Analyzed: 09-Nov-23					
2-Chloronaphthalene	Total	ND	1	0.05	0.1	µg/L					
2-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
3-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Bromophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Chloroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Chlorophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
Aniline	Total	ND	1	0.05	0.1	µg/L					
Benzidine	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethoxy) methane	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethyl) ether	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroisopropyl) ether	Total	ND	1	0.05	0.1	µg/L					
Dibenzofuran	Total	ND	1	0.05	0.1	µg/L					
Disalicylideneprapanediamin	Total	ND	1	0.05	0.1	µg/L					
Hexachloroethane	Total	ND	1	0.05	0.1	µg/L					
Nitrobenzene	Total	ND	1	0.05	0.1	µg/L					
N-Nitrosodi-n-propylamine	Total	ND	1	0.05	0.1	µg/L					
N-Nitrosodiphenylamine	Total	ND	1	0.05	0.1	µg/L					

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION	QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 111830-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42142			Prepared: 12-Oct-23		Analyzed: 09-Nov-23					
2-Chloronaphthalene	Total	0.933	1	0.05	0.1	µg/L	1	0	93	53 - 130%	PASS	
2-Nitroaniline	Total	1.05	1	0.05	0.1	µg/L	1	0	105	69 - 114%	PASS	
3-Nitroaniline	Total	0.853	1	0.05	0.1	µg/L	1	0	85	23 - 137%	PASS	
4-Bromophenylphenyl ether	Total	0.882	1	0.05	0.1	µg/L	1	0	88	61 - 132%	PASS	
4-Chloroaniline	Total	0.853	1	0.05	0.1	µg/L	1	0	85	50 - 150%	PASS	
4-Chlorophenylphenyl ether	Total	0.902	1	0.05	0.1	µg/L	1	0	90	63 - 130%	PASS	
4-Nitroaniline	Total	1.1	1	0.05	0.1	µg/L	1	0	110	10 - 159%	PASS	
Aniline	Total	0.555	1	0.05	0.1	µg/L	1	0	56	50 - 150%	PASS	
Benzidine	Total	0.0479	1	0.05	0.1	µg/L	1	0	5	0 - 125%	PASS	
Bis(2-Chloroethoxy) methane	Total	1.06	1	0.05	0.1	µg/L	1	0	106	66 - 122%	PASS	
Bis(2-Chloroethyl) ether	Total	0.937	1	0.05	0.1	µg/L	1	0	94	43 - 127%	PASS	
Bis(2-Chloroisopropyl) ether	Total	1.06	1	0.05	0.1	µg/L	1	0	106	49 - 128%	PASS	
Dibenzofuran	Total	0.135	1	0.05	0.1	µg/L	0.1	0	135	50 - 150%	PASS	
Disalicylidenepropanediamin	Total	13.3	1	0.05	0.1	µg/L	25	0	53	50 - 150%	PASS	
Hexachloroethane	Total	0.73	1	0.05	0.1	µg/L	1	0	73	27 - 130%	PASS	
Nitrobenzene	Total	0.877	1	0.05	0.1	µg/L	1	0	88	54 - 111%	PASS	
N-Nitrosodi-n-propylamine	Total	0.887	1	0.05	0.1	µg/L	1	0	89	61 - 152%	PASS	
N-Nitrosodiphenylamine	Total	0.905	1	0.05	0.1	µg/L	1	0	90	49 - 142%	PASS	

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODEc	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Sample ID: 111830-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:			
Method: EPA 625.1		Batch ID: O-42142			Prepared: 12-Oct-23			Analyzed: 09-Nov-23						
2-Chloronaphthalene	Total	0.892	1	0.05	0.1	µg/L	1	0	89	53 - 130%	PASS	4	30	PASS
2-Nitroaniline	Total	1.03	1	0.05	0.1	µg/L	1	0	103	69 - 114%	PASS	2	30	PASS
3-Nitroaniline	Total	0.86	1	0.05	0.1	µg/L	1	0	86	23 - 137%	PASS	1	30	PASS
4-Bromophenylphenyl ether	Total	0.855	1	0.05	0.1	µg/L	1	0	86	61 - 132%	PASS	2	30	PASS
4-Chloroaniline	Total	0.772	1	0.05	0.1	µg/L	1	0	77	50 - 150%	PASS	10	30	PASS
4-Chlorophenylphenyl ether	Total	0.88	1	0.05	0.1	µg/L	1	0	88	63 - 130%	PASS	2	30	PASS
4-Nitroaniline	Total	1.1	1	0.05	0.1	µg/L	1	0	110	10 - 159%	PASS	0	30	PASS
Aniline	Total	0.532	1	0.05	0.1	µg/L	1	0	53	50 - 150%	PASS	6	30	PASS
Benzidine	Total	0.034	1	0.05	0.1	µg/L	1	0	3	0 - 125%	PASS	50	30	FAIL R
Bis(2-Chloroethoxy) methane	Total	1.02	1	0.05	0.1	µg/L	1	0	102	66 - 122%	PASS	4	30	PASS
Bis(2-Chloroethyl) ether	Total	0.88	1	0.05	0.1	µg/L	1	0	88	43 - 127%	PASS	7	30	PASS
Bis(2-Chloroisopropyl) ether	Total	1	1	0.05	0.1	µg/L	1	0	100	49 - 128%	PASS	6	30	PASS
Dibenzofuran	Total	0.106	1	0.05	0.1	µg/L	0.1	0	106	50 - 150%	PASS	24	30	PASS
Disalicylidene-propanediamin	Total	21	1	0.05	0.1	µg/L	25	0	84	50 - 150%	PASS	45	30	FAIL R
Hexachloroethane	Total	0.683	1	0.05	0.1	µg/L	1	0	68	27 - 130%	PASS	7	30	PASS
Nitrobenzene	Total	0.848	1	0.05	0.1	µg/L	1	0	85	54 - 111%	PASS	3	30	PASS
N-Nitrosodi-n-propylamine	Total	0.78	1	0.05	0.1	µg/L	1	0	78	61 - 152%	PASS	13	30	PASS
N-Nitrosodiphenylamine	Total	0.745	1	0.05	0.1	µg/L	1	0	75	49 - 142%	PASS	20	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE
							LEVEL	RESULT	% LIMITS	% LIMITS	

Sample ID: 111830-B1	QAQC Procedural Blank	Matrix: BlankMatrix	Sampled:	Received:
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Method: EPA 625.1	Batch ID: O-42142	Prepared: 12-Oct-23	Analyzed: 09-Nov-23
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(d10-Acenaphthene)	Total	101	1			% Recovery	100	101	27 - 133%	PASS
(d10-Phenanthrene)	Total	100	1			% Recovery	100	100	43 - 129%	PASS
(d12-Chrysene)	Total	97	1			% Recovery	100	97	52 - 144%	PASS
(d12-Perylene)	Total	92	1			% Recovery	100	92	36 - 161%	PASS
(d8-Naphthalene)	Total	104	1			% Recovery	100	104	25 - 125%	PASS
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L				
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L				
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L				
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L				
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L				
Acenaphthene	Total	ND	1	0.001	0.005	µg/L				
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L				
Anthracene	Total	ND	1	0.001	0.005	µg/L				
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L				
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L				
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L				
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L				
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L				
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L				
Biphenyl	Total	ND	1	0.001	0.005	µg/L				
Chrysene	Total	ND	1	0.001	0.005	µg/L				
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L				
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L				
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L				

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Fluorene	Total	ND	1	0.001	0.005	µg/L							
Indeno[1,2,3-cd]pyrene	Total	ND	1	0.001	0.005	µg/L							
Naphthalene	Total	ND	1	0.001	0.005	µg/L							
Perylene	Total	ND	1	0.001	0.005	µg/L							
Phenanthrene	Total	ND	1	0.001	0.005	µg/L							
Pyrene	Total	ND	1	0.001	0.005	µg/L							



Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY	PRECISION	QA CODE	
							LEVEL	RESULT	%	LIMITS	%	LIMITS
Sample ID: 111830-BS1		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:		Received:		
Method: EPA 625.1		Batch ID: O-42142			Prepared: 12-Oct-23		Analyzed: 09-Nov-23					
(d10-Acenaphthene)	Total	103	1			% Recovery	100	0	103	27 - 133%	PASS	
(d10-Phenanthrene)	Total	99	1			% Recovery	100	0	99	43 - 129%	PASS	
(d12-Chrysene)	Total	95	1			% Recovery	100	0	95	52 - 144%	PASS	
(d12-Perylene)	Total	93	1			% Recovery	100	0	93	36 - 161%	PASS	
(d8-Naphthalene)	Total	101	1			% Recovery	100	0	101	25 - 125%	PASS	
1-Methylnaphthalene	Total	0.496	1	0.001	0.005	µg/L	0.5	0	99	31 - 128%	PASS	
1-Methylphenanthrene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	66 - 127%	PASS	
2,3,5-Trimethylnaphthalene	Total	0.497	1	0.001	0.005	µg/L	0.5	0	99	55 - 122%	PASS	
2,6-Dimethylnaphthalene	Total	0.484	1	0.001	0.005	µg/L	0.5	0	97	48 - 120%	PASS	
2-Methylnaphthalene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	47 - 130%	PASS	
Acenaphthene	Total	1.64	1	0.001	0.005	µg/L	1.5	0	109	53 - 131%	PASS	
Acenaphthylene	Total	1.65	1	0.001	0.005	µg/L	1.5	0	110	43 - 140%	PASS	
Anthracene	Total	1.57	1	0.001	0.005	µg/L	1.5	0	105	58 - 135%	PASS	
Benz[a]anthracene	Total	1.63	1	0.001	0.005	µg/L	1.5	0	109	55 - 145%	PASS	
Benzo[a]pyrene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	51 - 143%	PASS	
Benzo[b]fluoranthene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	46 - 165%	PASS	
Benzo[e]pyrene	Total	0.508	1	0.001	0.005	µg/L	0.5	0	102	42 - 152%	PASS	
Benzo[g,h,i]perylene	Total	1.47	1	0.001	0.005	µg/L	1.5	0	98	63 - 133%	PASS	
Benzo[k]fluoranthene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	56 - 145%	PASS	
Biphenyl	Total	0.497	1	0.001	0.005	µg/L	0.5	0	99	56 - 119%	PASS	
Chrysene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	56 - 141%	PASS	
Dibenz[a,h]anthracene	Total	1.35	1	0.001	0.005	µg/L	1.5	0	90	55 - 150%	PASS	
Dibenzo[a,l]pyrene	Total	0.786	1	0.001	0.005	µg/L	1.5	0	52	50 - 150%	PASS	
Dibenzothiophene	Total	0.491	1	0.001	0.005	µg/L	0.5	0	98	46 - 126%	PASS	

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODEc
							LEVEL	RESULT	%	LIMITS	%	LIMITS	
Fluoranthene	Total	1.64	1	0.001	0.005	µg/L	1.5	0	109	60 - 146%	PASS		
Fluorene	Total	1.6	1	0.001	0.005	µg/L	1.5	0	107	58 - 131%	PASS		
Indeno[1,2,3-cd]pyrene	Total	1.31	1	0.001	0.005	µg/L	1.5	0	87	50 - 151%	PASS		
Naphthalene	Total	1.57	1	0.001	0.005	µg/L	1.5	0	105	41 - 126%	PASS		
Perylene	Total	0.483	1	0.001	0.005	µg/L	0.5	0	97	48 - 141%	PASS		
Phenanthrene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	67 - 127%	PASS		
Pyrene	Total	1.65	1	0.001	0.005	µg/L	1.5	0	110	54 - 156%	PASS		

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODEc	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Sample ID: 111830-BS2		QAQC Procedural Blank			Matrix: BlankMatrix			Sampled:			Received:			
Method: EPA 625.1		Batch ID: O-42142			Prepared: 12-Oct-23			Analyzed: 09-Nov-23						
(d10-Acenaphthene)	Total	97	1			% Recovery	100	0	97	27 - 133%	PASS	6	30	PASS
(d10-Phenanthrene)	Total	96	1			% Recovery	100	0	96	43 - 129%	PASS	3	30	PASS
(d12-Chrysene)	Total	94	1			% Recovery	100	0	94	52 - 144%	PASS	1	30	PASS
(d12-Perylene)	Total	89	1			% Recovery	100	0	89	36 - 161%	PASS	4	30	PASS
(d8-Naphthalene)	Total	96	1			% Recovery	100	0	96	25 - 125%	PASS	5	30	PASS
1-Methylnaphthalene	Total	0.483	1	0.001	0.005	µg/L	0.5	0	97	31 - 128%	PASS	2	30	PASS
1-Methylphenanthrene	Total	0.482	1	0.001	0.005	µg/L	0.5	0	96	66 - 127%	PASS	0	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.49	1	0.001	0.005	µg/L	0.5	0	98	55 - 122%	PASS	1	30	PASS
2,6-Dimethylnaphthalene	Total	0.479	1	0.001	0.005	µg/L	0.5	0	96	48 - 120%	PASS	1	30	PASS
2-Methylnaphthalene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	47 - 130%	PASS	3	30	PASS
Acenaphthene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	53 - 131%	PASS	4	30	PASS
Acenaphthylene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	43 - 140%	PASS	4	30	PASS
Anthracene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	58 - 135%	PASS	2	30	PASS
Benz[a]anthracene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	55 - 145%	PASS	1	30	PASS
Benzo[a]pyrene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	51 - 143%	PASS	1	30	PASS
Benzo[b]fluoranthene	Total	1.6	1	0.001	0.005	µg/L	1.5	0	107	46 - 165%	PASS	2	30	PASS
Benzo[e]pyrene	Total	0.498	1	0.001	0.005	µg/L	0.5	0	100	42 - 152%	PASS	2	30	PASS
Benzo[g,h,i]perylene	Total	1.48	1	0.001	0.005	µg/L	1.5	0	99	63 - 133%	PASS	1	30	PASS
Benzo[k]fluoranthene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	56 - 145%	PASS	10	30	PASS
Biphenyl	Total	0.49	1	0.001	0.005	µg/L	0.5	0	98	56 - 119%	PASS	1	30	PASS
Chrysene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	56 - 141%	PASS	5	30	PASS
Dibenz[a,h]anthracene	Total	1.32	1	0.001	0.005	µg/L	1.5	0	88	55 - 150%	PASS	2	30	PASS
Dibenzo[a,l]pyrene	Total	0.761	1	0.001	0.005	µg/L	1.5	0	51	50 - 150%	PASS	2	30	PASS
Dibenzothiophene	Total	0.493	1	0.001	0.005	µg/L	0.5	0	99	46 - 126%	PASS	1	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE	SOURCE	ACCURACY		PRECISION		QA CODE _c	
							LEVEL	RESULT	%	LIMITS	%	LIMITS		
Fluoranthene	Total	1.63	1	0.001	0.005	µg/L	1.5	0	109	60 - 146%	PASS	0	30	PASS
Fluorene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	58 - 131%	PASS	2	30	PASS
Indeno[1,2,3-cd]pyrene	Total	1.32	1	0.001	0.005	µg/L	1.5	0	88	50 - 151%	PASS	1	30	PASS
Naphthalene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	41 - 126%	PASS	4	30	PASS
Perylene	Total	0.462	1	0.001	0.005	µg/L	0.5	0	92	48 - 141%	PASS	5	30	PASS
Phenanthrene	Total	1.56	1	0.001	0.005	µg/L	1.5	0	104	67 - 127%	PASS	1	30	PASS
Pyrene	Total	1.65	1	0.001	0.005	µg/L	1.5	0	110	54 - 156%	PASS	0	30	PASS

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PHYSIS

TENTATIVELY IDENTIFIED COMPOUNDS

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Sample ID: 111831

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3799	3.9777	1111	Anthracene-D10-	1719-06-8	91
10.4202	6.1135	1708	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	95
10.3608	4.2352	1183	Octane, 3-methyl-6-methylene-	74630-07-2	90
10.6070	3.1925	892	Cyclobutanecarboxylic acid, 2-propenyl ester	1000282-60-3	88
10.1843	1.7165	479	2,3,3-Trimethyl-1-hexene	1000113-52-1	85
10.1560	1.0437	292	1H-Tetrazole	288-94-8	87
10.4734	0.7739	216	Octane, 3-methyl-6-methylene-	74630-07-2	88
32.1514	0.5468	153	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98
10.3053	0.5331	149	Sulfurous acid, di(cyclohexylmethyl) ester	1010309-22-7	88
10.2490	0.4248	119	Hydroperoxide, 1-ethylbutyl	24254-56-6	83

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank B1_42142

Retention Time	Area (% of total)	Concentration (ng/L)	Library/ID	Cas Number	Match Quality (%)
35.3856	6.0679	1111	Anthracene-D10-	1517-22-2	96
10.6103	3.6837	675	Cyclopropane, 2-bromo-1,1,3-trimethyl-	36617-00-2	90
10.4201	1.3883	254	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	94
10.3612	0.9310	170	Octane, 3-methyl-6-methylene-	74630-07-2	88
10.3702	0.6057	111	Thiazole	288-47-1	80

Concentration estimated using the response for Anthracene-d10

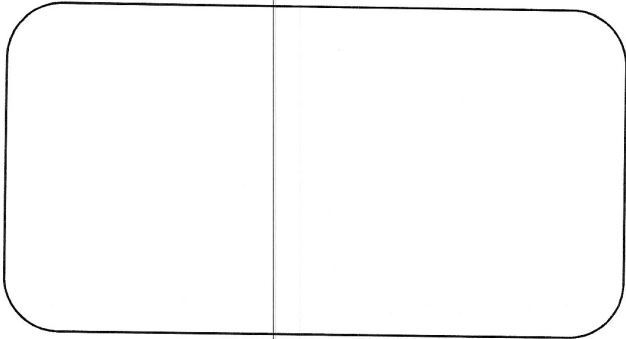
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PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature

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Sample Receipt Summary

Receiving Info

1. Initials Received By: MN
2. Date Received: 10/6/23
3. Time Received: 1322
4. Client Name: Evoform
5. Courier Information: (Please circle)
 - Client
 - UPS
 - Area Fast
 - DRS
 - FedEx
 - GSO/GLS
 - Ontrac
 - PAMS
 - PHYSIS Driver:
 - i. Start Time: _____
 - ii. End Time: _____
 - iii. Total Mileage: _____
 - iv. Number of Pickups: _____
6. Container Information: (Please put the # of containers or circle none)
 - Cooler
 - Styrofoam Cooler
 - Boxes
 - None
 - Carboy(s)
 - Carboy Trash Can(s)
 - Carboy Cap(s)
 - Other _____
7. What type of ice was used: (Please circle any that apply)
 - Wet Ice
 - Blue Ice
 - Dry Ice
 - Water
 - None
8. Randomly Selected Samples Temperature (°C): 1.8
 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: _____

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s)..... Yes / No
5. Correct containers and volume for all analyses indicated..... Yes / No
6. All samples received within method holding time..... Yes / No
7. Correct preservation used for all analyses indicated..... Yes / No
8. Name of sampler included on COC(s)..... Yes / No

Notes:



Chain of Custody Record

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

Client Information Client Contact: Dr. Ron Fenstermacher Phone: 808-748-5840 City & County of Honolulu		Lab PM: Arada, Rachelle E-Mail: Rachelle.Arada@et.eurofins.com Carmer Tracking Note(s)		COC No: Page: Page 2 of 2 Job #	
Due Date Requested TAT Requested (days) Compliance Project: <input type="checkbox"/> No <input type="checkbox"/> Yes PO #: C20525101 exp 06312023 WC #: 38001111 Project Name: RED-HILL Site:		Analysis Requested SUBCONTRACT - 8015 Ethanol: N R R R R R SUBCONTRACT - 825 PAH Phys LL (EAL) + TICs: 3 2 2 2 SUBCONTRACT - 625 Base Neutral LL (EAL) Phys: 2 2 2 2 SUBCONTRACT - 625 Acid LL (EAL) Phys: 2 2 2 2 SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL): R A R R 504 1_PREC - Local Method: R			
Sample Identification Sample Date: 4-Oct-2023 Sample Time: 1001 G Sample Type (C=Comp, G=grab): G Preservation Code: Water Matrix (W=Water, S=solid, O=soil, BT=Tissue, Ash):		Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Total Number of Containers: 1 Special Instructions/Note:			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/OC Requirements			
Empty Kit Relinquished by: BAILEY Relinquished by Date/Time: 04 Oct 2023 1400 Relinquished by Company: HBWS		Method of Shipment: FED EX Date/Time: 10/05/2023 10:20 Company: CEAF			
Relinquished by: BAILEY Relinquished by Date/Time:		Received by: [Signature] Received by Date/Time:			
Relinquished by: BAILEY Relinquished by Date/Time:		Received by: [Signature] Received by Date/Time:			
Custody Seal Intact <input checked="" type="checkbox"/> Custody Seal No <input type="checkbox"/>		Cooler Temperature(s) °C and Other Remarks: (F51A) GEL-FROZEN @ -20°C FOR 10.01.23			



Below Order Information

Bottle Order: RED-HILL - Quarterly
 Bottle Order #: 1845
 Request From Client: 12/14/2022
 Date Order Posted: 6/23/2022 7:29:27AM
 Order Status: Ready To Process
 Prepared By: Davis Haley
 Deliver By Date: 9/1/2023 11:59:00PM
 Lab Project Number: 38001111
 PWSID: HI000000331

Order Completion Information

Creator: Michelle Do
 Filled by:
 Sent Date:
 Sent Via:
 Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
5	6	30	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	504.1_PREC - Local Method	Water	Normal		
5	1	5	Plastic 250ml - unpreserved	None	505_LL_PREC - (MOD) ML505 +505-EAL Aldrin Dieldrin Tox	Water	Normal		
5	1	5	Plastic 500ml - with Nitric Acid	Nitric Acid	2320B - (MOD) Total Alkalinity SM4500_H+ - Local Method 2510B - Conductivity	Water	Normal		
5	1	5	Plastic 500ml - unpreserved	None	200.8 - Metals, Priority Pollutant by 200.8 200.7 - (MOD) Custom	Water	Normal		
5	1	5	Plastic 250ml - with Zinc Acetate & NaOH	Zinc Acetate and Sodium Hydroxide	2540C_Calcd - Total Dissolved Solids (TDS)	Water	Normal		
5	6	30	Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	SM4500_S2_D - Sulfide, Total	Water	Normal		
5	3	15	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	524.2_Pres_PREC - VOASDWA plus TICs + Acetone	Water	Normal		
5	2	10	Plastic 125mL - unpreserved	None	524.2_SIM_PREC - TBA by 524.2 SIM	Water	Normal		
5	1	5	Plastic 250ml - with Nitric Acid	Nitric Acid	525.2_PREC - 525plus Plus TICs 300_OF_28D_B - Bromide 4500_F_C - Fluoride 300_OF_28D_PREC - Chloride and Sulfate 300_OF_48H_PREC - Nitrite, Nitrate, and Nitrite+Nitrate 245.1 - Local Method	Water	Normal		

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



			8mL HCL	Thiosulfate/Hydrochloric Acid	(JP8)				
5	2	10	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	Water	Normal		
5	2	10	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal		
5	3	15	Voa Vial 40ml - Sodium Thio w/HCl-dropper	Sodium Thiosulfate	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal		
5	3	15	Voa Vial 40ml - unpreserved	None	SUBCONTRACT - 8015 Ethanol	Water	Normal		
5	2	10	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal		
5	2	10	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 Base Neutral LL (EAL) Physis	Water	Normal		
5	2	10	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 Acid LL (EAL) Physis	Water	Normal		
5	2	10	VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Trip Blank		
5	6	30	Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	524.2_Pres_PREC - VOASDWA plus TICs + Acetone	Water	Trip Blank		
5	3	15	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	524.2_SIM_PREC - TBA by 524.2 SIM	Water	Trip Blank		
					504.1_PREC - Local Method	Water	Trip Blank		

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



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-65785-1

Login Number: 65785
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
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").	False	HS exists in all 524.2 TB vials.
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-65785-1

Login Number: 65785
List Number: 2
Creator: Pehling-Wright, Penny

List Source: Eurofins Eaton Analytical South Bend
List Creation: 10/07/23 10:44 AM

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

