

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

Seawater Analytical - NELHA

JOB NUMBER

580-149216-1

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Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will 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 Environment Testing Northwest, LLC Project Manager.

Authorization



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Case Narrative

Client: Natural Energy Laboratory of Hawaii Authority
Project: Seawater Analytical - NELHA

Job ID: 580-149216-1

Job ID: 580-149216-1

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Job Narrative 580-149216-1

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

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

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

Receipt

The samples were received on 3/26/2025 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 17.5°C.

Receipt Exceptions

The following samples were received at the laboratory outside the required temperature criteria: Surface Seawater-28-Sump (580-149216-1), Deep Seawater-40-Sump (580-149216-2), Surface Seawater-55-Sump (580-149216-3) and Deep Seawater-55-Sump (580-149216-4). There was no cooling media present in the cooler. The client was contacted regarding this issue, and the laboratory was instructed to proceed with the analysis.

GC/MS VOA

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

GC VOA

Method RSK_175: The method requirement for no headspace was not met. The following volatile samples were analyzed with significant headspace in the sample container(s): Surface Seawater-28-Sump (580-149216-1), Deep Seawater-40-Sump (580-149216-2), Surface Seawater-55-Sump (580-149216-3) and Deep Seawater-55-Sump (580-149216-4). Significant headspace is defined as a bubble greater than 6 mm in diameter.

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

Diesel Range Organics

Method 8015D_DRO: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes: Deep Seawater-40-Sump (580-149216-2).

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

Pesticides

Method 8081B: The following samples required a copper clean-up (CleanCuPowder_00005), via EPA Method 3660B, to reduce matrix interferences: Surface Seawater-28-Sump (580-149216-1), Deep Seawater-40-Sump (580-149216-2), Surface Seawater-55-Sump (580-149216-3), Deep Seawater-55-Sump (580-149216-4), (LCS 580-488801/2-A), (LCS 580-488801/6-A), (LCSD 580-488801/3-A), (LCSD 580-488801/7-A) and (MB 580-488801/1-A).

Method 8081B: The surrogate recovery for the blank associated with preparation batch 580-488801 and analytical batch 580-489073 was outside the control limits for DCB Decachlorobiphenyl. The other surrogate was in control, and the associated samples were also in control. (MB 580-488801/1-A).

Method 8081B: The continuing calibration verification (CCV) associated with 580-489073 recovered high and outside the control limits for 4,4'-DDT on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (CCVIS 580-489073/3).

Method 8081B: The continuing calibration verification (CCV) associated with 580-489073 recovered low and outside the control limits for Endrin aldehyde and Endrin ketone on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (CCV 580-489073/21).

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Case Narrative

Client: Natural Energy Laboratory of Hawaii Authority
Project: Seawater Analytical - NELHA

Job ID: 580-149216-1

Job ID: 580-149216-1 (Continued)

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

Herbicides

Method 8321B_Herb: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 570-550940 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8321B_Herb: The method blank for analytical batch 570-550940 contained MCPPE above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8321B_Herb: The method blank for analytical batch 570-551512 contained MCPPE above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or 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.

Metals

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

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Definitions/Glossary

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

LCMS

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Client Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Surface Seawater-28-Sump

Lab Sample ID: 580-149216-1

Date Collected: 03/25/25 09:45

Matrix: Water

Date Received: 03/26/25 09:50

Method: SW846 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	ND		0.15	0.071	mg/L			04/01/25 15:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		78 - 120					04/01/25 15:29	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.11	ug/L			03/29/25 13:16	1
Ethane	ND		1.0	0.28	ug/L			03/29/25 13:16	1
Ethylene	ND		1.0	0.25	ug/L			03/29/25 13:16	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
CA Diesel Range Organics (C10-C28)	ND		0.099	0.081	mg/L		03/27/25 08:54	04/04/25 00:38	1
CA Extended Range Organics (>C28-C40)	ND		0.36	0.16	mg/L		03/27/25 08:54	04/04/25 00:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		53 - 120				03/27/25 08:54	04/04/25 00:38	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.022	0.0064	ug/L		03/28/25 09:06	04/01/25 20:57	1
alpha-BHC	ND		0.016	0.0036	ug/L		03/28/25 09:06	04/01/25 20:57	1
beta-BHC	ND		0.019	0.0045	ug/L		03/28/25 09:06	04/01/25 20:57	1
delta-BHC	ND		0.014	0.0045	ug/L		03/28/25 09:06	04/01/25 20:57	1
gamma-BHC (Lindane)	ND		0.018	0.0045	ug/L		03/28/25 09:06	04/01/25 20:57	1
4,4'-DDD	ND		0.014	0.0055	ug/L		03/28/25 09:06	04/01/25 20:57	1
4,4'-DDE	ND		0.0091	0.0027	ug/L		03/28/25 09:06	04/01/25 20:57	1
4,4'-DDT	ND		0.018	0.0045	ug/L		03/28/25 09:06	04/01/25 20:57	1
Dieldrin	ND		0.016	0.0045	ug/L		03/28/25 09:06	04/01/25 20:57	1
Endosulfan I	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 20:57	1
Endosulfan II	ND		0.022	0.0045	ug/L		03/28/25 09:06	04/01/25 20:57	1
Endosulfan sulfate	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 20:57	1
Endrin	ND		0.011	0.0027	ug/L		03/28/25 09:06	04/01/25 20:57	1
Endrin aldehyde	ND		0.055	0.031	ug/L		03/28/25 09:06	04/01/25 20:57	1
Heptachlor	ND		0.014	0.0036	ug/L		03/28/25 09:06	04/01/25 20:57	1
Heptachlor epoxide	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 20:57	1
Methoxychlor	ND		0.091	0.0045	ug/L		03/28/25 09:06	04/01/25 20:57	1
Endrin ketone	ND		0.018	0.0064	ug/L		03/28/25 09:06	04/01/25 20:57	1
Toxaphene	ND		1.8	0.42	ug/L		03/28/25 09:06	04/01/25 20:57	1
cis-Chlordane	ND		0.025	0.0073	ug/L		03/28/25 09:06	04/01/25 20:57	1
trans-Chlordane	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 20:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	53		42 - 120				03/28/25 09:06	04/01/25 20:57	1
DCB Decachlorobiphenyl	70		50 - 120				03/28/25 09:06	04/01/25 20:57	1

Method: SW846 8321B - Herbicides (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.22	ug/L			03/28/25 15:41	1

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Client Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Surface Seawater-28-Sump

Lab Sample ID: 580-149216-1

Date Collected: 03/25/25 09:45

Matrix: Water

Date Received: 03/26/25 09:50

Method: SW846 8321B - Herbicides (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-TP (Silvex)	ND		0.50	0.18	ug/L			03/28/25 15:41	1
2,4-D	ND		5.0	0.20	ug/L			03/28/25 15:41	1
2,4-DB	ND		5.0	0.21	ug/L			03/28/25 15:41	1
Dalapon	ND		5.0	0.25	ug/L			03/28/25 15:41	1
Dicamba	ND	F1	0.50	0.18	ug/L			03/28/25 15:41	1
Dichlorprop	ND		5.0	0.18	ug/L			03/28/25 15:41	1
Dinoseb	ND		2.5	0.22	ug/L			03/31/25 09:34	1
MCPA	ND		1.0	0.20	ug/L			03/28/25 15:41	1
MCP	0.20	J B	1.0	0.18	ug/L			03/28/25 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	83		53 - 169		03/28/25 15:41	1
2,4-Dichlorophenylacetic acid (Surr)	82		53 - 169		03/31/25 09:34	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0079	J	0.060	0.0072	mg/L		03/31/25 17:32	04/01/25 15:23	1
Antimony	0.0059	J	0.060	0.0042	mg/L		03/31/25 17:32	04/01/25 15:23	1
Barium	0.0052	J	0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 15:23	1
Beryllium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 15:23	1
Cadmium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 15:23	1
Chromium	ND		0.025	0.0027	mg/L		03/31/25 17:32	04/01/25 15:23	1
Cobalt	ND		0.020	0.00050	mg/L		03/31/25 17:32	04/01/25 15:23	1
Copper	ND		0.060	0.0055	mg/L		03/31/25 17:32	04/01/25 15:23	1
Lead	0.0046	J	0.030	0.0027	mg/L		03/31/25 17:32	04/01/25 15:23	1
Molybdenum	0.0089	J	0.040	0.0012	mg/L		03/31/25 17:32	04/01/25 15:23	1
Nickel	0.0017	J	0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 15:23	1
Selenium	ND		0.10	0.0087	mg/L		03/31/25 17:32	04/01/25 15:23	1
Silver	ND		0.050	0.0085	mg/L		03/31/25 17:32	04/01/25 15:23	1
Thallium	ND		0.10	0.0032	mg/L		03/31/25 17:32	04/01/25 15:23	1
Vanadium	ND		0.030	0.0061	mg/L		03/31/25 17:32	04/01/25 15:23	1
Zinc	ND		0.040	0.0093	mg/L		03/31/25 17:32	04/01/25 15:23	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.000050	mg/L		04/07/25 15:29	04/08/25 00:21	1

Client Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Deep Seawater-40-Sump

Lab Sample ID: 580-149216-2

Date Collected: 03/25/25 09:31

Matrix: Water

Date Received: 03/26/25 09:50

Method: SW846 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	ND		0.15	0.071	mg/L			04/01/25 15:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		78 - 120					04/01/25 15:52	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.11	ug/L			03/29/25 13:42	1
Ethane	ND		1.0	0.28	ug/L			03/29/25 13:42	1
Ethylene	ND		1.0	0.25	ug/L			03/29/25 13:42	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
CA Diesel Range Organics (C10-C28)	0.51		0.10	0.082	mg/L		03/27/25 08:54	04/04/25 00:58	1
CA Extended Range Organics (>C28-C40)	0.44		0.36	0.16	mg/L		03/27/25 08:54	04/04/25 00:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		53 - 120				03/27/25 08:54	04/04/25 00:58	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.022	0.0063	ug/L		03/28/25 09:06	04/01/25 21:17	1
alpha-BHC	ND		0.016	0.0036	ug/L		03/28/25 09:06	04/01/25 21:17	1
beta-BHC	ND		0.019	0.0045	ug/L		03/28/25 09:06	04/01/25 21:17	1
delta-BHC	ND		0.014	0.0045	ug/L		03/28/25 09:06	04/01/25 21:17	1
gamma-BHC (Lindane)	ND		0.018	0.0045	ug/L		03/28/25 09:06	04/01/25 21:17	1
4,4'-DDD	ND		0.014	0.0054	ug/L		03/28/25 09:06	04/01/25 21:17	1
4,4'-DDE	ND		0.0091	0.0027	ug/L		03/28/25 09:06	04/01/25 21:17	1
4,4'-DDT	ND		0.018	0.0045	ug/L		03/28/25 09:06	04/01/25 21:17	1
Dieldrin	ND		0.016	0.0045	ug/L		03/28/25 09:06	04/01/25 21:17	1
Endosulfan I	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 21:17	1
Endosulfan II	ND		0.022	0.0045	ug/L		03/28/25 09:06	04/01/25 21:17	1
Endosulfan sulfate	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 21:17	1
Endrin	ND		0.011	0.0027	ug/L		03/28/25 09:06	04/01/25 21:17	1
Endrin aldehyde	ND		0.054	0.031	ug/L		03/28/25 09:06	04/01/25 21:17	1
Heptachlor	ND		0.014	0.0036	ug/L		03/28/25 09:06	04/01/25 21:17	1
Heptachlor epoxide	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 21:17	1
Methoxychlor	ND		0.091	0.0045	ug/L		03/28/25 09:06	04/01/25 21:17	1
Endrin ketone	ND		0.018	0.0063	ug/L		03/28/25 09:06	04/01/25 21:17	1
Toxaphene	ND		1.8	0.42	ug/L		03/28/25 09:06	04/01/25 21:17	1
cis-Chlordane	ND		0.024	0.0072	ug/L		03/28/25 09:06	04/01/25 21:17	1
trans-Chlordane	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 21:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	55		42 - 120				03/28/25 09:06	04/01/25 21:17	1
DCB Decachlorobiphenyl	72		50 - 120				03/28/25 09:06	04/01/25 21:17	1

Method: SW846 8321B - Herbicides (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.22	ug/L			03/28/25 15:49	1

Eurofins Seattle

Client Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Deep Seawater-40-Sump

Lab Sample ID: 580-149216-2

Date Collected: 03/25/25 09:31

Matrix: Water

Date Received: 03/26/25 09:50

Method: SW846 8321B - Herbicides (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-TP (Silvex)	ND		0.50	0.18	ug/L			03/28/25 15:49	1
2,4-D	ND		5.0	0.20	ug/L			03/28/25 15:49	1
2,4-DB	ND		5.0	0.21	ug/L			03/28/25 15:49	1
Dalapon	ND		5.0	0.25	ug/L			03/28/25 15:49	1
Dicamba	ND		0.50	0.18	ug/L			03/28/25 15:49	1
Dichlorprop	ND		5.0	0.18	ug/L			03/28/25 15:49	1
Dinoseb	ND		2.5	0.22	ug/L			03/31/25 10:08	1
MCPA	ND		1.0	0.20	ug/L			03/28/25 15:49	1
MCP	0.19	J B	1.0	0.18	ug/L			03/28/25 15:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	75		53 - 169		03/28/25 15:49	1
2,4-Dichlorophenylacetic acid (Surr)	82		53 - 169		03/31/25 10:08	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060	0.0072	mg/L		03/31/25 17:32	04/01/25 15:19	1
Antimony	0.0059	J	0.060	0.0042	mg/L		03/31/25 17:32	04/01/25 15:19	1
Barium	0.012	J	0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 15:19	1
Beryllium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 15:19	1
Cadmium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 15:19	1
Chromium	ND		0.025	0.0027	mg/L		03/31/25 17:32	04/01/25 15:19	1
Cobalt	ND		0.020	0.00050	mg/L		03/31/25 17:32	04/01/25 15:19	1
Copper	ND		0.060	0.0055	mg/L		03/31/25 17:32	04/01/25 15:19	1
Lead	ND		0.030	0.0027	mg/L		03/31/25 17:32	04/01/25 15:19	1
Molybdenum	0.0088	J	0.040	0.0012	mg/L		03/31/25 17:32	04/01/25 15:19	1
Nickel	0.0041	J	0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 15:19	1
Selenium	ND		0.10	0.0087	mg/L		03/31/25 17:32	04/01/25 15:19	1
Silver	ND		0.050	0.0085	mg/L		03/31/25 17:32	04/01/25 15:19	1
Thallium	ND		0.10	0.0032	mg/L		03/31/25 17:32	04/01/25 15:19	1
Vanadium	ND		0.030	0.0061	mg/L		03/31/25 17:32	04/01/25 15:19	1
Zinc	ND		0.040	0.0093	mg/L		03/31/25 17:32	04/01/25 15:19	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.000050	mg/L		04/07/25 15:29	04/08/25 00:25	1

Client Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Surface Seawater-55-Sump

Lab Sample ID: 580-149216-3

Date Collected: 03/25/25 10:11

Matrix: Water

Date Received: 03/26/25 09:50

Method: SW846 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	ND		0.15	0.071	mg/L			04/01/25 16:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		78 - 120					04/01/25 16:39	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.11	ug/L			03/29/25 14:09	1
Ethane	ND		1.0	0.28	ug/L			03/29/25 14:09	1
Ethylene	ND		1.0	0.25	ug/L			03/29/25 14:09	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
CA Diesel Range Organics (C10-C28)	ND		0.10	0.083	mg/L		03/27/25 08:54	04/04/25 01:37	1
CA Extended Range Organics (>C28-C40)	ND		0.37	0.17	mg/L		03/27/25 08:54	04/04/25 01:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		53 - 120				03/27/25 08:54	04/04/25 01:37	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.022	0.0065	ug/L		03/28/25 09:06	04/01/25 21:37	1
alpha-BHC	ND		0.017	0.0037	ug/L		03/28/25 09:06	04/01/25 21:37	1
beta-BHC	ND		0.019	0.0046	ug/L		03/28/25 09:06	04/01/25 21:37	1
delta-BHC	ND		0.014	0.0046	ug/L		03/28/25 09:06	04/01/25 21:37	1
gamma-BHC (Lindane)	ND		0.019	0.0046	ug/L		03/28/25 09:06	04/01/25 21:37	1
4,4'-DDD	ND		0.014	0.0056	ug/L		03/28/25 09:06	04/01/25 21:37	1
4,4'-DDE	ND		0.0093	0.0028	ug/L		03/28/25 09:06	04/01/25 21:37	1
4,4'-DDT	ND		0.019	0.0046	ug/L		03/28/25 09:06	04/01/25 21:37	1
Dieldrin	ND		0.017	0.0046	ug/L		03/28/25 09:06	04/01/25 21:37	1
Endosulfan I	ND		0.019	0.0028	ug/L		03/28/25 09:06	04/01/25 21:37	1
Endosulfan II	ND		0.022	0.0046	ug/L		03/28/25 09:06	04/01/25 21:37	1
Endosulfan sulfate	ND		0.019	0.0028	ug/L		03/28/25 09:06	04/01/25 21:37	1
Endrin	ND		0.011	0.0028	ug/L		03/28/25 09:06	04/01/25 21:37	1
Endrin aldehyde	ND		0.056	0.032	ug/L		03/28/25 09:06	04/01/25 21:37	1
Heptachlor	ND		0.014	0.0037	ug/L		03/28/25 09:06	04/01/25 21:37	1
Heptachlor epoxide	ND		0.019	0.0028	ug/L		03/28/25 09:06	04/01/25 21:37	1
Methoxychlor	ND		0.093	0.0046	ug/L		03/28/25 09:06	04/01/25 21:37	1
Endrin ketone	ND		0.019	0.0065	ug/L		03/28/25 09:06	04/01/25 21:37	1
Toxaphene	ND		1.9	0.43	ug/L		03/28/25 09:06	04/01/25 21:37	1
cis-Chlordane	ND		0.025	0.0074	ug/L		03/28/25 09:06	04/01/25 21:37	1
trans-Chlordane	ND		0.019	0.0028	ug/L		03/28/25 09:06	04/01/25 21:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	57		42 - 120				03/28/25 09:06	04/01/25 21:37	1
DCB Decachlorobiphenyl	77		50 - 120				03/28/25 09:06	04/01/25 21:37	1

Method: SW846 8321B - Herbicides (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.22	ug/L			03/28/25 15:57	1

Eurofins Seattle

Client Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Surface Seawater-55-Sump

Lab Sample ID: 580-149216-3

Date Collected: 03/25/25 10:11

Matrix: Water

Date Received: 03/26/25 09:50

Method: SW846 8321B - Herbicides (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-TP (Silvex)	ND		0.50	0.18	ug/L			03/28/25 15:57	1
2,4-D	ND		5.0	0.20	ug/L			03/28/25 15:57	1
2,4-DB	ND		5.0	0.21	ug/L			03/28/25 15:57	1
Dalapon	ND		5.0	0.25	ug/L			03/28/25 15:57	1
Dicamba	ND		0.50	0.18	ug/L			03/28/25 15:57	1
Dichlorprop	ND		5.0	0.18	ug/L			03/28/25 15:57	1
Dinoseb	ND		2.5	0.22	ug/L			03/28/25 15:57	1
MCPA	ND		1.0	0.20	ug/L			03/28/25 15:57	1
MCPP	ND		1.0	0.18	ug/L			03/28/25 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	99		53 - 169		03/28/25 15:57	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060	0.0072	mg/L		03/31/25 17:32	04/01/25 15:15	1
Antimony	ND		0.060	0.0042	mg/L		03/31/25 17:32	04/01/25 15:15	1
Barium	0.0066	J	0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 15:15	1
Beryllium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 15:15	1
Cadmium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 15:15	1
Chromium	ND		0.025	0.0027	mg/L		03/31/25 17:32	04/01/25 15:15	1
Cobalt	ND		0.020	0.00050	mg/L		03/31/25 17:32	04/01/25 15:15	1
Copper	ND		0.060	0.0055	mg/L		03/31/25 17:32	04/01/25 15:15	1
Lead	ND		0.030	0.0027	mg/L		03/31/25 17:32	04/01/25 15:15	1
Molybdenum	0.0024	J	0.040	0.0012	mg/L		03/31/25 17:32	04/01/25 15:15	1
Nickel	ND		0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 15:15	1
Selenium	ND		0.10	0.0087	mg/L		03/31/25 17:32	04/01/25 15:15	1
Silver	ND		0.050	0.0085	mg/L		03/31/25 17:32	04/01/25 15:15	1
Thallium	0.0040	J	0.10	0.0032	mg/L		03/31/25 17:32	04/01/25 15:15	1
Vanadium	0.056		0.030	0.0061	mg/L		03/31/25 17:32	04/01/25 15:15	1
Zinc	ND		0.040	0.0093	mg/L		03/31/25 17:32	04/01/25 15:15	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.000050	mg/L		04/07/25 15:29	04/08/25 00:37	1

Client Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Deep Seawater-55-Sump

Lab Sample ID: 580-149216-4

Date Collected: 03/25/25 10:45

Matrix: Water

Date Received: 03/26/25 09:50

Method: SW846 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	ND		0.15	0.071	mg/L			04/01/25 16:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		78 - 120					04/01/25 16:16	1

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.11	ug/L			03/29/25 14:35	1
Ethane	ND		1.0	0.28	ug/L			03/29/25 14:35	1
Ethylene	ND		1.0	0.25	ug/L			03/29/25 14:35	1

Method: SW846 8015D - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
CA Diesel Range Organics (C10-C28)	ND		0.10	0.084	mg/L		03/27/25 08:54	04/04/25 01:57	1
CA Extended Range Organics (>C28-C40)	ND		0.38	0.17	mg/L		03/27/25 08:54	04/04/25 01:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	68		53 - 120				03/27/25 08:54	04/04/25 01:57	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.022	0.0064	ug/L		03/28/25 09:06	04/01/25 21:57	1
alpha-BHC	ND		0.016	0.0036	ug/L		03/28/25 09:06	04/01/25 21:57	1
beta-BHC	ND		0.019	0.0045	ug/L		03/28/25 09:06	04/01/25 21:57	1
delta-BHC	ND		0.014	0.0045	ug/L		03/28/25 09:06	04/01/25 21:57	1
gamma-BHC (Lindane)	ND		0.018	0.0045	ug/L		03/28/25 09:06	04/01/25 21:57	1
4,4'-DDD	ND		0.014	0.0055	ug/L		03/28/25 09:06	04/01/25 21:57	1
4,4'-DDE	ND		0.0091	0.0027	ug/L		03/28/25 09:06	04/01/25 21:57	1
4,4'-DDT	ND		0.018	0.0045	ug/L		03/28/25 09:06	04/01/25 21:57	1
Dieldrin	ND		0.016	0.0045	ug/L		03/28/25 09:06	04/01/25 21:57	1
Endosulfan I	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 21:57	1
Endosulfan II	ND		0.022	0.0045	ug/L		03/28/25 09:06	04/01/25 21:57	1
Endosulfan sulfate	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 21:57	1
Endrin	ND		0.011	0.0027	ug/L		03/28/25 09:06	04/01/25 21:57	1
Endrin aldehyde	ND		0.055	0.031	ug/L		03/28/25 09:06	04/01/25 21:57	1
Heptachlor	ND		0.014	0.0036	ug/L		03/28/25 09:06	04/01/25 21:57	1
Heptachlor epoxide	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 21:57	1
Methoxychlor	ND		0.091	0.0045	ug/L		03/28/25 09:06	04/01/25 21:57	1
Endrin ketone	ND		0.018	0.0064	ug/L		03/28/25 09:06	04/01/25 21:57	1
Toxaphene	ND		1.8	0.42	ug/L		03/28/25 09:06	04/01/25 21:57	1
cis-Chlordane	ND		0.025	0.0073	ug/L		03/28/25 09:06	04/01/25 21:57	1
trans-Chlordane	ND		0.018	0.0027	ug/L		03/28/25 09:06	04/01/25 21:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	51		42 - 120				03/28/25 09:06	04/01/25 21:57	1
DCB Decachlorobiphenyl	54		50 - 120				03/28/25 09:06	04/01/25 21:57	1

Method: SW846 8321B - Herbicides (LC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.22	ug/L			03/28/25 16:05	1

Eurofins Seattle

Client Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Deep Seawater-55-Sump

Lab Sample ID: 580-149216-4

Date Collected: 03/25/25 10:45

Matrix: Water

Date Received: 03/26/25 09:50

Method: SW846 8321B - Herbicides (LC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-TP (Silvex)	ND		0.50	0.18	ug/L			03/28/25 16:05	1
2,4-D	ND		5.0	0.20	ug/L			03/28/25 16:05	1
2,4-DB	ND		5.0	0.21	ug/L			03/28/25 16:05	1
Dalapon	ND		5.0	0.25	ug/L			03/28/25 16:05	1
Dicamba	ND		0.50	0.18	ug/L			03/28/25 16:05	1
Dichlorprop	ND		5.0	0.18	ug/L			03/28/25 16:05	1
Dinoseb	ND		2.5	0.22	ug/L			03/31/25 10:16	1
MCPA	ND		1.0	0.20	ug/L			03/28/25 16:05	1
MCPP	ND		1.0	0.18	ug/L			03/28/25 16:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid (Surr)	76		53 - 169		03/28/25 16:05	1
2,4-Dichlorophenylacetic acid (Surr)	83		53 - 169		03/31/25 10:16	1

Method: SW846 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060	0.0072	mg/L		03/31/25 17:32	04/01/25 15:04	1
Antimony	0.0063	J	0.060	0.0042	mg/L		03/31/25 17:32	04/01/25 15:04	1
Barium	0.013	J	0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 15:04	1
Beryllium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 15:04	1
Cadmium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 15:04	1
Chromium	ND		0.025	0.0027	mg/L		03/31/25 17:32	04/01/25 15:04	1
Cobalt	ND		0.020	0.00050	mg/L		03/31/25 17:32	04/01/25 15:04	1
Copper	ND		0.060	0.0055	mg/L		03/31/25 17:32	04/01/25 15:04	1
Lead	ND		0.030	0.0027	mg/L		03/31/25 17:32	04/01/25 15:04	1
Molybdenum	0.0079	J	0.040	0.0012	mg/L		03/31/25 17:32	04/01/25 15:04	1
Nickel	0.0015	J	0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 15:04	1
Selenium	ND		0.10	0.0087	mg/L		03/31/25 17:32	04/01/25 15:04	1
Silver	ND		0.050	0.0085	mg/L		03/31/25 17:32	04/01/25 15:04	1
Thallium	0.0047	J	0.10	0.0032	mg/L		03/31/25 17:32	04/01/25 15:04	1
Vanadium	ND		0.030	0.0061	mg/L		03/31/25 17:32	04/01/25 15:04	1
Zinc	ND		0.040	0.0093	mg/L		03/31/25 17:32	04/01/25 15:04	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.000050	mg/L		04/07/25 15:29	04/08/25 00:41	1

QC Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Method: 8260B/CA_LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-489078/10

Matrix: Water

Analysis Batch: 489078

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline Range Organics (C6-C12)	ND		0.15	0.071	mg/L			04/01/25 13:55	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		78 - 120					04/01/25 13:55	1

Lab Sample ID: LCS 580-489078/7

Matrix: Water

Analysis Batch: 489078

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Gasoline Range Organics (C6-C12)	1.00	0.894		mg/L		89	75 - 127		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	103		78 - 120						

Lab Sample ID: LCSD 580-489078/8

Matrix: Water

Analysis Batch: 489078

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Gasoline Range Organics (C6-C12)	1.00	0.915		mg/L		91	75 - 127	2	13
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	105		78 - 120						

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 570-551226/5

Matrix: Water

Analysis Batch: 551226

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methane	ND		1.0	0.11	ug/L			03/29/25 12:50	1
Ethane	ND		1.0	0.28	ug/L			03/29/25 12:50	1
Ethylene	ND		1.0	0.25	ug/L			03/29/25 12:50	1

Lab Sample ID: LCS 570-551226/3

Matrix: Water

Analysis Batch: 551226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Methane	12.9	14.0		ug/L		108	80 - 120		
Ethane	25.7	26.0		ug/L		101	80 - 120		
Ethylene	32.5	36.4		ug/L		112	80 - 120		

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QC Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 570-551226/4

Matrix: Water

Analysis Batch: 551226

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
Methane	12.9	12.7		ug/L		98	80 - 120	10	20
Ethane	25.7	23.4		ug/L		91	80 - 120	10	20
Ethylene	32.5	32.8		ug/L		101	80 - 120	10	20

Method: 8015D - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 580-488661/1-A

Matrix: Water

Analysis Batch: 489353

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 488661

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
CA Diesel Range Organics (C10-C28)	ND		0.11	0.090	mg/L		03/27/25 08:54	04/03/25 18:14	1
CA Extended Range Organics (>C28-C40)	ND		0.40	0.18	mg/L		03/27/25 08:54	04/03/25 18:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	68		53 - 120	03/27/25 08:54	04/03/25 18:14	1

Lab Sample ID: LCS 580-488661/2-A

Matrix: Water

Analysis Batch: 489353

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 488661

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
CA Diesel Range Organics (C10-C28)	4.00	3.39		mg/L		85	42 - 123
CA Extended Range Organics (>C28-C40)	4.00	3.84		mg/L		96	60 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	89		53 - 120

Lab Sample ID: LCSD 580-488661/3-A

Matrix: Water

Analysis Batch: 489353

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 488661

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
CA Diesel Range Organics (C10-C28)	4.00	3.31		mg/L		83	42 - 123	2	27
CA Extended Range Organics (>C28-C40)	4.00	3.75		mg/L		94	60 - 122	2	19

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	90		53 - 120

QC Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-488801/1-A

Matrix: Water

Analysis Batch: 489073

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 488801

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.024	0.0070	ug/L		03/28/25 09:06	04/01/25 18:38	1
alpha-BHC	ND		0.018	0.0040	ug/L		03/28/25 09:06	04/01/25 18:38	1
beta-BHC	ND		0.021	0.0050	ug/L		03/28/25 09:06	04/01/25 18:38	1
delta-BHC	ND		0.015	0.0050	ug/L		03/28/25 09:06	04/01/25 18:38	1
gamma-BHC (Lindane)	ND		0.020	0.0050	ug/L		03/28/25 09:06	04/01/25 18:38	1
4,4'-DDD	ND		0.015	0.0060	ug/L		03/28/25 09:06	04/01/25 18:38	1
4,4'-DDE	ND		0.010	0.0030	ug/L		03/28/25 09:06	04/01/25 18:38	1
4,4'-DDT	ND		0.020	0.0050	ug/L		03/28/25 09:06	04/01/25 18:38	1
Dieldrin	ND		0.018	0.0050	ug/L		03/28/25 09:06	04/01/25 18:38	1
Endosulfan I	ND		0.020	0.0030	ug/L		03/28/25 09:06	04/01/25 18:38	1
Endosulfan II	ND		0.024	0.0050	ug/L		03/28/25 09:06	04/01/25 18:38	1
Endosulfan sulfate	ND		0.020	0.0030	ug/L		03/28/25 09:06	04/01/25 18:38	1
Endrin	ND		0.012	0.0030	ug/L		03/28/25 09:06	04/01/25 18:38	1
Endrin aldehyde	ND		0.060	0.034	ug/L		03/28/25 09:06	04/01/25 18:38	1
Heptachlor	ND		0.015	0.0040	ug/L		03/28/25 09:06	04/01/25 18:38	1
Heptachlor epoxide	ND		0.020	0.0030	ug/L		03/28/25 09:06	04/01/25 18:38	1
Methoxychlor	ND		0.10	0.0050	ug/L		03/28/25 09:06	04/01/25 18:38	1
Endrin ketone	ND		0.020	0.0070	ug/L		03/28/25 09:06	04/01/25 18:38	1
Toxaphene	ND		2.0	0.46	ug/L		03/28/25 09:06	04/01/25 18:38	1
cis-Chlordane	ND		0.027	0.0080	ug/L		03/28/25 09:06	04/01/25 18:38	1
trans-Chlordane	ND		0.020	0.0030	ug/L		03/28/25 09:06	04/01/25 18:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	59		42 - 120	03/28/25 09:06	04/01/25 18:38	1
DCB Decachlorobiphenyl	45	S1-	50 - 120	03/28/25 09:06	04/01/25 18:38	1

Lab Sample ID: LCS 580-488801/2-A

Matrix: Water

Analysis Batch: 489073

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 488801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Aldrin	0.200	0.153		ug/L		76	25 - 124
alpha-BHC	0.200	0.180		ug/L		90	54 - 120
beta-BHC	0.200	0.159		ug/L		79	54 - 120
delta-BHC	0.200	0.154		ug/L		77	51 - 120
gamma-BHC (Lindane)	0.200	0.180		ug/L		90	55 - 120
4,4'-DDD	0.200	0.175		ug/L		88	53 - 120
4,4'-DDE	0.200	0.147		ug/L		73	47 - 120
4,4'-DDT	0.200	0.145		ug/L		73	39 - 122
Dieldrin	0.200	0.166		ug/L		83	48 - 122
Endosulfan I	0.200	0.180		ug/L		90	45 - 123
Endosulfan II	0.200	0.163		ug/L		81	24 - 120
Endosulfan sulfate	0.200	0.162		ug/L		81	56 - 120
Endrin	0.200	0.171		ug/L		86	48 - 120
Endrin aldehyde	0.200	0.157		ug/L		78	26 - 139
Heptachlor	0.200	0.168		ug/L		84	35 - 120
Heptachlor epoxide	0.200	0.157		ug/L		79	49 - 120
Methoxychlor	0.200	0.165		ug/L		83	44 - 129

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QC Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-488801/2-A

Matrix: Water

Analysis Batch: 489073

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 488801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Endrin ketone	0.200	0.166		ug/L		83	51 - 120	
cis-Chlordane	0.200	0.157		ug/L		79	48 - 120	
trans-Chlordane	0.200	0.160		ug/L		80	48 - 120	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	61		42 - 120
DCB Decachlorobiphenyl	52		50 - 120

Lab Sample ID: LCS 580-488801/6-A

Matrix: Water

Analysis Batch: 489073

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 488801

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Toxaphene	5.00	3.16		ug/L		63	50 - 150	

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	63		42 - 120
DCB Decachlorobiphenyl	66		50 - 120

Lab Sample ID: LCSD 580-488801/3-A

Matrix: Water

Analysis Batch: 489073

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 488801

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits		RPD Limit	
Aldrin	0.200	0.175		ug/L		87	25 - 124		13	35
alpha-BHC	0.200	0.194		ug/L		97	54 - 120		7	23
beta-BHC	0.200	0.176		ug/L		88	54 - 120		10	19
delta-BHC	0.200	0.170		ug/L		85	51 - 120		10	23
gamma-BHC (Lindane)	0.200	0.198		ug/L		99	55 - 120		9	21
4,4'-DDD	0.200	0.195		ug/L		97	53 - 120		10	19
4,4'-DDE	0.200	0.174		ug/L		87	47 - 120		17	25
4,4'-DDT	0.200	0.176		ug/L		88	39 - 122		19	20
Dieldrin	0.200	0.185		ug/L		92	48 - 122		10	23
Endosulfan I	0.200	0.198		ug/L		99	45 - 123		9	26
Endosulfan II	0.200	0.179		ug/L		90	24 - 120		10	26
Endosulfan sulfate	0.200	0.181		ug/L		90	56 - 120		11	21
Endrin	0.200	0.184		ug/L		92	48 - 120		8	24
Endrin aldehyde	0.200	0.176		ug/L		88	26 - 139		12	35
Heptachlor	0.200	0.187		ug/L		94	35 - 120		11	26
Heptachlor epoxide	0.200	0.174		ug/L		87	49 - 120		10	24
Methoxychlor	0.200	0.192		ug/L		96	44 - 129		15	20
Endrin ketone	0.200	0.189		ug/L		95	51 - 120		13	25
cis-Chlordane	0.200	0.177		ug/L		89	48 - 120		12	27
trans-Chlordane	0.200	0.180		ug/L		90	48 - 120		12	28

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	67		42 - 120
DCB Decachlorobiphenyl	68		50 - 120

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QC Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: LCSD 580-488801/7-A

Matrix: Water

Analysis Batch: 489073

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 488801

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Toxaphene	5.00	3.33		ug/L		67	50 - 150	5	15
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
Tetrachloro-m-xylene	67		42 - 120						
DCB Decachlorobiphenyl	71		50 - 120						

Method: 8321B - Herbicides (LC/MS)

Lab Sample ID: MB 570-550940/6

Matrix: Water

Analysis Batch: 550940

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2,4,5-T	ND		0.50	0.22	ug/L			03/28/25 15:33	1
2,4,5-TP (Silvex)	ND		0.50	0.18	ug/L			03/28/25 15:33	1
2,4-D	ND		5.0	0.20	ug/L			03/28/25 15:33	1
2,4-DB	ND		5.0	0.21	ug/L			03/28/25 15:33	1
Dalapon	ND		5.0	0.25	ug/L			03/28/25 15:33	1
Dicamba	ND		0.50	0.18	ug/L			03/28/25 15:33	1
Dichlorprop	ND		5.0	0.18	ug/L			03/28/25 15:33	1
Dinoseb	ND		2.5	0.22	ug/L			03/28/25 15:33	1
MCPA	ND		1.0	0.20	ug/L			03/28/25 15:33	1
MCP	0.210	J	1.0	0.18	ug/L			03/28/25 15:33	1
Surrogate	MB MB		Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
2,4-Dichlorophenylacetic acid (Surr)	108		53 - 169					03/28/25 15:33	1

Lab Sample ID: LCS 570-550940/2

Matrix: Water

Analysis Batch: 550940

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-T	10.0	8.57		ug/L		86	68 - 151
2,4-D	10.0	8.10		ug/L		81	62 - 149
2,4-DB	10.0	8.83		ug/L		88	63 - 151
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
2,4-Dichlorophenylacetic acid (Surr)	89		53 - 169				

Lab Sample ID: LCSD 570-550940/3

Matrix: Water

Analysis Batch: 550940

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
2,4,5-T	10.0	7.77		ug/L		78	68 - 151	10	20
2,4-D	10.0	7.16		ug/L		72	62 - 149	12	20
2,4-DB	10.0	8.08		ug/L		81	63 - 151	9	23

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QC Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Method: 8321B - Herbicides (LC/MS) (Continued)

Lab Sample ID: LCSD 570-550940/3

Matrix: Water

Analysis Batch: 550940

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	80		53 - 169

Lab Sample ID: 580-149216-1 MS

Matrix: Water

Analysis Batch: 550940

Client Sample ID: Surface Seawater-28-Sump

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-T	ND		10.0	9.94		ug/L		99	68 - 155
2,4-D	ND		10.0	8.11		ug/L		81	57 - 154
2,4-DB	ND		10.0	7.29		ug/L		73	53 - 161

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	74		53 - 169

Lab Sample ID: 580-149216-1 MSD

Matrix: Water

Analysis Batch: 550940

Client Sample ID: Surface Seawater-28-Sump

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4,5-T	ND		10.0	10.4		ug/L		104	68 - 155	4	20
2,4-D	ND		10.0	8.42		ug/L		84	57 - 154	4	20
2,4-DB	ND		10.0	7.65		ug/L		76	53 - 161	5	20

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	75		53 - 169

Lab Sample ID: MB 570-551512/6

Matrix: Water

Analysis Batch: 551512

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.50	0.22	ug/L			03/31/25 09:26	1
2,4,5-TP (Silvex)	ND		0.50	0.18	ug/L			03/31/25 09:26	1
2,4-D	ND		5.0	0.20	ug/L			03/31/25 09:26	1
2,4-DB	ND		5.0	0.21	ug/L			03/31/25 09:26	1
Dalapon	ND		5.0	0.25	ug/L			03/31/25 09:26	1
Dicamba	ND		0.50	0.18	ug/L			03/31/25 09:26	1
Dichlorprop	ND		5.0	0.18	ug/L			03/31/25 09:26	1
Dinoseb	ND		2.5	0.22	ug/L			03/31/25 09:26	1
MCPA	ND		1.0	0.20	ug/L			03/31/25 09:26	1
MCP	0.222	J	1.0	0.18	ug/L			03/31/25 09:26	1

	MB	MB							
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
2,4-Dichlorophenylacetic acid (Surr)	116		53 - 169		03/31/25 09:26	1			

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QC Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Method: 8321B - Herbicides (LC/MS) (Continued)

Lab Sample ID: LCS 570-551512/2

Matrix: Water

Analysis Batch: 551512

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4,5-T	10.0	8.84		ug/L		88	68 - 151
2,4-D	10.0	8.30		ug/L		83	62 - 149
2,4-DB	10.0	9.14		ug/L		91	63 - 151

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	89		53 - 169

Lab Sample ID: LCSD 570-551512/3

Matrix: Water

Analysis Batch: 551512

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
2,4,5-T	10.0	9.12		ug/L		91	68 - 151	3	20
2,4-D	10.0	8.65		ug/L		87	62 - 149	4	20
2,4-DB	10.0	8.89		ug/L		89	63 - 151	3	23

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2,4-Dichlorophenylacetic acid (Surr)	94		53 - 169

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 350-5905/25-A

Matrix: Water

Analysis Batch: 5935

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 5905

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060	0.0072	mg/L		03/31/25 17:32	04/01/25 14:42	1
Antimony	ND		0.060	0.0042	mg/L		03/31/25 17:32	04/01/25 14:42	1
Barium	ND		0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 14:42	1
Beryllium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 14:42	1
Cadmium	ND		0.020	0.00090	mg/L		03/31/25 17:32	04/01/25 14:42	1
Chromium	ND		0.025	0.0027	mg/L		03/31/25 17:32	04/01/25 14:42	1
Cobalt	ND		0.020	0.00050	mg/L		03/31/25 17:32	04/01/25 14:42	1
Copper	ND		0.060	0.0055	mg/L		03/31/25 17:32	04/01/25 14:42	1
Lead	ND		0.030	0.0027	mg/L		03/31/25 17:32	04/01/25 14:42	1
Molybdenum	ND		0.040	0.0012	mg/L		03/31/25 17:32	04/01/25 14:42	1
Nickel	ND		0.020	0.0010	mg/L		03/31/25 17:32	04/01/25 14:42	1
Selenium	ND		0.10	0.0087	mg/L		03/31/25 17:32	04/01/25 14:42	1
Silver	ND		0.050	0.0085	mg/L		03/31/25 17:32	04/01/25 14:42	1
Thallium	ND		0.10	0.0032	mg/L		03/31/25 17:32	04/01/25 14:42	1
Vanadium	ND		0.030	0.0061	mg/L		03/31/25 17:32	04/01/25 14:42	1
Zinc	ND		0.040	0.0093	mg/L		03/31/25 17:32	04/01/25 14:42	1

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QC Sample Results

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 350-5905/26-A

Matrix: Water

Analysis Batch: 5935

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 5905

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1.00	0.990		mg/L		99	80 - 120
Antimony	1.00	0.995		mg/L		100	80 - 120
Barium	1.00	1.05		mg/L		105	80 - 120
Beryllium	1.00	1.06		mg/L		106	80 - 120
Cadmium	1.00	1.08		mg/L		108	80 - 120
Chromium	1.00	1.04		mg/L		104	80 - 120
Cobalt	1.00	1.06		mg/L		106	80 - 120
Copper	1.00	1.01		mg/L		101	80 - 120
Lead	1.00	1.08		mg/L		108	80 - 120
Molybdenum	1.00	1.02		mg/L		102	80 - 120
Nickel	1.00	1.08		mg/L		108	80 - 120
Selenium	1.00	1.03		mg/L		103	80 - 120
Silver	1.00	1.01		mg/L		101	80 - 120
Thallium	1.00	1.10		mg/L		110	80 - 120
Vanadium	1.00	1.03		mg/L		103	80 - 120
Zinc	1.00	1.10		mg/L		110	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 350-6057/21-A

Matrix: Water

Analysis Batch: 6072

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 6057

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.000050	mg/L		04/07/25 15:29	04/07/25 23:50	1

Lab Sample ID: LCS 350-6057/22-A

Matrix: Water

Analysis Batch: 6072

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 6057

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00200	0.00200		mg/L		100	80 - 120

Lab Chronicle

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Surface Seawater-28-Sump

Lab Sample ID: 580-149216-1

Date Collected: 03/25/25 09:45

Matrix: Water

Date Received: 03/26/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B/CA_LUFTMS		1	489078	AA	EET SEA	04/01/25 15:29
Total/NA	Analysis	RSK-175		1	551226	I9H5	EET CAL 4	03/29/25 13:16
Total/NA	Prep	3510C			488661	EM	EET SEA	03/27/25 08:54
Total/NA	Analysis	8015D		1	489353	SW	EET SEA	04/04/25 00:38
Total/NA	Prep	3510C			488801	EM	EET SEA	03/28/25 09:06
Total/NA	Analysis	8081B		1	489073	TL1	EET SEA	04/01/25 20:57
Total/NA	Analysis	8321B		1	550940	CG	EET CAL 4	03/28/25 15:41
Total/NA	Analysis	8321B		1	551512	CG	EET CAL 4	03/31/25 09:34
Total Recoverable	Prep	3005A			5905	RMN	EET SSM	03/31/25 17:32
Total Recoverable	Analysis	6010D		1	5935	JLS	EET SSM	04/01/25 15:23
Total/NA	Prep	7470A			6057	JL	EET SSM	04/07/25 15:29
Total/NA	Analysis	7470A		1	6072	JL	EET SSM	04/08/25 00:21

Client Sample ID: Deep Seawater-40-Sump

Lab Sample ID: 580-149216-2

Date Collected: 03/25/25 09:31

Matrix: Water

Date Received: 03/26/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B/CA_LUFTMS		1	489078	AA	EET SEA	04/01/25 15:52
Total/NA	Analysis	RSK-175		1	551226	I9H5	EET CAL 4	03/29/25 13:42
Total/NA	Prep	3510C			488661	EM	EET SEA	03/27/25 08:54
Total/NA	Analysis	8015D		1	489353	SW	EET SEA	04/04/25 00:58
Total/NA	Prep	3510C			488801	EM	EET SEA	03/28/25 09:06
Total/NA	Analysis	8081B		1	489073	TL1	EET SEA	04/01/25 21:17
Total/NA	Analysis	8321B		1	550940	CG	EET CAL 4	03/28/25 15:49
Total/NA	Analysis	8321B		1	551512	CG	EET CAL 4	03/31/25 10:08
Total Recoverable	Prep	3005A			5905	RMN	EET SSM	03/31/25 17:32
Total Recoverable	Analysis	6010D		1	5935	JLS	EET SSM	04/01/25 15:19
Total/NA	Prep	7470A			6057	JL	EET SSM	04/07/25 15:29
Total/NA	Analysis	7470A		1	6072	JL	EET SSM	04/08/25 00:25

Client Sample ID: Surface Seawater-55-Sump

Lab Sample ID: 580-149216-3

Date Collected: 03/25/25 10:11

Matrix: Water

Date Received: 03/26/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B/CA_LUFTMS		1	489078	AA	EET SEA	04/01/25 16:39
Total/NA	Analysis	RSK-175		1	551226	I9H5	EET CAL 4	03/29/25 14:09
Total/NA	Prep	3510C			488661	EM	EET SEA	03/27/25 08:54
Total/NA	Analysis	8015D		1	489353	SW	EET SEA	04/04/25 01:37
Total/NA	Prep	3510C			488801	EM	EET SEA	03/28/25 09:06
Total/NA	Analysis	8081B		1	489073	TL1	EET SEA	04/01/25 21:37
Total/NA	Analysis	8321B		1	550940	CG	EET CAL 4	03/28/25 15:57

Eurofins Seattle

Lab Chronicle

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Client Sample ID: Surface Seawater-55-Sump

Lab Sample ID: 580-149216-3

Date Collected: 03/25/25 10:11

Matrix: Water

Date Received: 03/26/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			5905	RMN	EET SSM	03/31/25 17:32
Total Recoverable	Analysis	6010D		1	5935	JLS	EET SSM	04/01/25 15:15
Total/NA	Prep	7470A			6057	JL	EET SSM	04/07/25 15:29
Total/NA	Analysis	7470A		1	6072	JL	EET SSM	04/08/25 00:37

Client Sample ID: Deep Seawater-55-Sump

Lab Sample ID: 580-149216-4

Date Collected: 03/25/25 10:45

Matrix: Water

Date Received: 03/26/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260B/CA_LUFTMS		1	489078	AA	EET SEA	04/01/25 16:16
Total/NA	Analysis	RSK-175		1	551226	I9H5	EET CAL 4	03/29/25 14:35
Total/NA	Prep	3510C			488661	EM	EET SEA	03/27/25 08:54
Total/NA	Analysis	8015D		1	489353	SW	EET SEA	04/04/25 01:57
Total/NA	Prep	3510C			488801	EM	EET SEA	03/28/25 09:06
Total/NA	Analysis	8081B		1	489073	TL1	EET SEA	04/01/25 21:57
Total/NA	Analysis	8321B		1	550940	CG	EET CAL 4	03/28/25 16:05
Total/NA	Analysis	8321B		1	551512	CG	EET CAL 4	03/31/25 10:16
Total Recoverable	Prep	3005A			5905	RMN	EET SSM	03/31/25 17:32
Total Recoverable	Analysis	6010D		1	5935	JLS	EET SSM	04/01/25 15:04
Total/NA	Prep	7470A			6057	JL	EET SSM	04/07/25 15:29
Total/NA	Analysis	7470A		1	6072	JL	EET SSM	04/08/25 00:41

Laboratory References:

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

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

EET SSM = Eurofins Seattle Specialty Metals, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-25
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
8260B/CA_LUFTMS		Water	Gasoline Range Organics (C6-C12)

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4175	02-02-26

Laboratory: Eurofins Seattle Specialty Metals

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167-008	07-07-25

Sample Summary

Client: Natural Energy Laboratory of Hawaii Authority
Project/Site: Seawater Analytical - NELHA

Job ID: 580-149216-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-149216-1	Surface Seawater-28-Sump	Water	03/25/25 09:45	03/26/25 09:50
580-149216-2	Deep Seawater-40-Sump	Water	03/25/25 09:31	03/26/25 09:50
580-149216-3	Surface Seawater-55-Sump	Water	03/25/25 10:11	03/26/25 09:50
580-149216-4	Deep Seawater-55-Sump	Water	03/25/25 10:45	03/26/25 09:50

Chain of Custody Record

Client Information		Sample:	Lab PW:	Carrier Tracking No(s):	COC No:
Client Contact:		Phone:	Stone, Judy L		580-66615-20470.1
Pamela Madden		Phone: 808-327-9524	E-Mail: Judy.Stone@eurofins.com	State of Origin: HI	Page: 1 of 1
Company:		PWSID:		Job #:	
Natural Energy Laboratory of Hawaii Auth		Due Date Requested:		Analysis Requested	
Address: 73-4460 Queen Kaahumanu Hwy Suite #101		TAT Requested (days):		Preservation Codes:	
City: Kailua-Kona		Compliance Project: ☒ Yes ☐ No		D - HNO3 N - None A - HCL	
State Zip: HI, 96745		Pre-Payment by CC Required		Total Number of containers	
Phone: 808-327-9524(Tel)		Project #:		Other:	
Email: pamela.b.madden@hawaii.gov		Project #: 58021830		Special Instructions/Note:	
Project Name: Seawater Analytical		SSOW#:			
Site: NELHA					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, O=Owastoff, BI=Tissue Avail)
Surface Seawater - 28 - Sump	3/25/25	0945	G	Water	
Deep Seawater - 40 - Sump	3/25/25	0931	G	Water	
Surface Seawater - 55 - Sump	3/25/25	1011	G	Water	
Deep Seawater 55 Sump	3/25/25	1045	G	Water	
Possible Hazard Identification					
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological					
Deliverable Requested: I, II, III, IV, Other (Specify)					
Empty Kit Relinquished by: Date: Time: Method of Shipment: FedEx					
Relinquished by: Date/Time: 3/25/25 1145 Company: NELHA Received by: Date/Time: 3/26/25 0800 Company: ECH					
Relinquished by: Date/Time: Company: Received by: Date/Time: Company:					
Custody Seals Intact: Custody Seal No.: Cooler Temperature(s) °C and Other Remarks: Temp Range 17.5-19.0					
A Yes A No					

5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310

Chain of Custody Record



Loc: 580
149216

[illegible]

Login Sample Receipt Checklist

Client: Natural Energy Laboratory of Hawaii Authority

Job Number: 580-149216-1

Login Number: 149216

List Source: Eurofins Seattle

List Number: 1

Creator: Pike, Jacob 1

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	False	Cooler temperature outside required temperature criteria.
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	
Is the Field Sampler's name present on COC?	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	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Natural Energy Laboratory of Hawaii Authority

Job Number: 580-149216-1

Login Number: 149216

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 03/28/25 01:53 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	