

## DOH Checklist to Amend the Public Health Advisory for Manana Marine Corps Housing



### Manana Marine Corps Housing Checklist to Amend the Public Health Advisory initiated November 29, 2021 for Joint Base Pearl Harbor -Hickam Public Water System No. 360 HEER Incident Case No.: 20211128-1848

**Purpose:** This checklist identifies the documentation and review that the Hawaii Department of Health (DOH) conducted to **amend** the Public Health Advisory No. 21-165 (Advisory) for Manana Marine Corps Housing (Manana Housing) in Pearl City, Oahu, Hawaii.

DOH's priority is to protect the public health and environment of the people of Hawaii. DOH will evaluate the "lines of evidence" that must be satisfied before amending the health advisory and issuing notices that the water can be used for all purposes including drinking.

**Background:** Joint Base Pearl Harbor-Hickam (JBPHH) drinking water distribution system at Manana Housing (Manana System) had booster pump issues which prompted an emergency connection from a pre-arranged interconnection point with the City and County of Honolulu Board of Water Supply (BWS). This crossover, on November 16, 2021, to the BWS source occurred before the Red Hill Bulk Fuel Storage Facility jet fuel spill event reported on November 20, 2021. On November 28, 2021, it was reported by the Navy that a chemical release of petroleum, which is a hazardous substance, entered the JBPHH drinking water distribution system and the Red Hill Shaft. This release triggered an emergency response and DOH issuance of the Advisory on November 29, 2021, for the entire JBPHH Public Water System No. 360 (JBPHH System). A separate investigation from the rest of the JBPHH system was conducted to determine if the complaints at Manana Housing could be attributed to the Red Hill Shaft contamination.

**Potential Cause of Change in Water Quality:** Complaints of water quality and concerns of petroleum exposure from Manana Housing coincided with increasing complaint calls from other areas of the JBPPH System.

Several complaints from Manana Housing indicated a water quality issue. Un-boosted, the system pressure from the shaft at the booster station is below 20 psi which is inadequate to serve the upgradient homes. As a result, the potential for back siphoning is increased and could result in the flow of water from a building entering the distribution line. Additionally, because the pressure and connections from the JBPHH and BWS sources to the distribution system are different, pressure differences in localized portions of the Manana System changed as well as the overall directional flow which created opportunities for the dislodgement of sediments and biofilm in the distribution line.

As the water system operator for Manana Housing, the Navy provided information about the water system upon DOH's request. The Marine Corps conducted water and residential testing prior to a whole system maintenance type flushing. Post flushing confirmation sampling was conducted. The DOH also tested the distribution system to determine the quality of the flushing.

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**Conclusion:** Information has been collected and evaluated to conclude that there is sufficient evidence to **recommend that the advisory for Manana Marine Corps Housing be amended.**

## DOH Checklist to Amend the Public Health Advisory for Manana Marine Corps Housing



### Objective 1 – Line of Evidence: Completion of the DOH’s water quality investigation.

Reference	Status	Documentation
<p>Appendix 1.1</p> <p>Course of Action correspondence</p> <p>Pre-flush Test Results</p> <p>Post-flush Test Results</p>	Complete	<p>Marine Corps Base Hawaii (MCBH) prepared a course of action to address the water quality at Manana Housing (see course of action documents). The elements of the plan include pre-flush testing, flushing, and post-flush testing. At the time of this action, the Manana System was on the BWS supplied water and the distribution flushing activity was considered a maintenance activity.</p> <p>Pre-flush <b>testing within selected residential units did not find petroleum contamination</b> or coliform in their testing. Bromoform was the only analyte detected. In chlorinated drinking water, bromoform is one form of disinfection by-product collectively known as Total Trihalomethanes (TTHM). The bromoform levels detected were well below the EPA MCL of 0.08 ug/L. Flushing of the Manana System was conducted between January 14 and 17, 2022.</p> <p>Post-flush microbiological testing indicated no coliform bacteria, but raised levels of heterotrophic plate count and pseudomonas enumeration within premise plumbing were detected. While still below levels of concern, the elevated levels are suspected to be indicative of biofilm movement from the flushing activity. The flushing was conducted by some of the residents consistent with the recommended flushing protocol established by the Interagency Drinking Water System Team (IDWST). Additional flushing and investigation into the premise plumbing composition is recommended and will be further discussed between MCBH and the housing contractor.</p>
<p>Appendix 1.3</p> <p>NAVFAC Cross Connection Investigation Report</p>	Complete	<p>A cross connection survey was requested to exclude the possibility of back siphoning from non-residential buildings which potentially could have activities that could pose a threat to water quality. The cross-connection report was received by the DOH on January 7, 2022. Manana Housing has limited non-residential structures. The three support structures/facilities evaluated include a Marine Corps Mini Exchange and gas station, the booster pump building and the recreational facility which includes a swimming pool. Naval Facilities Engineering Command (NAVFAC) investigated these assets and concluded that the structures were either protected by a backflow prevention device or were isolated and did not pose a threat hydraulically.</p>
<p>Appendix 1.4</p> <p>DOH Complainant Residence</p>	Complete	<p>On February 4, 2022 a Manana Housing complainant sent a photo of a suspected sheen several weeks after the residential and distribution system flushing. The DOH contacted the complainant and conducted a field investigation of the sheen at the complainant’s residence. Remnants of floating material, like the photo, was collected at a laundry room service sink on the second floor of the building. A photoionization device (PID) was used on samples collected during the investigation. No volatile compounds were detected by the PID. A</p>

## DOH Checklist to Amend the Public Health Advisory for Manana Marine Corps Housing



### Objective 1 – Line of Evidence: Completion of the DOH’s water quality investigation.

Reference	Status	Documentation
Sample Report		toilet tank on the same floor was inspected and no floating material was observed. DOH collected a sample and conducted the complete residential analyte test protocol established for confirmation sampling under the IDWST. <b>The testing results did not find any analytes associated with a petroleum contamination.</b> Raised levels of copper were detected, but below any concern. The presence of copper is consistent with that found in post flushed premise plumbing in other flushing zones within the JBPHH System. It is suspected that the elevated copper, above NAVFAC’s baseline, is attributed to dislodgement from the flushing activity and would return to pre-flush levels over time.

### Objective 2 – Line of Evidence: Receipt of the Navy’s Waiawa Shaft Drinking Water Entry Point to Distribution sample results confirming the quality of the source water. Data does not exceed Federal DW MCLs, specified State EALs, and ISPs for Waiawa Shaft (only source of the drinking water).

Reference	Status	Documentation
Appendix 2  The Regulated Public Water System’s Water Quality is Compliant	Complete	The Waiawa Shaft Entry Point to Distribution (EPD) was sampled on January 11, 2022, to confirm the quality of the single source aquifer. The EPD sample was tested for a list of water analytes which would be indicative of petroleum contamination. This analyte list included Total Organic Carbon (TOC), Total Petroleum Hydrocarbon (TPH) gas/diesel/oil, Semi-Volatile Organic Carbon (SVOC), and Volatile Organic Carbon (VOC) contamination. All analytes tested did not exceed Federal Drinking Water Maximum Contaminant Levels (MCLs), State Environmental Action Levels (EALs), and the Incident Specific Parameters (ISPs) for the recovery response. As such, no detectable levels indicative of petroleum contamination was observed.



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### Objective 3 – Documentation that the water served to this community was only served by the City and County of Honolulu Board of Water Supply during the contamination event.

Reference	Status	Documentation
<p>Appendix 3</p> <p>Memorandum for Record - Management Inquiry into Manana Booster/BWS</p> <p>Information not included as it contains critical utility information</p>	Complete	<p>Navy Investigation Report, dated December 29, 2021. This report documents the course of events that prompted the emergency switch from the JBPHH System to BWS. Manana Housing is the first service system off the 42-inch Waiawa main (Water Transmission Main), located approximately one mile downgradient from Waiawa Shaft. The housing area is at a higher elevation than the Water Transmission Main leaving a residual pressure of approximately 15 psi at the booster station. The booster station provides additional service pressure at the entry into the Manana System. The two booster pumps failed on November 16, 2021. Request to open the Board of Water Supply Manana Interconnection was granted and executed on the same day, November 16, 2021. Redundant isolation of the system from the JBPHH System was confirmed on November 18, 2021. A NAVFAC Memorandum for Record (MFR) dated 29 December 2021, reference SECNAVINST 12752.1A CH-1, was prepared by NAVFAC. This MFR documents the course of events and actions leading to the decision to crossover the Manana System from the JBPHH System to BWS water. This document confirms that Manana Housing was on BWS water prior to the Red Hill Bulk Fuel Storage Facility jet fuel release event reported by the Navy on November 20, 2021.</p> <p><u>This document in Appendix 3 is not included for public viewing as it contains critical utility information</u></p>

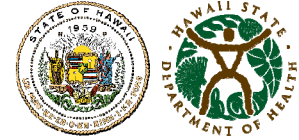
## DOH Checklist to Amend the Public Health Advisory for Manana Marine Corps Housing



### Objective 4 –Confirmation that Manana Housing will only be served by the Navy’s Waiawa Shaft moving forward.

Reference	Status	Documentation
Appendix 4.1  Major Utilities Distribution (Manana Housing) GIS map	Complete	<p>NAVFAC provided an overall schematic of the water source connection for the Manana System. The primary source of water for Manana Housing is from the Water Transmission Main coming from Waiawa Shaft. A 12-inch service connection from the Water Transmission Main is directed upgradient to a booster pump station (bldg. 817) at Manana Housing. An emergency interconnection point with the BWS is situated near the entrance to Manana Housing. Connection to the BWS system goes through a backflow prevention device identified as BFP11301 into the Manana System. A cluster of pipes crossing between the BFP11301 and the Manana Federal Fire Station (Bldg. 68) is further investigated under evidence provided in Appendices 4.3 and 4.4.</p> <p><u>All documents in Appendix 4 are not included for public viewing as it contains critical utility information</u></p>
Appendix 4.2  GIS Map detail of Manana Booster  As-built Manana Booster Station	Complete	<p>NAVFAC provided a GIS schematic of the Manana System booster pump station (bldg. 817) inclusive of a parallel pump configuration, isolation around devices, and the flow meter (SCADA point) located after the booster pumps. As-built plans provided by NAVFAC confirm the information provided in the GIS schematic. Both this diagram and the provided as-built plan confirm connection to the Navy’s Waiawa Shaft at a single-entry point from the Water Transmission Main.</p> <p><u>All documents in Appendix 4 are not included for public viewing as it contains critical utility information</u></p>
Appendix 4.3  Closeup of the BWS of the Piping around the BWS interconnection	Complete	<p>As shown in the GIS map referenced in Appendix 4.1, a cluster of piping around the backflow preventor at the emergency interconnection showed the possibility of line crossing or branches from unidentified lines. The Navy provided a closeup of the GIS map which clarified one of the lines is the BWS interconnection lateral and the second line as a dedicated run between the Manana System and the Manana Federal Fire Station. The Federal Fire Station is located off property prior to the front gate of Manana Housing. An investigation to the Federal Fire Station service line is discussed in Appendix 4.4. In conclusion, the Objective 4 investigation confirms that the BWS emergency water interconnection is the sole access point between BWS and Manana Housing.</p> <p><u>All documents in Appendix 4 are not included for public viewing as it contains critical utility information</u></p>

## DOH Checklist to Amend the Public Health Advisory for Manana Marine Corps Housing



### **Objective 4** –Confirmation that Manana Housing will only be served by the Navy’s Waiawa Shaft moving forward.

Reference	Status	Documentation
Appendix 4.4  As-built Manana Federal Fire Station	Complete	<p>The GIS map referenced in Appendix 4.1 shows a pipe run from Manana Housing to the Manana Federal Fire Station. The termination of the line at the fire station was not known from the GIS map. Additional information was provided by NAVFAC to clarify this service line. The utility as-built plans for the Manana Federal Fire Station shows the service line terminating at the Federal Fire Station building confirming that no other possible reconnection to another water source exist.</p> <p><u>All documents in Appendix 4 are not included for public viewing as it contains critical utility information</u></p>

## *Appendix 1.1*

### *MCBH RESPONSE*

## ***Course of Action (COA)***



**DEPARTMENT OF THE NAVY**  
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND HAWAII, JBPHH HI 96860-3139  
**UNITED STATES MARINE CORPS**  
MARINE CORPS BASE HAWAII, KANEOHE BAY HI 96863-3002

MCBH  
11330  
December 31, 2021

NAVFAC HI  
11330  
Ser 00/00751  
December 31, 2021

**JOINT LETTER**

Mr. Ernest Lau  
Chief Engineer  
Honolulu Board of Water Supply  
630 South Beretania Street  
Honolulu, HI 96843

Dear Mr. Ernest Lau,

**SUBJECT: REQUEST FOR EXTENSION OF USE OF BWS INTERCONNECT AT MANANA HOUSING NEIGHBORHOOD**

Naval Facilities Engineering Systems Command Hawaii (NAVFAC HI) and Marine Corps Base Hawaii (MCBH) formally request that the Honolulu Board of Water Supply (BWS) emergency interconnection at MCBH Manana Housing area remain in place until January 21, 2022. This will ensure the 165 families that reside in this multi-service community continue to receive safe and clean drinking water while the Navy works to clean and restore its own water distribution system.

As you are aware, the MCBH Manana neighborhood was switched over to BWS water on November 16, 2021 to ensure adequate service pressure is provided while repairs to the booster pump system were performed. Due to the complete isolation from the Navy's water system, the MCBH distribution system in Manana has remained unaffected by the November 20, 2021 fuel release associated with the Navy's water contamination issues. This has been validated by conducting a thorough investigation of the sequence of events during the switch to BWS water at Manana, meter readings and billing for BWS water used at Manana, and subsequent testing of BWS water by Navy and Hawaii Department of Health (HDOH) throughout the Manana neighborhood.

We understand the date of 21 January is a further extension to the 14 January date we discussed during our phone conversation on 30 December. However, this would allow a complete flush and testing on the rest of the Navy distribution system before connecting the Manana area back to the Navy system. This flushing and testing operation on the Navy's distribution system would be in accordance with the Inter-agency Drinking Water Systems Team (IDWST) agreed upon procedures and is expected to be completed by 20 January 2022.

As previously discussed, during the booster pump repair process, it was determined that the repair and replacement has delayed the return to the Navy's water system beyond the originally anticipated switch over date. We are working to expedite repairs and replacement so the system can be fully restored and proper pressure provided to the Manana neighborhood. While we understand BWS is not willing to leave the emergency connection in place until repairs to both pumps repairs are completed, leaving the

11330  
December 31, 2021

interconnect in place while the remainder of the Navy distribution system flushing is conducted will ensure continued safe water is provided to residents at Manana and eliminates the need to perform contaminate flushing in Manana which may not be possible with only one booster pump operational. As long as the BWS interconnect remains in place at Manana we will continue to minimize water usage and suspend irrigation.

MCBH and NAVFAC HI both thank you for the service you provide to Manana housing and the larger MCBH community at Kaneohe Bay, and we sincerely appreciate your consideration to extend the use of this interconnect until January 21, 2022. If you have any questions or concerns, please do not hesitate to reach out to either of us directly.

Sincerely,

KOUMPARAKIS.SPE  
ROS.CHRIS.104901  
7029

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Date: 2021.12.31 20:32:35  
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SPEROS C. KOUMPARAKIS  
Colonel, U.S. Marine Corps  
Commanding Officer  
Marine Corps Base Hawaii

Sincerely,

MEYER.JAME  
S.G.1099961  
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MEYER.JAMES.G.1099  
961810  
Date: 2021.12.31  
20:24:00 -10'00'

J G MEYER  
Captain, U.S. Navy  
Commanding Officer  
NAVFAC Hawaii

Copy to: Hawaii Department of Health



**UNITED STATES MARINE CORPS**  
MARINE CORPS BASE HAWAII  
BOX 63002  
KANEHOE BAY HAWAII 96863-3002

IN REPLY REFER TO:

11330

Code 00

January 11, 2022

Mr. Ernest Lau  
Manager and Chief Engineer  
Honolulu Board of Water Supply  
630 South Beretania Street  
Honolulu, HI 96843

Dear Mr. Lau:

**SUBJECT: REQUEST FOR EXTENSION OF USE OF BWS INTERCONNECT AT MANANA HOUSING NEIGHBORHOOD**

We are in receipt of your January 5, 2022 response to our letter regarding an extension of use of the BWS emergency interconnect at MCBH Manana Housing area. We sincerely appreciate your commitment to keep the interconnect in place through January 14, 2022, and would like to continue our dialog on keeping it in place until the Navy completes its flushing process. Additionally, we have provided the Hawaii Department of Health (HDOH) with our maintenance flush plan, and briefed it to the Interagency Drinking Water System Team (IDWST). There were no concerns or objections from any party, and we have begun executing the plan as described in the attached correspondence.

As you are aware, the Navy is conducting a HDOH approved contaminant flush on their affected pipelines to allow their distribution system to be removed from the HDOH advisory that was issued on November 29, 2021. Clarification was provided by HDOH to the IDWST on January 4, 2022 that the advisory did NOT apply to the Manana neighborhood due to its connection to BWS water and isolation from the Navy system. Areas served by the Navy's water distribution network will be removed from the HDOH advisory in phases as flushing and follow-on testing progresses. The first phase of flushing (Phase A1) encompasses the piping from Navy's Waiawa Well, past Manana where the neighborhood feeder line is, to the Pearl City Peninsula neighborhood. Flushing has been completed on phase A1 and test results are pending. We anticipate a review by the IDWST and lift of the HDOH advisory to be completed on or about February 3, 2022.

We are requesting that the BWS interconnect remain in place until Phase A1 is complete and the HDOH advisory is lifted for this portion of the distribution system. Shutting down the BWS interconnect before this date and forcing a connection to the Navy's "uncleared" system will effectively put the Manana neighborhood on the "affected" list. This would result in potential delays to the Navy's overall flushing plan, would increase perceived risk of residents being rejoined to the Navy's "uncleared system", and would require additional resources be committed to provide residents temporary lodging, distribution of clean water, and implementation of additional precautions for water to be restored in this area.



11330  
Code 00  
January 11, 2022

Thank you again for your consideration of this important request and we look forward to your response and our follow on discussion planned for January 13, 2022. If you have any questions or concerns, please do not hesitate to reach out.

Sincerely,

KOUMPARAKIS  
.SPEROS.CHRI  
S.1049017029

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KOUMPARAKIS.SPEROS.  
CHRIS.1049017029  
Date: 2022.01.11 19:19:39  
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SPEROS C. KOUMPARAKIS  
Colonel, U.S. Marine Corps  
Commanding Officer  
Marine Corps Base Hawaii

Enclosure: MCBH Manana Housing Maintenance Flush Plan

Copy to:

Navy Installations Command  
Navy Region Hawaii  
Naval Facilities Engineering System Command, Pacific  
Naval Facilities Engineering Systems Command, Hawaii  
Marine Corps Installations Pacific  
Hawaii Department of Health

## ***MCBH Pre-Flush Test Results***

# FQ Labs

3170 Ualena Street, Unit A  
Honolulu, HI 96819  
Phone: 808-839-9444, Fax: 808-839-9744

**Marine Corps Base Hawaii**  
Box 64122, Building 3B, Room 326  
CAMP H.M. SMITH, HI, 96861-4211  
Attn: Robert Malaca  
Project Name:

Received: 01/10/2022 @ 12:50 PM  
Completed: 01/12/2022 @ 3:00 PM  
Project Number: 220110-2677-007  
Temperature: 5.1 °C

## CERTIFICATE OF ANALYSIS

Sample ID: 220110-2677-007-01      Water Sample - Lab # 14  
Bldg. CEDAR DR.      Sampled: 1/10/2022 @ 9:45 AM      Sampler: Sean Smither

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
E.coli	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
Heterotrophic Plate Count	<2	MPN/ml	2.0	SM 9215 E	01/10/2022 2:00 PM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/10/2022 2:00 PM	IQ

Sample ID: 220110-2677-007-02      Water Sample - Lab # 15  
Bldg. BIRCH CIR.      Sampled: 1/10/2022 @ 10:00 AM      Sampler: Sean Smither

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
E.coli	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
Heterotrophic Plate Count	<2	MPN/ml	2.0	SM 9215 E	01/10/2022 2:00 PM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/10/2022 2:00 PM	IQ

Sample ID: 220110-2677-007-03      Water Sample - Lab # 16  
FH 16A BIRCH CIR.      Sampled: 1/10/2022 @ 10:15 AM      Sampler: Sean Smither

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
E.coli	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
Heterotrophic Plate Count	<2	MPN/ml	2.0	SM 9215 E	01/10/2022 2:00 PM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/10/2022 2:00 PM	IQ

Sample ID: 220110-2677-007-04      Water Sample - Lab # 17  
Bldg. BIRCH CIR.      Sampled: 1/10/2022 @ 10:30 AM      Sampler: Sean Smither

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
E.coli	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
Heterotrophic Plate Count	<2	MPN/ml	2.0	SM 9215 E	01/10/2022 2:00 PM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/10/2022 2:00 PM	IQ

Marine Corps Base Hawaii  
Box 64122, Building 3B, Room 326  
CAMP H.M. SMITH, HI, 96861-4211  
Attn: Robert Malaca  
Project Name:

Received: 01/10/2022 @ 12:50 PM  
Completed: 01/12/2022 @ 3:00 PM  
Project Number: 220110-2677-007  
Temperature: 5.1 °C

### CERTIFICATE OF ANALYSIS

Sample ID: 220110-2677-007-05      Water Sample - Lab # 18  
BWS Backflow      Sampled: 1/10/2022 @ 10:40 AM      Sampler: Sean Smither

Analysis	Results	Units	MDL	Test Method	Analized	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
E.coli	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
Heterotrophic Plate Count	<2	MPN/ml	2.0	SM 9215 E	01/10/2022 2:00 PM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/10/2022 2:00 PM	IQ

Sample ID: 220110-2677-007-06      Water Sample - Lab # 19  
Bldg. [REDACTED] ELM DR.      Sampled: 1/10/2022 @ 11:25 AM      Sampler: Sean Smither

Analysis	Results	Units	MDL	Test Method	Analized	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
E.coli	Absence	in 100-ml	-	SM 9223 B	01/10/2022 2:00 PM	IQ
Heterotrophic Plate Count	33	MPN/ml	2.0	SM 9215 E	01/10/2022 2:00 PM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/10/2022 2:00 PM	IQ

Approved By: *Amelda Q. Aguado*  
Thursday, January 13, 2022



**BABCOCK Laboratories, Inc.**  
*The Standard of Excellence for Over 100 Years*

Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 1 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Attached is the analytical report for the sample(s) received for your project. Below is a list of the individual sample descriptions with the corresponding laboratory number(s). Also, enclosed is a copy of the Chain of Custody document (if received with your sample(s)). Please note any unused portion of the sample(s) may be responsibly discarded after 30 days from the above report date, unless you have requested otherwise.

Thank you for the opportunity to serve your analytical needs. If you have any questions or concerns regarding this report please contact our client service department.

**Sample Identification**

<u>Lab Sample #</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>By</u>	<u>Date Submitted</u>	<u>By</u>
C2A0731-01	Bldg #0854	Water	01/04/22 08:00	Kent / Sean Smither	01/06/22 08:05	FedEx
C2A0731-02	Bldg # [REDACTED] Elm Dr.	Water	01/04/22 08:00	Kent / Sean Smither	01/06/22 08:05	FedEx
C2A0731-03	Bldg # [REDACTED] Birch Cir.	Water	01/04/22 08:00	Kent / Sean Smither	01/06/22 08:05	FedEx
C2A0731-04	Bldg # [REDACTED] Elm Dr.	Water	01/04/22 08:00	Kent / Sean Smither	01/06/22 08:05	FedEx
C2A0731-05	Bldg # [REDACTED] Cedar Dr.	Water	01/04/22 08:00	Kent / Sean Smither	01/06/22 08:05	FedEx
C2A0731-06	BWS Backflow	Water	01/04/22 08:00	Kent / Sean Smither	01/06/22 08:05	FedEx



**BABCOCK Laboratories, Inc.**  
*The Standard of Excellence for Over 100 Years*

Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 2 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-01**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg #0854	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Aggregate Organic Compounds							
Total Petroleum Hydrocarbons	ND	1.0	mg/L	EPA 418.1	01/13/22 10:00	HNH	
Volatile Organic Compounds by EPA 524.2							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,1,1-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,1,2-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,1-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,1-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,1-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,2,3-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,2,4-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,2,4-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,2-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,2-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,3-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,3-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,3-Dichloropropene (total)	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,3,5-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
1,4-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
2,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
2-Butanone(MEK-EPA 8260)	ND	5.0	ug/L	EPA 524.2	01/06/22 20:48	JES	
2-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
4-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	ug/L	EPA 524.2	01/06/22 20:48	JES	
Benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Bis(2-chloroethyl)ether"	ND	5.0	ug/L	EPA 524.2	01/06/22 20:48	JES	
Bromobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Bromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Bromodichloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Bromoform	2.2	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Bromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	



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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 3 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-01**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg #0854	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Volatile Organic Compounds by EPA 524.2							
Carbon Tetrachloride	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Chlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Chloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Chloroform	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Chloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
cis-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
cis-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Dibromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Dibromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Dichlorodifluoromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Ethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Hexachlorobutadiene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Isopropylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Methyl tert butyl Ether	ND	3.0	ug/L	EPA 524.2	01/06/22 20:48	JES	
Methylene Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
n-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
n-Propyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Naphthalene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
p-Isopropyltoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
sec-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Styrene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
tert-Butylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Tetrachloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Toluene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
trans-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
trans-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Trichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Trichlorofluoromethane	ND	5.0	ug/L	EPA 524.2	01/06/22 20:48	JES	
Trichlorotrifluoroethane	ND	10	ug/L	EPA 524.2	01/06/22 20:48	JES	
Vinyl Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Xylenes (m+p)	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Xylenes (ortho)	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	
Xylenes (Total)	ND	0.50	ug/L	EPA 524.2	01/06/22 20:48	JES	



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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 4 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-01**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg #0854	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
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**Testing performed by: Babcock Laboratories, Inc. - Riverside**

CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035

Volatile Organic Compounds by EPA 524.2

Surrogate: 1,2-Dichloroethane-d4	104%	50-150	EPA 524.2	01/06/22 20:48	JES
Surrogate: 4-Bromofluorobenzene	108%	50-150	EPA 524.2	01/06/22 20:48	JES
Surrogate: Toluene-d8	105%	50-150	EPA 524.2	01/06/22 20:48	JES
Surrogate: 1,2-Dichlorobenzene-d4	110%	50-150	EPA 524.2	01/06/22 20:48	JES





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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 5 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-02**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Elm Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Aggregate Organic Compounds							
Total Petroleum Hydrocarbons	ND	1.0	mg/L	EPA 418.1	01/13/22 10:00	HNH	
Volatile Organic Compounds by EPA 524.2							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,1,1-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,1,2-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,1-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,1-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,1-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,2,3-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,2,4-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,2,4-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,2-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,2-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,3-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,3-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,3-Dichloropropene (total)	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,3,5-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
1,4-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
2,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
2-Butanone(MEK-EPA 8260)	ND	5.0	ug/L	EPA 524.2	01/06/22 21:17	JES	
2-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
4-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	ug/L	EPA 524.2	01/06/22 21:17	JES	
Benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Bis(2-chloroethyl)ether"	ND	5.0	ug/L	EPA 524.2	01/06/22 21:17	JES	
Bromobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Bromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Bromodichloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Bromoform	1.5	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Bromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	



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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 6 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-02**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Elm Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Volatile Organic Compounds by EPA 524.2							
Carbon Tetrachloride	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Chlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Chloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Chloroform	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Chloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
cis-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
cis-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Dibromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Dibromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Dichlorodifluoromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Ethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Hexachlorobutadiene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Isopropylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Methyl tert butyl Ether	ND	3.0	ug/L	EPA 524.2	01/06/22 21:17	JES	
Methylene Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
n-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
n-Propyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Naphthalene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
p-Isopropyltoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
sec-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Styrene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
tert-Butylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Tetrachloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Toluene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
trans-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
trans-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Trichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Trichlorofluoromethane	ND	5.0	ug/L	EPA 524.2	01/06/22 21:17	JES	
Trichlorotrifluoroethane	ND	10	ug/L	EPA 524.2	01/06/22 21:17	JES	
Vinyl Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Xylenes (m+p)	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Xylenes (ortho)	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	
Xylenes (Total)	ND	0.50	ug/L	EPA 524.2	01/06/22 21:17	JES	



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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 7 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-02**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Elm Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
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**Testing performed by: Babcock Laboratories, Inc. - Riverside**

CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035

Volatile Organic Compounds by EPA 524.2

Surrogate: 1,2-Dichloroethane-d4	105%	50-150	EPA 524.2	01/06/22 21:17	JES
Surrogate: 4-Bromofluorobenzene	106%	50-150	EPA 524.2	01/06/22 21:17	JES
Surrogate: Toluene-d8	104%	50-150	EPA 524.2	01/06/22 21:17	JES
Surrogate: 1,2-Dichlorobenzene-d4	110%	50-150	EPA 524.2	01/06/22 21:17	JES



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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 8 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-03**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Birch Cir.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Aggregate Organic Compounds							
Total Petroleum Hydrocarbons	ND	1.0	mg/L	EPA 418.1	01/13/22 10:00	HNH	
Volatile Organic Compounds by EPA 524.2							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,1,1-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,1,2-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,1-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,1-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,1-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,2,3-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,2,4-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,2,4-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,2-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,2-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,3-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,3-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,3-Dichloropropene (total)	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,3,5-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
1,4-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
2,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
2-Butanone(MEK-EPA 8260)	ND	5.0	ug/L	EPA 524.2	01/06/22 21:45	JES	
2-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
4-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	ug/L	EPA 524.2	01/06/22 21:45	JES	
Benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Bis(2-chloroethyl)ether"	ND	5.0	ug/L	EPA 524.2	01/06/22 21:45	JES	
Bromobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Bromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Bromodichloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Bromoform	1.9	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Bromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	



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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 9 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-03**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Birch Cir.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Volatile Organic Compounds by EPA 524.2							
Carbon Tetrachloride	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Chlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Chloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Chloroform	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Chloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
cis-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
cis-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Dibromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Dibromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Dichlorodifluoromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Ethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Hexachlorobutadiene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Isopropylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Methyl tert butyl Ether	ND	3.0	ug/L	EPA 524.2	01/06/22 21:45	JES	
Methylene Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
n-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
n-Propyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Naphthalene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
p-Isopropyltoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
sec-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Styrene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
tert-Butylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Tetrachloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Toluene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
trans-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
trans-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Trichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Trichlorofluoromethane	ND	5.0	ug/L	EPA 524.2	01/06/22 21:45	JES	
Trichlorotrifluoroethane	ND	10	ug/L	EPA 524.2	01/06/22 21:45	JES	
Vinyl Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Xylenes (m+p)	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Xylenes (ortho)	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	
Xylenes (Total)	ND	0.50	ug/L	EPA 524.2	01/06/22 21:45	JES	



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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 10 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-03**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Birch Cir.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
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**Testing performed by: Babcock Laboratories, Inc. - Riverside**

CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035

Volatile Organic Compounds by EPA 524.2

Surrogate: 1,2-Dichloroethane-d4	103%	50-150	EPA 524.2	01/06/22 21:45	JES
Surrogate: 4-Bromofluorobenzene	114%	50-150	EPA 524.2	01/06/22 21:45	JES
Surrogate: Toluene-d8	109%	50-150	EPA 524.2	01/06/22 21:45	JES
Surrogate: 1,2-Dichlorobenzene-d4	111%	50-150	EPA 524.2	01/06/22 21:45	JES



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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 11 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-04**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Elm Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Aggregate Organic Compounds							
Total Petroleum Hydrocarbons	ND	1.0	mg/L	EPA 418.1	01/13/22 10:00	HNH	
Volatile Organic Compounds by EPA 524.2							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,1,1-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,1,2-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,1-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,1-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,1-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,2,3-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,2,4-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,2,4-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,2-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,2-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,3-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,3-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,3-Dichloropropene (total)	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,3,5-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
1,4-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
2,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
2-Butanone(MEK-EPA 8260)	ND	5.0	ug/L	EPA 524.2	01/06/22 22:13	JES	
2-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
4-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	ug/L	EPA 524.2	01/06/22 22:13	JES	
Benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Bis(2-chloroethyl)ether"	ND	5.0	ug/L	EPA 524.2	01/06/22 22:13	JES	
Bromobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Bromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Bromodichloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Bromoform	1.4	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Bromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	





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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 12 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-04**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Elm Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Volatile Organic Compounds by EPA 524.2							
Carbon Tetrachloride	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Chlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Chloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Chloroform	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Chloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
cis-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
cis-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Dibromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Dibromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Dichlorodifluoromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Ethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Hexachlorobutadiene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Isopropylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Methyl tert butyl Ether	ND	3.0	ug/L	EPA 524.2	01/06/22 22:13	JES	
Methylene Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
n-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
n-Propyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Naphthalene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
p-Isopropyltoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
sec-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Styrene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
tert-Butylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Tetrachloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Toluene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
trans-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
trans-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Trichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Trichlorofluoromethane	ND	5.0	ug/L	EPA 524.2	01/06/22 22:13	JES	
Trichlorotrifluoroethane	ND	10	ug/L	EPA 524.2	01/06/22 22:13	JES	
Vinyl Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Xylenes (m+p)	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Xylenes (ortho)	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	
Xylenes (Total)	ND	0.50	ug/L	EPA 524.2	01/06/22 22:13	JES	

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CA ELAP No. 2698  
 EPA No. CA00102  
 NELAP No. OR4035  
 LACSD No. 10119





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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 13 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-04**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Elm Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
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**Testing performed by: Babcock Laboratories, Inc. - Riverside**

CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035

Volatile Organic Compounds by EPA 524.2

Surrogate: 1,2-Dichloroethane-d4	102%	50-150	EPA 524.2	01/06/22 22:13	JES
Surrogate: 4-Bromofluorobenzene	113%	50-150	EPA 524.2	01/06/22 22:13	JES
Surrogate: Toluene-d8	105%	50-150	EPA 524.2	01/06/22 22:13	JES
Surrogate: 1,2-Dichlorobenzene-d4	110%	50-150	EPA 524.2	01/06/22 22:13	JES



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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 14 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-05**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Cedar Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Volatile Organic Compounds by EPA 524.2							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,1,1-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,1,2-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,1-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,1-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,1-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,2,3-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,2,4-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,2,4-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,2-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,2-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,3-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,3-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,3-Dichloropropene (total)	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,3,5-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
1,4-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
2,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
2-Butanone(MEK-EPA 8260)	ND	5.0	ug/L	EPA 524.2	01/06/22 22:42	JES	
2-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
4-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	ug/L	EPA 524.2	01/06/22 22:42	JES	
Benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Bis(2-chloroethyl)ether"	ND	5.0	ug/L	EPA 524.2	01/06/22 22:42	JES	
Bromobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Bromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Bromodichloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Bromoform	2.6	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Bromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Carbon Tetrachloride	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Chlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Chloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	



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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 15 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-05**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Cedar Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Volatile Organic Compounds by EPA 524.2							
Chloroform	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Chloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
cis-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
cis-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Dibromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Dibromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Dichlorodifluoromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Ethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Hexachlorobutadiene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Isopropylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Methyl tert butyl Ether	ND	3.0	ug/L	EPA 524.2	01/06/22 22:42	JES	
Methylene Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
n-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
n-Propyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Naphthalene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
p-Isopropyltoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
sec-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Styrene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
tert-Butylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Tetrachloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Toluene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
trans-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
trans-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Trichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Trichlorofluoromethane	ND	5.0	ug/L	EPA 524.2	01/06/22 22:42	JES	
Trichlorotrifluoroethane	ND	10	ug/L	EPA 524.2	01/06/22 22:42	JES	
Vinyl Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Xylenes (m+p)	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Xylenes (ortho)	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Xylenes (Total)	ND	0.50	ug/L	EPA 524.2	01/06/22 22:42	JES	
Surrogate: 1,2-Dichloroethane-d4	102%	50-150		EPA 524.2	01/06/22 22:42	JES	
Surrogate: 4-Bromofluorobenzene	108%	50-150		EPA 524.2	01/06/22 22:42	JES	



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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 16 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-05**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
Bldg # [REDACTED] Cedar Dr.	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
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**Testing performed by: Babcock Laboratories, Inc. - Riverside**

CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035

Volatile Organic Compounds by EPA 524.2

Surrogate: Toluene-d8	105%	50-150	EPA 524.2	01/06/22 22:42	JES
Surrogate: 1,2-Dichlorobenzene-d4	111%	50-150	EPA 524.2	01/06/22 22:42	JES



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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 17 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-06**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
BWS Backflow	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Aggregate Organic Compounds							
Total Petroleum Hydrocarbons	ND	1.0	mg/L	EPA 418.1	01/13/22 10:00	HNH	
Volatile Organic Compounds by EPA 524.2							
1,1,1,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,1,1-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,1,2-Trichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,1-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,1-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,1-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,2,3-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,2,4-Trichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,2,4-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,2-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,2-Dichloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,3-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,3-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,3-Dichloropropene (total)	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,3,5-Trimethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
1,4-Dichlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
2,2-Dichloropropane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
2-Butanone(MEK-EPA 8260)	ND	5.0	ug/L	EPA 524.2	01/06/22 23:10	JES	
2-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
4-Chlorotoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
4-Methyl-2-Pentanone(MIBK)	ND	5.0	ug/L	EPA 524.2	01/06/22 23:10	JES	
Benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Bis(2-chloroethyl)ether"	ND	5.0	ug/L	EPA 524.2	01/06/22 23:10	JES	
Bromobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Bromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Bromodichloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Bromoform	0.75	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Bromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	



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Client Name: Marine Corp Base Hawaii  
 Contact: Robert Malaca  
 Address: d St. Bldg 272  
 MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 18 of 21  
 Project Name: 2021-Drinking Water Analysis  
 Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-06**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
BWS Backflow	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
<b><i>Testing performed by: Babcock Laboratories, Inc. - Riverside</i></b>							
CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035							
Volatile Organic Compounds by EPA 524.2							
Carbon Tetrachloride	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Chlorobenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Chloroethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Chloroform	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Chloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
cis-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
cis-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Dibromochloromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Dibromomethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Dichlorodifluoromethane	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Ethylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Hexachlorobutadiene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Isopropylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Methyl tert butyl Ether	ND	3.0	ug/L	EPA 524.2	01/06/22 23:10	JES	
Methylene Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
n-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
n-Propyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Naphthalene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
p-Isopropyltoluene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
sec-Butyl benzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Styrene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
tert-Butylbenzene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Tetrachloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Toluene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
trans-1,2-Dichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
trans-1,3-Dichloropropene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Trichloroethene	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Trichlorofluoromethane	ND	5.0	ug/L	EPA 524.2	01/06/22 23:10	JES	
Trichlorotrifluoroethane	ND	10	ug/L	EPA 524.2	01/06/22 23:10	JES	
Vinyl Chloride	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Xylenes (m+p)	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Xylenes (ortho)	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	
Xylenes (Total)	ND	0.50	ug/L	EPA 524.2	01/06/22 23:10	JES	



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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 19 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

Laboratory Reference Number

**C2A0731-06**

<u>Sample Description</u>	<u>Matrix</u>	<u>Sampled Date/Time</u>	<u>Received Date/Time</u>
BWS Backflow	Water	01/04/22 08:00	01/06/22 8:05

Analyte(s)	Result	RDL	Units	Method	Analysis Date	Analyst	Flag
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**Testing performed by: Babcock Laboratories, Inc. - Riverside**

CA ELAP No. 2698, EPA No. CA00102, NELAP No. OR4035

Volatile Organic Compounds by EPA 524.2

Surrogate: 1,2-Dichloroethane-d4	105%	50-150		EPA 524.2	01/06/22 23:10	JES	
Surrogate: 4-Bromofluorobenzene	105%	50-150		EPA 524.2	01/06/22 23:10	JES	
Surrogate: Toluene-d8	106%	50-150		EPA 524.2	01/06/22 23:10	JES	
Surrogate: 1,2-Dichlorobenzene-d4	111%	50-150		EPA 524.2	01/06/22 23:10	JES	



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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 20 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

**Work Order Number: C2A0731**

Received on Ice (Y/N): Yes Temp: 5 °C

## Notes and Definitions

ND: Analyte NOT DETECTED at or above the Method Detection Limit (**if MDL is reported**), otherwise at or above the Reportable Detection Limit (RDL)  
NR: Not Reported  
RDL: Reportable Detection Limit  
MDL: Method Detection Limit  
\* / " : NELAP does not offer accreditation for this analyte/method/matrix combination

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## Approval

Enclosed are the analytical results for the submitted sample(s). Babcock Laboratories certify the data presented as part of this report meet the minimum quality standards in the referenced analytical methods. Any exceptions have been noted.

**Shelia Marie McGlown**

cc:

e-Short\_No Alias.rpt

This report applies only to the sample(s) analyzed. As a mutual protection to clients, the public, and Babcock Laboratories, Inc., this report is submitted and accepted for the exclusive use of the Client to whom it is addressed. Interpretation and use of the information contained within this report are the sole responsibility of the Client. Babcock Laboratories, Inc. is not responsible for any misinformation or consequences that may result from misinterpretation or improper use of this report. This report is not to be modified or abbreviated in any way. Additionally, this report is not to be used, in whole or in part, in any advertising or publicity matter without written authorization from Babcock Laboratories, Inc. The liability of Babcock Laboratories, Inc. is limited to the actual cost of the requested analyses, unless otherwise agreed upon in writing. There is no other warranty expressed or implied.





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Client Name: Marine Corp Base Hawaii  
Contact: Robert Malaca  
Address: d St. Bldg 272  
MCBH Kaneohe Bay, HI 96863

Analytical Report: Page 21 of 21  
Project Name: 2021-Drinking Water Analysis  
Project Number: 2021-Drinking Water Analysis

Report Date: 19-Jan-2022

Work Order Number: C2A0731

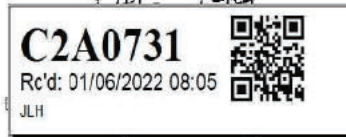
Received on Ice (Y/N): Yes Temp: 5 °C



6100 Quail Valley Court Riverside, CA 92507  
(951) 653-3351 • FAX (951) 653-1662  
www.babcocklabs.com

**Chain of Custody & Sample Information Record**

Client: <b>MCBH UTILITIES</b>		Contact: <b>ROBERT MALACA</b>		Fax No.		Additional Reporting Requests	
Phone No.		email: <b>ROBERT.MALACA@USMC.MIL</b>				Includes QC Data Package: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Project Name:		Turn Around Time: Routine *72 Hour Rush *48 Hour Rush *24 Hour Rush				Email Results: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Project Location:		*Lab TAT Approval: By:		*Additional Charges Apply		State EDI: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Include Source Number in Notes)	
Sampler Information		# of Containers & Preservatives		Sample Type		Analysis Requested	
Name: <b>KENT FUCHIGAMI / SEMI SAMPLER</b>		Unpreserved		Routine		Matrix	
Employer: <b>MCBH UTILITIES</b>		HCl		Resample		Notes	
Signature: <b>Ken F. Fuchigami</b>		HNO <sub>3</sub>		Special		DW = Drinking Water WW = Waste Water GW = Ground Water S = Source SG = Sludge L = Liquid M = Miscellaneous	
Sample ID		Date		Time			
Bldg # 0854		1/4/22		0800		15	
		1/4/22		0800		15	
		1/4/22		0800		15	
		1/4/22		0800		15	
		1/4/22		0800		15	
BWS BACKFLOW		1/4/22		0800		15	
Relinquished By (sign)		Print Name / Company		Date / Time		Received By (sign)	
<b>Ken F. Fuchigami</b>		<b>SEMI SAMPLER / MCBH</b>		<b>1/5/2022</b>		<b>FED EX</b>	
		<b>FED EX</b>		<b>1/6/22</b>		<b>OSAHON OJASEKI / ESB</b>	
By signing on behalf of your organization and relinquishing this chain of custody you agree to abide by the Babcock Laboratories, Inc. Terms and Conditions.							
(For Lab Use Only)		Sample Integrity Upon Receipt/Acceptance Criteria		T/G 62			
Sample(s) Submitted on Ice? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Sample meets laboratory acceptance criteria? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Custody Seal(s) Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>NA</b>		Permission to continue: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Sample(s) Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Deviation/Notes: <b>PM notified</b>					
Temperature: <b>5</b> °C <input type="checkbox"/> Cooler Blank		Signature/Date: <b>JLH 1/6/2022</b>					



## ***MCBH Post-Flush Test Results***

# FQ Labs

3170 Ualena Street, Unit A  
Honolulu, HI 96819  
Phone: 808-839-9444, Fax: 808-839-9744

**Marine Corps Base Hawaii**  
Box 64122, Building 3B, Room 326  
CAMP H.M. SMITH, HI, 96861-4211  
Attn:  
Project Name: Manana Housing

Received: 01/18/2022 @ 10:18 AM  
Completed: 01/20/2022 @ 11:55 AM  
Project Number: 220118-2677-008  
Temperature: 3.8 °C

## CERTIFICATE OF ANALYSIS

Sample ID: 220118-2677-008-01

Water Sample- Lab # 20  
BLD BIRCH CIR

Sampled: 1/18/2022 @ 8:25 AM

Sampler: Kent Fuchigami

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/18/2022 11:30 AM	IQ
Heterotrophic Plate Count	<2	MPN/ml	2.0	SM 9215 E	01/18/2022 11:30 AM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/18/2022 11:30 AM	IQ

Sample ID: 220118-2677-008-02

Water Sample- Lab # 21  
BLD ELM DR

Sampled: 1/18/2022 @ 8:40 AM

Sampler: Kent Fuchigami

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/18/2022 11:30 AM	IQ
Heterotrophic Plate Count	DOH limit for HPC is 100 MPN/ml (or CFU/ml) → 28	MPN/ml	2.0	SM 9215 E	01/18/2022 11:30 AM	IQ
Pseudomonas	Pseudomonas is a subset of HPC (no EPA or DOH limit is defined) → 25.9	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/18/2022 11:30 AM	IQ

Sample ID: 220118-2677-008-03

Water Sample- Lab # 22  
BLD HOT ELM DR

Sampled: 1/18/2022 @ 8:45 AM

Sampler: Kent Fuchigami

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/18/2022 11:30 AM	IQ
Heterotrophic Plate Count	DOH limit for HPC is 100 MPN/ml (or CFU/ml) → 90	MPN/ml	2.0	SM 9215 E	01/18/2022 11:30 AM	IQ
Pseudomonas	Pseudomonas is a subset of HPC (no EPA or DOH limit is defined) → 435.2	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/18/2022 11:30 AM	IQ

Sample ID: 220118-2677-008-04

Water Sample- Lab # 23  
BLD CEDAR DR

Sampled: 1/18/2022 @ 8:55 AM

Sampler: Kent Fuchigami

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/18/2022 11:30 AM	IQ
Heterotrophic Plate Count	DOH limit for HPC is 100 MPN/ml (or CFU/ml) → 8	MPN/ml	2.0	SM 9215 E	01/18/2022 11:30 AM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/18/2022 11:30 AM	IQ

Sample ID: 220118-2677-008-05

Water Sample- Lab # 24  
BLD HOT CEDAR DR

Sampled: 1/18/2022 @ 9:10 AM

Sampler: Kent Fuchigami

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/18/2022 11:30 AM	IQ
Heterotrophic Plate Count	DOH limit for HPC is 100 MPN/ml (or CFU/ml) → 12	MPN/ml	2.0	SM 9215 E	01/18/2022 11:30 AM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/18/2022 11:30 AM	IQ

Marine Corps Base Hawaii  
Box 64122, Building 3B, Room 326  
CAMP H.M. SMITH, HI, 96861-4211  
Attn:  
Project Name: Manana Housing

Received: 01/18/2022 @ 10:18 AM  
Completed: 01/20/2022 @ 11:55 AM  
Project Number: 220118-2677-008  
Temperature: 3.8 °C

## CERTIFICATE OF ANALYSIS

Sample ID: 220118-2677-008-06

Water Sample- Lab # 25  
BLD XXXX BIRCH CIR

Sampled: 1/18/2022 @ 9:25 AM

Sampler: Kent Fuchigami

Analysis	Results	Units	MDL	Test Method	Analyzed	By
Total Coliform	Absence	in 100-ml	-	SM 9223 B	01/18/2022 11:30 AM	IQ
Heterotrophic Plate Count	DOH limit for HPC is 100 MPN/ml (or CFU/ml) <span style="color: red;">➤</span> 4	MPN/ml	2.0	SM 9215 E	01/18/2022 11:30 AM	IQ
Pseudomonas	<1	MPN/100 mL	1.0	IDEXX, Pseudalert, Quantitray	01/18/2022 11:30 AM	IQ

Approved By:

*Amelinda D. Gwanto*

Thursday, January 20, 2022

## *Appendix 1.2*

### *DOH POST FLUSH SAMPLING*

## ***DOH Sample Locations***

## ***DOH Field Results***

Appendix 1.x DOH Field Measurements January 19, 2022

Sample PT	Location	Chlorine (ppm)	turbidity (NTU)	Pressure	
1	Entry to Manana section, BFP	0.33	0.36	ND	Approx 72
2	Fire hydrant 30	0.15	0.56	72	
3	Fire hydrant 31	0.05	0.74	70	long dead end
4	Fire hydrant 9	0.1	0.38	64	
5	Fire hydrant 18A	0.22	0.66	50	use Marine's chlorine meter
6	Fire hydrant 15	0.18	0.27	48	use Marine's chlorine meter
7	Fire hydrant 18A	0.21	0.21	51	use Marine's chlorine meter
8	Fire hydrant 14	0.14	0.43	54	use Marine's chlorine meter
9	Fire hydrant 13	0.33	0.47	57	use Marine's chlorine meter
10	Fire hydrant 12A	0.21	0.27	60	use Marine's chlorine meter
		0.17666667	0.44333333	58.4444	Average Pressure



## ***DOH Micro Results***

COC #:  
500-2201-296

Monitoring:  
Total Coliform Bacteria

Sampler Name:  
Zhaohui Wang

Sample Type:

Scheduled Sample Date:  
1/19/2022

Sample Date/Time:  
1/19/2022 11:00 AM

Collection Remarks:  
chlorine 0.33 Total Beginning temp. 20.5, ending temp 21.0

Lab Received Date/Time:  
1/19/2022 2:00 PM

Lab Comments:  
Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

CI Reading:  
(mg/L)

Sample Results:  
Test Type : Colisure  
Lab Results Completed Date : 1/20/2022  
Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

Sample Complete	1/19/2022	500-2201-309	
500-689 - DOH SAMPLE PT 4: Manana section Fire hydrant 9			
Total Coliform Bacteria			<input type="checkbox"/> Schedule
Sample Complete	1/19/2022	500-2201-308	
500-690 - DOH SAMPLE PT 5: Manana section Fire hydrant 18A			
Total Coliform Bacteria			<input type="checkbox"/> Schedule
Sample Complete	1/19/2022	500-2201-310	
500-691 - DOH SAMPLE PT 6: Manana section Fire hydrant 15			
Total Coliform Bacteria			<input type="checkbox"/> Schedule
Sample Complete	1/19/2022	500-2201-302	
500-692 - DOH SAMPLE PT 7: Manana section Fire hydrant 18			
Total Coliform Bacteria			<input type="checkbox"/> Schedule
Sample Complete	1/19/2022	500-2201-303	
500-693 - DOH SAMPLE PT 8: Manana section Fire hydrant 14			
Total Coliform Bacteria			<input type="checkbox"/> Schedule
Sample Complete	1/19/2022	500-2201-304	
500-694 - DOH SAMPLE PT 9: Manana section Fire hydrant 13			
Total Coliform Bacteria			<input type="checkbox"/> Schedule
Sample Complete	1/19/2022	500-2201-305	
500-695 - DOH SAMPLE PT 10: Manana section Fire hydrant 12A			
Total Coliform Bacteria			<input type="checkbox"/> Schedule
Sample Complete	1/19/2022	500-2201-306	

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate

## Sample Collection &amp; Reservation System

Navigate To

New Location

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All

Scheduled After / Scheduled Before :

01/19/2022 01/19/2022

Category:

Total Coliform

Sampling Progress:

Sample Scheduled  
Sample Initiated  
Sample Awaiting Analysis  
Sample Rejected  
Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

Clear

Initiate

COC #:  
500-2201-307

Monitoring:  
Total Coliform Bacteria

Sampler Name:  
Zhaohui Wang

Sample Type:

Scheduled Sample Date:  
1/19/2022

Sample Date/Time:  
1/19/2022 10:43 AM

Collection Remarks:  
Chlorine 0.15 Total Beginning temp 20.5, ending 21.0

Lab Received Date/Time:  
1/19/2022 2:00 PM

Lab Comments:  
Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

CI Reading:  
(mg/L)

Sample Results:

Test Type : Colisure

Lab Results Completed Date : 1/20/2022

Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

500-095 - DON SAMPLE PT 10, Manana Section Fire Hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate

# Sample Collection & Reservation System

[Navigate To](#)[New Location](#)

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All 

Scheduled After / Scheduled Before :

01/19/2022  01/19/2022 

Category:

Total Coliform 

Sampling Progress:

Sample Scheduled

Sample Initiated

Sample Awaiting Analysis

Sample Rejected

Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

COC #:

500-2201-309

Monitoring:

Total Coliform Bacteria

Sampler Name:

Zhaohui Wang

Sample Type:

Scheduled Sample Date:

1/19/2022

Sample Date/Time:

1/19/2022 10:22 AM

Collection Remarks:

Chlorine 0.08 total Beginning temp. 20.5, ending temp 21

Lab Received Date/Time:

1/19/2022 2:00 PM

Lab Comments:

Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

CI Reading:

(mg/L)

Sample Results:

Test Type : Colisure

Lab Results Completed Date : 1/20/2022

Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

[Close](#)

500-695 - DOH SAMPLE PT 10: Manana section Fire hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule[Select All](#)[Deselect All](#)[Expand All](#)[Collapse All](#)[Reschedule/Cancel](#)[Schedule](#)[Initiate](#)

## Sample Collection &amp; Reservation System

Navigate To

New Location

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All ▼

Scheduled After / Scheduled Before :

01/19/2022  01/19/2022 

Category:

Total Coliform ▼

Sampling Progress:

Sample Scheduled

Sample Initiated

Sample Awaiting Analysis

Sample Rejected

Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

COC #:

500-2201-308

Monitoring:

Total Coliform Bacteria

Sampler Name:

Zhaohui Wang

Sample Type:

Scheduled Sample Date:

1/19/2022

Sample Date/Time:

1/19/2022 11:20 AM

Collection Remarks:

Chlorine 0.10 Total Beginning temp 20.5 ending temp 21.0

Lab Received Date/Time:

1/19/2022 2:00 PM

Lab Comments:

Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

Cl Reading:

(mg/L)

Sample Results:

Test Type : Colisure

Lab Results Completed Date : 1/20/2022

Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

500-095 - BOTTLE SAMPLE # 10: Mainland section fire hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate

## Sample Collection &amp; Reservation System

Navigate To

New Location

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All ▼

Scheduled After / Scheduled Before :

01/19/2022  01/19/2022 

Category:

Total Coliform ▼

Sampling Progress:

Sample Scheduled

Sample Initiated

Sample Awaiting Analysis

Sample Rejected

Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

**COC #:**  
500-2201-310**Monitoring:**  
Total Coliform Bacteria**Sampler Name:**  
Zhaohui Wang**Sample Type:****Scheduled Sample Date:**  
1/19/2022**Sample Date/Time:**  
1/19/2022 11:35 AM**Collection Remarks:**  
Chlorine 0.22 Total Beginning temp. 20.5 ending temp 21.0**Lab Received Date/Time:**  
1/19/2022 2:00 PM**Lab Comments:**  
Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.**CI Reading:**  
(mg/L)**Sample Results:**  
**Test Type :** Colisure  
**Lab Results Completed Date :** 1/20/2022  
**Lab Comments :**

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

500-095 - BOTTLE SAMPLE # 10: Mainland Section Fire Hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate

## Sample Collection &amp; Reservation System

Navigate To

New Location

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All ▼

Scheduled After / Scheduled Before :

01/19/2022  01/19/2022 

Category:

Total Coliform ▼

Sampling Progress:

Sample Scheduled  
Sample Initiated  
Sample Awaiting Analysis  
Sample Rejected  
Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

COC #:  
500-2201-302

Monitoring:  
Total Coliform Bacteria

Sampler Name:  
Zhaohui Wang

Sample Type:

Scheduled Sample Date:  
1/19/2022

Sample Date/Time:  
1/19/2022 1:00 PM

Collection Remarks:  
Chlorine 0.21 Total Beginning temp. 20.5 ending temp 21.0

Lab Received Date/Time:  
1/19/2022 2:00 PM

Lab Comments:  
Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

CI Reading:  
(mg/L)

Sample Results:

Test Type : Colisure

Lab Results Completed Date : 1/20/2022

Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

500-095 - BOTTLE SAMPLE # 10: Mainland Section Fire Hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate

## Sample Collection &amp; Reservation System

Navigate To

New Location

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All ▼

Scheduled After / Scheduled Before :

01/19/2022  01/19/2022 

Category:

Total Coliform ▼

Sampling Progress:

Sample Scheduled  
Sample Initiated  
Sample Awaiting Analysis  
Sample Rejected  
Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

COC #:

500-2201-303

Monitoring:

Total Coliform Bacteria

Sampler Name:

Zhaohui Wang

Sample Type:

Scheduled Sample Date:

1/19/2022

Sample Date/Time:

1/19/2022 11:50 AM

Collection Remarks:

Chlorine 0.22 Total Beginning temp. 20.5 ending temp. 21.0

Lab Received Date/Time:

1/19/2022 2:00 PM

Lab Comments:

Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

CI Reading:

(mg/L)

Sample Results:

Test Type : Colisure

Lab Results Completed Date : 1/20/2022

Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

500-095 - BOTTLE SAMPLE # 10: Mainland Section Fire Hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate



## Sample Collection &amp; Reservation System

Navigate To

New Location

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All ▼

Scheduled After / Scheduled Before :

01/19/2022  01/19/2022 

Category:

Total Coliform ▼

Sampling Progress:

Sample Scheduled  
Sample Initiated  
Sample Awaiting Analysis  
Sample Rejected  
Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

COC #:  
500-2201-304

Monitoring:  
Total Coliform Bacteria

Sampler Name:  
Zhaohui Wang

Sample Type:

Scheduled Sample Date:  
1/19/2022

Sample Date/Time:  
1/19/2022 12:42 PM

Collection Remarks:  
Chlorine 0.14 Total Beginning temp. 20.5 ending temp. 21.0

Lab Received Date/Time:  
1/19/2022 2:00 PM

Lab Comments:  
Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

CI Reading:  
(mg/L)

Sample Results:

Test Type : Colisure

Lab Results Completed Date : 1/20/2022

Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

500-095 - BOTTLE SAMPLE # 10: Mainland section fire hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate

## Sample Collection &amp; Reservation System

Navigate To

New Location

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All ▼

Scheduled After / Scheduled Before :

01/19/2022  01/19/2022 

Category:

Total Coliform ▼

Sampling Progress:

Sample Scheduled  
Sample Initiated  
Sample Awaiting Analysis  
Sample Rejected  
Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

COC #:

500-2201-305

Monitoring:

Total Coliform Bacteria

Sampler Name:

Zhaohui Wang

Sample Type:

Scheduled Sample Date:

1/19/2022

Sample Date/Time:

1/19/2022 12:25 PM

Collection Remarks:

Chlorine 0.33 Total Beginning temp. 20.5 ending temp. 21.0

Lab Received Date/Time:

1/19/2022 2:00 PM

Lab Comments:

Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

CI Reading:

(mg/L)

Sample Results:

Test Type : Colisure

Lab Results Completed Date : 1/20/2022

Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

500-095 - BOTTLE SAMPLE # 10: Mainland Section Fire Hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate

## Sample Collection &amp; Reservation System

Navigate To

New Location

## Non-SDWIS Sample Schedule Search

Sample Location:

Analyte/Group:

Show All ▼

Scheduled After / Scheduled Before :

01/19/2022  01/19/2022 

Category:

Total Coliform ▼

Sampling Progress:

Sample Scheduled  
Sample Initiated  
Sample Awaiting Analysis  
Sample Rejected  
Sample Complete

Hold down the [Ctrl] key to multi-select or deselect.

To export results for completed samples, select just "Sample Complete" and combine with other search criteria as necessary.

COC #:

500-2201-306

Monitoring:

Total Coliform Bacteria

Sampler Name:

Zhaohui Wang

Sample Type:

Scheduled Sample Date:

1/19/2022

Sample Date/Time:

1/19/2022 12:08 PM

Collection Remarks:

Chlorine 0.21 Total 0.21 Beginning temp. 20.5 ending temp. 21.0

Lab Received Date/Time:

1/19/2022 2:00 PM

Lab Comments:

Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

CI Reading:

(mg/L)

Sample Results:

Test Type : Colisure

Lab Results Completed Date : 1/20/2022

Lab Comments :

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Total Coliforms				Negative
E. coli				Negative

Close

500-095 - BOTTLE SAMPLE # 10: Mainland Section Fire Hydrant 12A

Total Coliform Bacteria

Sample Complete

1/19/2022

500-2201-306

☐ Schedule

Select All

Deselect All

Expand All

Collapse All

Reschedule/Cancel

Schedule

Initiate

## ***Appendix 1.3***

### ***NAVFAC Cross Connection Investigation Report***

# **UNITED STATES NAVY**

---



## **CROSS CONNECTION INVESTIGATION AT MANANA HOUSING AREA, PEARL CITY, HAWAII**

**JANUARY 2022**



---

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND, HAWAII  
400 MARSHALL ROAD  
JBPHH, HAWAII 96860-3139

# CROSS-CONNECTION INVESTIGATION

MANANA HOUSING AREA, PEARL CITY, HAWAII

JANUARY 2022

A cross-connection investigation of the potable water system at the Manana Housing Area in Pearl City, was conducted on January 3, 2022. The purpose of this investigation was to identify potential cross-connections, and identify backflow prevention devices and measures put in to place to prevent these cross-connections.

Currently, the Manana Housing Area is being supplied with potable water via a Honolulu Board of Water Supply interconnection, while the Navy's booster pumps are being repaired. In normal operations, water from the Waiawa Pump Station is supplied to the Manana Housing Area.

Facilities with higher risk factors were identified and investigated. Manana Housing Area is mainly residential. The buildings that were investigated include; the booster pump building, the mini-mart, and the pool mechanical building.

The inlet valves to the booster pump building from the Waiawa Pump Station, are physically shut. The pressure on the suction side of the pumps is about 16 psi, while the system pressure, which is currently supplied by the Honolulu Board of Water Supply, is about 56 psi.

The lateral to the mini-mart is protected by a reduced pressure principle backflow prevention device.

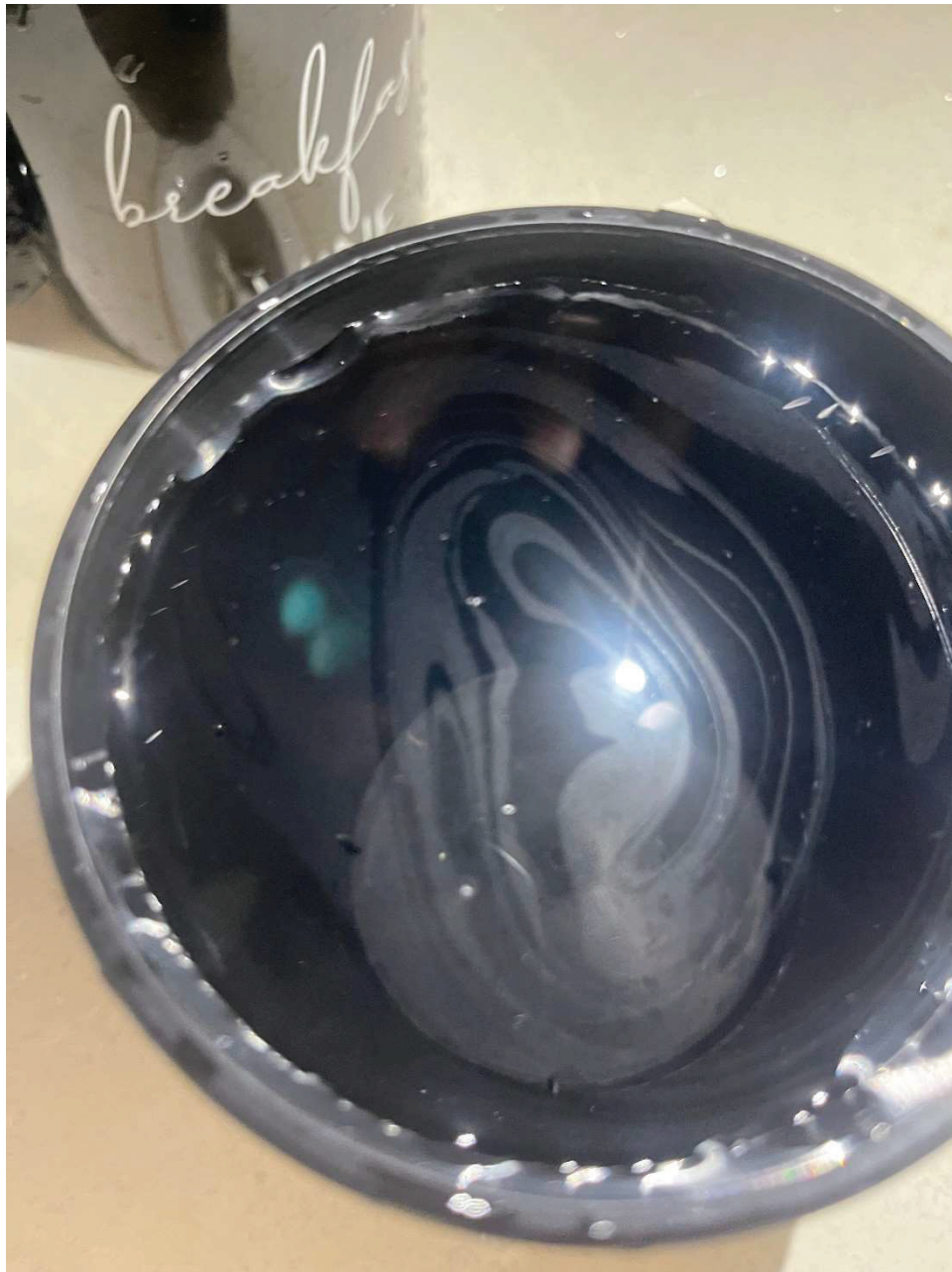
The lateral to the pool mechanical building is protected by a reduced pressure principle backflow prevention device.

There were no cross-connection deficiencies identified during this investigation.

## ***APPENDIX 1.4***

### ***DOH COMPLAINANT RESIDENCE SAMPLE REPORT***

Photo of suspected sheen provided by complainant on February 4, 2022 prompting an investigation by DOH on February 7, 2022.





***DOH Complainant Residence Sample Reports***

***Metals***

***VOC***

***SVOC***

***TPH Gas***

***TPH Diesel and Oil***



# Sample Analysis Tracking System

**C22-02-0096**

020722-35-01

SCRS Analyte/Analyte Group : Metals

## Sample Receipt Data

**Sampler Name:**

Melvin Tokuda

**Sample Date/Time:**

2/7/2022 at 10:50 AM

**Received By:**

Yao, Guomin

**Receipt Date/Time:**

2/7/2022 at 12:00 PM

**Collection Remarks:**

None

**Lab Comments:**

None

**Disposal Date/Time:**

None

## Inorganic Metals - Graphite Furnace (EPA 200.9)

**Analyst:**

Chun, Elsie

**Analysis Date/Time:**

2/8/2022 at 10:00 AM

**Preservation Date/Time:**

2/7/2022 at 4:30 PM

**Sample Results:**

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Antimony	Less than 2 µg/L		6 µg/L	NA
Arsenic	Less than 2 µg/L		10 µg/L	NA
Beryllium	Less than 0.5 µg/L		4 µg/L	NA
Cadmium	Less than 0.2 µg/L		5 µg/L	NA
Chromium	Less than 2 µg/L		100 µg/L	ND
Lead	Less than 2.5 µg/L	Less than 5 µg/L	15 µg/L	NA
Nickel	Less than 5 µg/L			NA
Selenium	Less than 5 µg/L		50 µg/L	NA
Thallium	Less than 1 µg/L		2 µg/L	NA

**Trace Amounts:**

None

**Lab Comments:**

Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

## Inorganic Regular Metals - ICPMS (EPA 200.8)

---

**Analyst:**

Chun, Elsie

**Analysis Date/Time:**

2/8/2022 at 11:00 AM

**Preservation Date/Time:**

2/7/2022 at 4:30 PM

**Sample Results:**

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Antimony	Less than 2 µg/L		6 µg/L	ND
Arsenic	Less than 2 µg/L		10 µg/L	ND
Barium	Less than 10 µg/L		2000 µg/L	ND
Beryllium	Less than 0.5 µg/L		4 µg/L	ND
Cadmium	Less than 0.2 µg/L		5 µg/L	ND
Chromium	Less than 2 µg/L		100 µg/L	NA
Copper	Less than 25 µg/L	Less than 50 µg/L	1300 µg/L	81.97 µg/L
Lead	Less than 2.5 µg/L	Less than 5 µg/L	15 µg/L	ND
Mercury	Less than 0.5 µg/L		2 µg/L	ND
Nickel	Less than 5 µg/L			ND
Selenium	Less than 5 µg/L		50 µg/L	ND
Thallium	Less than 1 µg/L		2 µg/L	ND

**Trace Amounts:**

None

**Lab Comments:**

Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.



# Sample Analysis Tracking System

**C22-02-0083**

020722-35-01

SCRS Analyte/Analyte Group : Volatile Organic Compounds

## Sample Receipt Data

**Sampler Name:**

Melvin Tokuda

**Sample Date/Time:**

2/7/2022 at 10:50 AM

**Received By:**

Yao, Guomin

**Receipt Date/Time:**

2/7/2022 at 12:00 PM

**Collection Remarks:**

CHLORINE RESIDUAL 0.10

**Lab Comments:**

None

**Disposal Date/Time:**

None

## Volatile Organic Compounds - GCMS (EPA 524.2)

**Analyst:**

Oyadomari, Wendy

**Analysis Date/Time:**

2/8/2022 at 12:00 AM

**Sample Results:**

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Vinyl Chloride	Less than 0.5 µg/L		2 µg/L	ND
1,1-Dichloroethylene	Less than 0.5 µg/L		7 µg/L	ND
1,1,1-Trichloroethane	Less than 0.5 µg/L		200 µg/L	ND
Carbon Tetrachloride	Less than 0.5 µg/L		5 µg/L	ND
Benzene	Less than 0.5 µg/L		5 µg/L	ND
1,2-Dichloroethane	Less than 0.5 µg/L		5 µg/L	ND
Trichloroethylene	Less than 0.5 µg/L		5 µg/L	ND
p-Dichlorobenzene	Less than 0.5 µg/L		75 µg/L	ND
trans-1,2-Dichloroethylene	Less than 0.5 µg/L		100 µg/L	ND
cis-1,2-Dichloroethylene	Less than 0.5 µg/L		70 µg/L	ND
1,2-Dichloropropane	Less than 0.5 µg/L		5 µg/L	ND
Toluene	Less than 0.5 µg/L		1000 µg/L	ND

Contaminant	Detection Limit	Non-Quantifiable Limit	MCL	Result
Ethylbenzene	Less than 0.5 µg/L		700 µg/L	ND
Chlorobenzene	Less than 0.5 µg/L		100 µg/L	ND
o-Dichlorobenzene	Less than 0.5 µg/L		600 µg/L	ND
Styrene	Less than 0.5 µg/L		100 µg/L	ND
Total Xylenes	Less than 0.5 µg/L		10000 µg/L	ND
Tetrachloroethylene	Less than 0.5 µg/L		5 µg/L	ND
Dichloromethane	Less than 0.5 µg/L		5 µg/L	ND
1,1,2-Trichloroethane	Less than 0.5 µg/L		5 µg/L	ND
1,2,4-Trichlorobenzene	Less than 0.5 µg/L		70 µg/L	ND

**Trace Amounts:**

SMALL BUBBLE IN SAMPLE VIAL 2/8/22 WCO

**Lab Comments:**

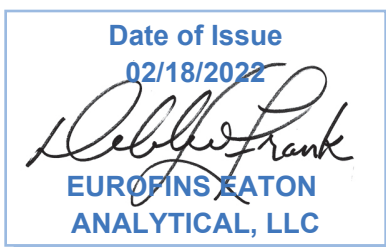
Notice: SLD is provisionally certified by EPA for this drinking water analysis effective 8/9/19 due to deficiencies in the building which are currently being addressed.

750 Royal Oaks Drive, Suite 100  
Monrovia, California 91016-3629  
Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

## Laboratory Report

for

State of Hawaii DOH  
2385 Waimano Home Road  
Pearl City, HI 96782  
Attention: **Melvin Tokuda**  
Fax: 808-586-4351



Utah ELCP CA00006

DEB: Debbie L Frank  
Project Manager

Report: 986258  
Project: RED-HILL-INCIDENT  
Group: 525 plus -8260 gas - RUSH

\* Accredited in accordance with TNI 2016 and ISO/IEC 17025:2017.

\* Laboratory certifies that the test results meet all **TNI 2016 and ISO/IEC 17025:2017** requirements unless noted under the individual analysis.

\* As applicable, this report consists of the cover page, State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms.

\* Test results relate only to the sample(s) tested.

\* Test results apply to the sample(s) as received, unless otherwise noted in the comments report (ISO/IEC 17025:2017).

\* This report shall not be reproduced except in full, without the written approval of the laboratory.

\* This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.

## STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	Montana	Cert 0035
Arizona	AZ0778	Nebraska	NE-OS-21-13
Arkansas	CA00006	Nevada	CA00006
California	2813	New Hampshire *	2959
Colorado	CA00006	New Jersey *	CA 008
Connecticut	PH-0107	New Mexico	CA00006
Delaware	CA 006	New York *	11320
Florida *	E871024	North Carolina	06701
Georgia	947	North Dakota	R-009
Guam	21-008R	Ohio - 537.1	87786
Hawaii	CA00006	Oregon *	4034
Idaho	CA00006	Pennsylvania *	68-00565
Illinois	200033	Puerto Rico	CA00006
Indiana	C-CA-01	Rhode Island	LAO00326
Iowa – Asbestos	413	South Carolina	87016
Kansas *	E-10268	South Dakota	CA11320
Kentucky	90107	Tennessee	TN02839
Louisiana *	LA008	Texas *	T104704230-20-18
Maine	CA00006	Utah (Primary AB) *	CA00006
Maryland	224	Vermont	VT0114
Marianas Islands	MP0004	Virginia *	460260
Massachusetts	M-CA006	Washington	C838
Michigan	9906	EPA Region 5	CA00006
Mississippi	CA00006	Los Angeles County Sanitation Districts	10264

\* NELAP/TNI Recognized Accreditation Bodies

# ISO/IEC 17025:2017 Accredited Method List

The test listed below are accredited and met the requirements of ISO/IEC 17025 as verify by A2LA.

Refer to our certificates and scope of accreditations (no. 5890-1 and 5890-2) found at:

<https://www.eurofinsus.com/Eaton>

Test(s)	Method(s)	Potable Water *	Waste Water
Enterococci	Enterolert	x	x
<i>Escherichia coli</i> (Enumeration)	SM 9221 B.1 SM 9221 F	x	
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x
Heterotrophic Bacteria	SM 9215 B	x	
Legionella	Legiolert®	x	
<i>Pseudomonas aeruginosa</i>	Idexx Pseudalert	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x	
Total Microcystins and Nodularins	EPA 546	X	
Yeast and Mold	SM 9610	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x	
1,4-Dioxane	EPA 522	x	
2,3,7,8-TCDD	Modified EPA 1613 B	x	
Acrylamide	* LCMS 2440)	x	
Algal Toxins/Microcystin	* LCMS 3570	x	
Alkalinity	SM 2320B	x	x
Ammonia	EPA 350.1, SM 4500-NH3 H		x
Asbestos	EPA 100.2	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x
BOD/CBOD	SM 5210 B		x
Bromate	* LCMS- 2447	x	
Carbonate as CO3	SM 2330 B	x	x
Carbonyls	EPA 556	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x
Chlorinated Acids	EPA 515.4	x	
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x	
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-CI G	x	
Color	SM2120B	x	
Conductivity	EPA 120.1, SM 2510B	x	x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x	
Cyanide (Amenable)	SM 4500-CN G	x	x
Cyanide (Free)	SM 4500CN F	x	x
Cyanide (Total)	EPA 335.4	x	x
Cyanogen Chloride (Screen)	* 335 Mod (WC-24467)	x	
Diquat and Paraquat	EPA 549.2	x	
DBP and HAA	SM 6251 B	x	
Dissolved Organic Carbon	SM 5310 C	x	
Dissolved Oxygen	SM 4500-O G		x
EDB/DCBP/TCP	EPA 504.1	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x	
EDTA and NTA	* WC-2454	x	
Endothall	EPA 548.1, *(LCMS-2445)	x	
Fluoride	SM 4500F C	x	x
Glyphosate	EPA 547	x	
Glyphosate and AMPA	* LCMS-3618	x	
Gross Alpha and Gross Beta	EPA 900.0	x	x

Test(s)	Method(s)	Potable Water *	Waste Water
Gross Alpha coprecipitation	SM 7110 C	x	x
Hardness	SM 2340 B	x	x
Hexavalent Chromium	EPA 218.6,	x	x
Hexavalent Chromium	EPA 218.7,	x	
Hexavalent Chromium	SM 3500-Cr B		x
Inorganic Anions and DBPs	EPA 300.0	x	x
Norganic Anions and DBPs	EPA 300.1	x	
Kjeldahl Nitrogen	EPA 351.2		x
Metals	EPA 200.7, EPA200.8	x	x
Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Odor	SM2150B	x	
Organohalide Pesticides and PCB	EPA 505	x	
Ortho Phosphate	SM 4500P E	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	
Perchlorate	EPA 331.0	x	
Perchlorate (Low and High Levels)	EPA 314.0	x	
Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
PPCP and EDC	* LCMS-2443	x	
pH	EPA 150.1 SM 4500-H+ B	x	x
Phenolics – Low Level	*WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
Phenylurea Pesticides/Herbicides	* LCMS-2448	x	
Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Radon-222	SM 7500RN	x	
Residue (Filterable)	SM 2540C	x	x
Residue (Non-Filterable)	SM 2540D		x
Residue (Total)	SM 2540B		x
Residue (Volatile)	EPA 160.4		x
Semi-Volatile Compounds	EPA 525.2	x	
Silica	SM 4500-SiO2 C	x	x
Sulfide	SM 4500-S D		x
Sulfite	SM 4500-SO3 B	x	x
Surfactants	SM 5540C	x	x
Taste and Odor	SM 6040 E	x	
Total Organic Carbon	SM 5310 C	x	x
Total Phenols	EPA 420.1		x
Total Phenols	EPA 420.4	x	x
Triazine Pesticides and their Degradates	* LCMS-3617	x	
Turbidity	EPA 180.1	x	x
Uranium by ICP/MS	EPA 200.8	x	
UV 254 Organic Constituents	SM 5910B	x	
VOCs	EPA 524.2	x	
VOCs	*(GCMS 2412) by EPA 524.2 modified	x	

(\*) includes: Bottled Water, Drinking Water and Water as Component of Food & Beverage.

(+) In-House Method



## Acknowledgement of Samples Received

Addr: **State of Hawaii DOH**  
2385 Waimano Home Road  
Pearl City, HI 96782

Attn: Melvin Tokuda  
Phone: 808-586-4280

Client ID: HAWAII-DOH  
Folder #: 986258  
Project: RED-HILL-INCIDENT  
Sample Group: 525 plus -8260 gas - RUSH

Project Manager: Debbie L Frank  
Phone: (626) 386-1149  
PO #: P-CARD

The following samples were received from you on **February 09, 2022** at **1426**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical, LLC.

Sample #	Sample ID	Sample Date
202202090849	020721-35-01	02/07/2022 1050
	Sub Matrix Code: DW Static ID: TREATED-525+MethylNaphthalene TICs 8260 TPH gas @525PLUS C PLUS TICS	
202202090850	RUSH	02/07/2022 0000
	RUSH	

### Test Description

@525PLUS C PLUS TICS -- Semivolatiles by GCMS



800 566 LABS (800 566 5227)

## EUROFINS EATON ANALYTICAL USE ONLY:

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

°C ( Compliance:  $4 \pm 2$  °C )

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

	(check for yes) <i>OR</i>
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list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER COMMENTS

Water

O = Other - Please Identify

TIME

1050

id est

992

000

905

PAGE OF

## INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

48255

## SAMPLE TEMP RECEIVED:

Note: If samples are out of temperature range, let the ASM's know. ASM's will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 618A (Observation = 5.0 °C) (Corr. Factor = 0.1 °C) (Final = 4.9 °C)

TYPE OF ICE: Real ☒ Synthetic ☐ No Ice ☐ CONDITION OF ICE: Frozen ☐ Partially Frozen ☒ Thawed ☐ N/A ☐METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: \_\_\_\_\_

## Compliance Acceptance Criteria:

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

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

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

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

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

6) Chlorine check. Manufacturer: Sansafe. Lot No.: \_\_\_\_\_ Expiration Date: \_\_\_\_\_ Results: \_\_\_\_\_

7) VOA and Radon Headspace:

No Samples with Headspace: ☐Samples with Headspace (see below): ☐

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

Exempt from headspace concerns: Methods 815.4, HAA (8251, 862), 505, SPME, @CH, 532LCMS, 558, 538, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	None/<8 mm	>8mm	Test

Samp ID	Bottle #	None/<8 mm	>8mm	Test

Samp ID	Bottle #	None/<8 mm	>8mm	Test

Samp ID	Bottle #	None/<8 mm	>8mm	Test

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

SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RECEIVED BY: <i>[Signature]</i>	<i>Gustavo Sanchez</i>	Eurofins Eaton Analytical	2-9-22	1426
SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLES CHECKED AGAINST COC BY:		Eurofins Eaton Analytical		

Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

**Laboratory Comments**

**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

State of Hawaii DOH  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

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**Folder Comments**

@525.2 TIC's: Sample 20220200849: ND

1-Methylnaphthalene, 2-Methylnaphthalene were not identified in the TIC review.

Tentatively identified compounds (TICs) are non-target compounds, which have been subjected to mass spectral library searches for tentative identifications. Unknown compounds are non-target compounds whose mass spectra do not adequately match the mass spectra from the mass spectral library searches for tentative identifications and are reported as unknown.

**Flags Legend:**

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

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**Laboratory Hits**

**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

**State of Hawaii DOH**  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

Samples Received on:  
02/09/2022 1426

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
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Laboratory Data

Report: 986258  
Project: RED-HILL-INCIDENT  
Group: 525 plus -8260 gas - RUSH

State of Hawaii DOH  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

Samples Received on:  
02/09/2022 1426

Prepared	Analyzed	Prep Batch	Analyzed Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
<b>020721-35-01 (202202090849)</b>						<b>Sampled on 02/07/2022 1050</b>				
Static ID: TREATED-525+MethylNaphthalene TICs 8260 TPH gas										
<b>EPA 525.2 - Semivolatiles by GCMS</b>										
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	2,4-DDD	ND	ug/L	0.039	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	2,4-DDE	ND	ug/L	0.025	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	2,4-DDT	ND	ug/L	0.031	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.033	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.070	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	4,4-DDD	ND	ug/L	0.029	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	4,4-DDE	ND	ug/L	0.029	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	4,4-DDT	ND	ug/L	0.022	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Acenaphthene	ND	ug/L	0.011	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.037	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Acetochlor	ND	ug/L	0.018	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Alachlor	ND	ug/L	0.022	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.020	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.022	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Anthracene	ND	ug/L	0.0040	0.020	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Atrazine	ND	ug/L	0.048	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.010	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.011	0.020	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.010	0.020	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.020	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.0080	0.020	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Beta-BHC	ND	ug/L	0.028	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Bromacil	ND	ug/L	0.054	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Butachlor	ND	ug/L	0.022	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.049	0.50	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.025	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.052	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Chloroneb	ND	ug/L	0.025	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Chlorothalonil (Draconil, Bravo)	ND	ug/L	0.018	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.016	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Chrysene	ND	ug/L	0.0050	0.020	1

Rounding on totals after summation.

ND - Analyte was not detected at the calculated MDL.

J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

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## Laboratory Data

Report: 986258  
Project: RED-HILL-INCIDENT  
Group: 525 plus -8260 gas - RUSH

State of Hawaii DOH  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

Samples Received on:  
02/09/2022 1426

Prepared	Analyzed	Prep Batch	Analyzed Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Delta-BHC	ND	ug/L	0.026	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.063	0.60	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.15	0.60	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.039	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.034	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.012	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Dieldrin	ND	ug/L	0.044	0.20	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.040	0.50	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Dimethoate	ND (LK)	ug/L	0.064	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.037	0.50	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	0.083	1.0	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Di-n-octylphthalate	ND	ug/L	0.044	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.067	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.094	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.029	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Endrin	ND	ug/L	0.054	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.070	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	EPTC	ND	ug/L	0.026	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Fluoranthene	ND	ug/L	0.012	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Fluorene	ND	ug/L	0.010	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.022	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Heptachlor	ND	ug/L	0.022	0.040	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.027	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.041	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.038	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.021	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Isophorone	ND	ug/L	0.024	0.50	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Lindane	ND	ug/L	0.022	0.040	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Malathion	ND	ug/L	0.050	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Methoxychlor	ND	ug/L	0.032	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Metolachlor	ND	ug/L	0.015	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Metribuzin	ND	ug/L	0.024	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Molinate	ND	ug/L	0.018	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Naphthalene	ND	ug/L	0.011	0.30	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Parathion	ND	ug/L	0.058	0.10	1

Rounding on totals after summation.

ND - Analyte was not detected at the calculated MDL.

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(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

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Laboratory Data

**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

**State of Hawaii DOH**  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

Samples Received on:  
02/09/2022 1426

Prepared	Analyzed	Prep Batch	Analyzed Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Pendimethalin	ND	ug/L	0.031	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.091	0.20	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Phenanthrene	ND	ug/L	0.0060	0.040	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Propachlor	ND	ug/L	0.011	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Pyrene	ND	ug/L	0.014	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Simazine	ND	ug/L	0.028	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Terbacil	ND	ug/L	0.034	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Terbutylazine	ND	ug/L	0.038	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.013	0.20	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.024	0.050	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Trifluralin	ND	ug/L	0.061	0.10	1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	110	%			1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Acenaphthene-d10	81	%			1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Chrysene-d12	80	%			1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Perylene-d12	93	%			1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Phenanthrene-d10	82	%			1
02/11/22	02/15/22 14:11	1385989	1387200	(EPA 525.2)	Triphenylphosphate	100	%			1

Rounding on totals after summation.

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**Laboratory QC Summary**

**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

State of Hawaii DOH

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**Semivolatiles by GCMS**

**Prep Batch: 1385989   Analytical Batch: 1387200**

202202090849

020721-35-01

**Analysis Date: 02/15/2022**

Analyzed by: JWC

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Report: 986258  
Project: RED-HILL-INCIDENT  
Group: 525 plus -8260 gas - RUSH

## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
<b>Semivolatiles by GCMS by EPA 525.2</b>									
<b>Prep Batch: 1385989 Analytical Batch: 1387200</b>					<b>Analysis Date: 02/15/2022</b>				
DUP_202202090920	1,3-Dimethyl-2-nitrobenzene (S)			103	%	103	(70-130)		
LCS1	1,3-Dimethyl-2-nitrobenzene (S)		5	95.9	%	96	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)		5	99.7	%	100	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			103	%	103	(70-130)		
MRL_CHK	1,3-Dimethyl-2-nitrobenzene (S)		5	99.1	%	99	(70-130)		
MS_202202090971	1,3-Dimethyl-2-nitrobenzene (S)		5	99.7	%	100	(70-130)		
DUP_202202090920	2,4-DDD	ND		ND	ug/L		(0-20)		
LCS1	2,4-DDD		2	2.03	ug/L	101	(70-130)		
LCS2	2,4-DDD		2	2.07	ug/L	103	(70-130)	20	2.0
MBLK	2,4-DDD			<0.1	ug/L				
MRL_CHK	2,4-DDD		0.1	0.114	ug/L	114	(50-150)		
MS_202202090971	2,4-DDD	ND	2	2.07	ug/L	103	(70-130)		
DUP_202202090920	2,4-DDE	ND		ND	ug/L		(0-20)		
LCS1	2,4-DDE		2	1.99	ug/L	100	(70-130)		
LCS2	2,4-DDE		2	2.04	ug/L	102	(70-130)	20	2.5
MBLK	2,4-DDE			<0.1	ug/L				
MRL_CHK	2,4-DDE		0.1	0.0950	ug/L	95	(50-150)		
MS_202202090971	2,4-DDE	ND	2	2.01	ug/L	101	(70-130)		
DUP_202202090920	2,4-DDT	ND		ND	ug/L		(0-20)		
LCS1	2,4-DDT		2	2.06	ug/L	103	(70-130)		
LCS2	2,4-DDT		2	2.18	ug/L	109	(70-130)	20	5.7
MBLK	2,4-DDT			<0.1	ug/L				
MRL_CHK	2,4-DDT		0.1	0.0920	ug/L	92	(50-150)		
MS_202202090971	2,4-DDT	ND	2	2.14	ug/L	107	(70-130)		
DUP_202202090920	2,4-Dinitrotoluene	ND		ND	ug/L		(0-20)		
LCS1	2,4-Dinitrotoluene		2	2.19	ug/L	110	(70-130)		
LCS2	2,4-Dinitrotoluene		2	2.12	ug/L	106	(70-130)	20	3.3
MBLK	2,4-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,4-Dinitrotoluene		0.1	0.130	ug/L	130	(50-150)		
MS_202202090971	2,4-Dinitrotoluene	ND	2	2.27	ug/L	114	(70-130)		
DUP_202202090920	2,6-Dinitrotoluene	ND		ND	ug/L		(0-20)		
LCS1	2,6-Dinitrotoluene		2	2.24	ug/L	112	(70-130)		
LCS2	2,6-Dinitrotoluene		2	2.20	ug/L	110	(70-130)	20	2.3
MBLK	2,6-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,6-Dinitrotoluene		0.1	0.108	ug/L	108	(50-150)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202202090971	2,6-Dinitrotoluene	ND	2	2.24	ug/L	112	(70-130)		
DUP_202202090920	4,4-DDD	ND		ND	ug/L		(0-20)		
LCS1	4,4-DDD		2	2.17	ug/L	108	(70-130)		
LCS2	4,4-DDD		2	2.21	ug/L	111	(70-130)	20	1.8
MBLK	4,4-DDD			<0.1	ug/L				
MRL_CHK	4,4-DDD		0.1	0.106	ug/L	106	(50-150)		
MS_202202090971	4,4-DDD	ND	2	2.26	ug/L	113	(70-130)		
DUP_202202090920	4,4-DDE	ND		ND	ug/L		(0-20)		
LCS1	4,4-DDE		2	1.93	ug/L	97	(70-130)		
LCS2	4,4-DDE		2	1.98	ug/L	99	(70-130)	20	2.6
MBLK	4,4-DDE			<0.1	ug/L				
MRL_CHK	4,4-DDE		0.1	0.0850	ug/L	85	(50-150)		
MS_202202090971	4,4-DDE	ND	2	1.90	ug/L	95	(70-130)		
DUP_202202090920	4,4-DDT	ND		ND	ug/L		(0-20)		
LCS1	4,4-DDT		2	1.94	ug/L	97	(70-130)		
LCS2	4,4-DDT		2	2.04	ug/L	102	(70-130)	20	5.0
MBLK	4,4-DDT			<0.1	ug/L				
MRL_CHK	4,4-DDT		0.1	0.115	ug/L	115	(50-150)		
MS_202202090971	4,4-DDT	ND	2	1.97	ug/L	99	(70-130)		
DUP_202202090920	Acenaphthene	ND		ND	ug/L		(0-20)		
LCS1	Acenaphthene		2	2.00	ug/L	100	(70-130)		
LCS2	Acenaphthene		2	2.07	ug/L	103	(70-130)	20	3.4
MBLK	Acenaphthene			<0.1	ug/L				
MRL_CHK	Acenaphthene		0.1	0.0940	ug/L	94	(50-150)		
MS_202202090971	Acenaphthene	ND	2	2.05	ug/L	103	(70-130)		
DUP_202202090920	Acenaphthene-d10 (I)			87.7	%	88	(50-150)		
LCS1	Acenaphthene-d10 (I)		5	88.4	%	88	(50-150)		
LCS2	Acenaphthene-d10 (I)		5	92.4	%	92	(50-150)		
MBLK	Acenaphthene-d10 (I)			94.9	%	95	(50-150)		
MRL_CHK	Acenaphthene-d10 (I)		5	90.2	%	90	(50-150)		
MS_202202090971	Acenaphthene-d10 (I)		5	90.4	%	90	(50-150)		
DUP_202202090920	Acenaphthylene	ND		ND	ug/L		(0-20)		
LCS1	Acenaphthylene		2	2.04	ug/L	102	(70-130)		
LCS2	Acenaphthylene		2	2.04	ug/L	102	(70-130)	20	0.0
MBLK	Acenaphthylene			<0.1	ug/L				
MRL_CHK	Acenaphthylene		0.1	0.0800	ug/L	80	(50-150)		
MS_202202090971	Acenaphthylene	ND	2	2.10	ug/L	105	(70-130)		
DUP_202202090920	Acetochlor	ND		ND	ug/L		(0-20)		

Spike recovery is already corrected for native results.

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

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Report: 986258  
Project: RED-HILL-INCIDENT  
Group: 525 plus -8260 gas - RUSH

## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Acetochlor		2	2.20	ug/L	110	(70-130)		
LCS2	Acetochlor		2	2.15	ug/L	108	(70-130)	20	2.3
MBLK	Acetochlor			<0.1	ug/L				
MRL_CHK	Acetochlor		0.05	0.0410	ug/L	82	(50-150)		
MS_202202090971	Acetochlor	ND	2	2.25	ug/L	112	(70-130)		
DUP_202202090920	Alachlor	ND		ND	ug/L		(0-20)		
LCS1	Alachlor		2	2.19	ug/L	110	(70-130)		
LCS2	Alachlor		2	2.18	ug/L	109	(70-130)	20	0.46
MBLK	Alachlor			<0.05	ug/L				
MRL_CHK	Alachlor		0.05	0.0420	ug/L	84	(50-150)		
MS_202202090971	Alachlor	ND	2	2.25	ug/L	113	(70-130)		
DUP_202202090920	Alpha-BHC	ND		ND	ug/L		(0-20)		
LCS1	Alpha-BHC		2	2.20	ug/L	110	(70-130)		
LCS2	Alpha-BHC		2	2.14	ug/L	107	(70-130)	20	2.8
MBLK	Alpha-BHC			<0.1	ug/L				
MRL_CHK	Alpha-BHC		0.1	0.0990	ug/L	99	(50-150)		
MS_202202090971	Alpha-BHC	ND	2	2.21	ug/L	111	(70-130)		
DUP_202202090920	alpha-Chlordane	ND		ND	ug/L		(0-20)		
LCS1	alpha-Chlordane		2	1.91	ug/L	95	(70-130)		
LCS2	alpha-Chlordane		2	1.98	ug/L	99	(70-130)	20	3.6
MBLK	alpha-Chlordane			<0.05	ug/L				
MRL_CHK	alpha-Chlordane		0.05	0.0330	ug/L	66	(50-150)		
MS_202202090971	alpha-Chlordane	ND	2	1.96	ug/L	98	(70-130)		
DUP_202202090920	Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Anthracene		2	2.08	ug/L	104	(70-130)		
LCS2	Anthracene		2	2.12	ug/L	106	(70-130)	20	1.9
MBLK	Anthracene			<0.02	ug/L				
MRL_CHK	Anthracene		0.02	0.0190	ug/L	95	(50-150)		
MS_202202090971	Anthracene	ND	2	2.12	ug/L	106	(70-130)		
DUP_202202090920	Atrazine	ND		ND	ug/L		(0-20)		
LCS1	Atrazine		2	2.44	ug/L	122	(70-130)		
LCS2	Atrazine		2	2.43	ug/L	121	(70-130)	20	0.41
MBLK	Atrazine			<0.05	ug/L				
MRL_CHK	Atrazine		0.05	0.0570	ug/L	114	(50-150)		
MS_202202090971	Atrazine	ND	2	2.47	ug/L	124	(70-130)		
DUP_202202090920	Benz(a)Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Benz(a)Anthracene		2	1.97	ug/L	99	(70-130)		
LCS2	Benz(a)Anthracene		2	2.05	ug/L	103	(70-130)	20	4.0

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**Report:** 986258  
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## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Benz(a)Anthracene			<0.05	ug/L				
MRL_CHK	Benz(a)Anthracene		0.05	0.0440	ug/L	88	(50-150)		
MS_202202090971	Benz(a)Anthracene	ND	2	2.08	ug/L	104	(70-130)		
DUP_202202090920	Benzo(a)pyrene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(a)pyrene		2	2.09	ug/L	105	(70-130)		
LCS2	Benzo(a)pyrene		2	2.05	ug/L	102	(70-130)	20	1.9
MBLK	Benzo(a)pyrene			<0.02	ug/L				
MRL_CHK	Benzo(a)pyrene		0.02	0.0190	ug/L	95	(50-150)		
MS_202202090971	Benzo(a)pyrene	ND	2	2.12	ug/L	106	(70-130)		
DUP_202202090920	Benzo(b)Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(b)Fluoranthene		2	2.23	ug/L	112	(70-130)		
LCS2	Benzo(b)Fluoranthene		2	2.15	ug/L	107	(70-130)	20	3.6
MBLK	Benzo(b)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(b)Fluoranthene		0.02	0.0220	ug/L	110	(50-150)		
MS_202202090971	Benzo(b)Fluoranthene	ND	2	2.22	ug/L	111	(70-130)		
DUP_202202090920	Benzo(g,h,i)Perylene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(g,h,i)Perylene		2	2.27	ug/L	113	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2	2.20	ug/L	110	(70-130)	20	3.1
MBLK	Benzo(g,h,i)Perylene			<0.05	ug/L				
MRL_CHK	Benzo(g,h,i)Perylene		0.05	0.0370	ug/L	74	(50-150)		
MS_202202090971	Benzo(g,h,i)Perylene	ND	2	2.13	ug/L	107	(70-130)		
DUP_202202090920	Benzo(k)Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(k)Fluoranthene		2	2.10	ug/L	105	(70-130)		
LCS2	Benzo(k)Fluoranthene		2	2.16	ug/L	108	(70-130)	20	2.8
MBLK	Benzo(k)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(k)Fluoranthene		0.02	0.0190	ug/L	95	(50-150)		
MS_202202090971	Benzo(k)Fluoranthene	ND	2	2.18	ug/L	109	(70-130)		
DUP_202202090920	Beta-BHC	ND		ND	ug/L		(0-20)		
LCS1	Beta-BHC		2	2.23	ug/L	112	(70-130)		
LCS2	Beta-BHC		2	2.23	ug/L	112	(70-130)	20	0.0
MBLK	Beta-BHC			<0.1	ug/L				
MRL_CHK	Beta-BHC		0.1	0.0990	ug/L	99	(50-150)		
MS_202202090971	Beta-BHC	ND	2	2.26	ug/L	113	(70-130)		
DUP_202202090920	Bromacil	ND		ND	ug/L		(0-20)		
LCS1	Bromacil		2	2.48	ug/L	124	(70-130)		
LCS2	Bromacil		2	2.44	ug/L	122	(70-130)	20	2.0
MBLK	Bromacil			<0.2	ug/L				
MRL_CHK	Bromacil		0.1	0.112	ug/L	112	(50-150)		

Spike recovery is already corrected for native results.

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

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**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202202090971	Bromacil	ND	2	2.64	ug/L	<u>132</u>	(70-130)		
DUP_202202090920	Butachlor	ND		ND	ug/L		(0-20)		
LCS1	Butachlor		2	2.31	ug/L	115	(70-130)		
LCS2	Butachlor		2	2.37	ug/L	119	(70-130)	20	2.6
MBLK	Butachlor			<0.05	ug/L				
MRL_CHK	Butachlor		0.05	0.0580	ug/L	116	(50-150)		
MS_202202090971	Butachlor	ND	2	2.43	ug/L	121	(70-130)		
DUP_202202090920	Butylbenzylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Butylbenzylphthalate		2	2.21	ug/L	111	(70-130)		
LCS2	Butylbenzylphthalate		2	2.27	ug/L	113	(70-130)	20	2.7
MBLK	Butylbenzylphthalate			<0.5	ug/L				
MRL_CHK	Butylbenzylphthalate		0.15	0.181	ug/L	121	(50-150)		
MS_202202090971	Butylbenzylphthalate	ND	2	2.31	ug/L	116	(70-130)		
DUP_202202090920	Caffeine by method 525mod	ND		ND	ug/L		(0-20)		
LCS1	Caffeine by method 525mod		2	1.96	ug/L	98	(45-137)		
LCS2	Caffeine by method 525mod		2	1.83	ug/L	92	(45-137)	20	6.9
MBLK	Caffeine by method 525mod			<0.05	ug/L				
MRL_CHK	Caffeine by method 525mod		0.05	0.0670	ug/L	134	(50-150)		
MS_202202090971	Caffeine by method 525mod	ND	2	1.95	ug/L	98	(46-144)		
DUP_202202090920	Chlorobenzilate	ND		ND	ug/L		(0-20)		
LCS1	Chlorobenzilate		2	2.51	ug/L	125	(70-130)		
LCS2	Chlorobenzilate		2	2.51	ug/L	126	(70-130)	20	0.0
MBLK	Chlorobenzilate			<0.1	ug/L				
MRL_CHK	Chlorobenzilate		0.1	0.115	ug/L	115	(50-150)		
MS_202202090971	Chlorobenzilate	ND	2	2.63	ug/L	<u>131</u>	(70-130)		
DUP_202202090920	Chloroneb	ND		ND	ug/L		(0-20)		
LCS1	Chloroneb		2	2.07	ug/L	103	(70-130)		
LCS2	Chloroneb		2	2.09	ug/L	105	(70-130)	20	0.96
MBLK	Chloroneb			<0.1	ug/L				
MRL_CHK	Chloroneb		0.1	0.0990	ug/L	99	(50-150)		
MS_202202090971	Chloroneb	ND	2	2.18	ug/L	109	(70-130)		
DUP_202202090920	Chlorothalonil(Draconil,Bravo)	ND		ND	ug/L		(0-20)		
LCS1	Chlorothalonil(Draconil,Bravo)		2	2.18	ug/L	109	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2	2.23	ug/L	111	(70-130)	20	1.8
MBLK	Chlorothalonil(Draconil,Bravo)			<0.1	ug/L				
MRL_CHK	Chlorothalonil(Draconil,Bravo)		0.1	0.0860	ug/L	86	(50-150)		
MS_202202090971	Chlorothalonil(Draconil,Bravo)	ND	2	2.26	ug/L	113	(70-130)		
DUP_202202090920	Chlorpyrifos (Dursban)	ND		ND	ug/L		(0-20)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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Report: 986258  
Project: RED-HILL-INCIDENT  
Group: 525 plus -8260 gas - RUSH

## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Chlorpyrifos (Dursban)		2	2.19	ug/L	110	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2	2.23	ug/L	112	(70-130)	20	1.8
MBLK	Chlorpyrifos (Dursban)			<0.05	ug/L				
MRL_CHK	Chlorpyrifos (Dursban)		0.05	0.0520	ug/L	104	(50-150)		
MS_202202090971	Chlorpyrifos (Dursban)	ND	2	2.25	ug/L	113	(70-130)		
DUP_202202090920	Chrysene	ND		ND	ug/L		(0-20)		
LCS1	Chrysene		2	2.16	ug/L	108	(70-130)		
LCS2	Chrysene		2	2.14	ug/L	107	(70-130)	20	0.93
MBLK	Chrysene			<0.02	ug/L				
MRL_CHK	Chrysene		0.02	0.0220	ug/L	110	(50-150)		
MS_202202090971	Chrysene	ND	2	2.23	ug/L	111	(70-130)		
DUP_202202090920	Chrysene-d12 (I)			82.9	%	83	(50-150)		
LCS1	Chrysene-d12 (I)		5	87.7	%	88	(50-150)		
LCS2	Chrysene-d12 (I)		5	96.4	%	96	(50-150)		
MBLK	Chrysene-d12 (I)			89.4	%	89	(50-150)		
MRL_CHK	Chrysene-d12 (I)		5	86.7	%	87	(50-150)		
MS_202202090971	Chrysene-d12 (I)		5	89.1	%	89	(50-150)		
DUP_202202090920	Delta-BHC	ND		ND	ug/L		(0-20)		
LCS1	Delta-BHC		2	2.11	ug/L	105	(70-130)		
LCS2	Delta-BHC		2	2.12	ug/L	106	(70-130)	20	0.47
MBLK	Delta-BHC			<0.1	ug/L				
MRL_CHK	Delta-BHC		0.1	0.100	ug/L	100	(50-150)		
MS_202202090971	Delta-BHC	ND	2	2.21	ug/L	110	(70-130)		
DUP_202202090920	Di-(2-Ethylhexyl)adipate	ND		ND	ug/L		(0-20)		
LCS1	Di-(2-Ethylhexyl)adipate		2	2.20	ug/L	110	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2	2.24	ug/L	112	(70-130)	20	1.8
MBLK	Di-(2-Ethylhexyl)adipate			<0.6	ug/L				
MRL_CHK	Di-(2-Ethylhexyl)adipate		0.3	0.394	ug/L	131	(50-150)		
MS_202202090971	Di-(2-Ethylhexyl)adipate	ND	2	2.01	ug/L	101	(70-130)		
DUP_202202090920	Di(2-Ethylhexyl)phthalate	ND		ND	ug/L		(0-20)		
LCS1	Di(2-Ethylhexyl)phthalate		2	2.13	ug/L	106	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2	2.09	ug/L	104	(70-130)	20	1.9
MBLK	Di(2-Ethylhexyl)phthalate			<0.6	ug/L				
MRL_CHK	Di(2-Ethylhexyl)phthalate		0.6	0.709	ug/L	118	(50-150)		
MS_202202090971	Di(2-Ethylhexyl)phthalate	ND	2	1.88	ug/L	94	(70-130)		
DUP_202202090920	Diazinon (Qualitative)	ND		ND	ug/L		(0-20)		
LCS1	Diazinon (Qualitative)		2	2.21	ug/L	111	(15-132)		
LCS2	Diazinon (Qualitative)		2	2.21	ug/L	111	(15-132)	20	0.0

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

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Report: 986258  
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## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Diazinon (Qualitative)			<0.10	ug/L				
MRL_CHK	Diazinon (Qualitative)		0.1	0.113	ug/L	113	(15-132)		
MS_202202090971	Diazinon (Qualitative)	ND	2	2.14	ug/L	107	(15-132)		
DUP_202202090920	Dibenz(a,h)Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Dibenz(a,h)Anthracene		2	2.27	ug/L	114	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2	2.27	ug/L	113	(70-130)	20	0.0
MBLK	Dibenz(a,h)Anthracene			<0.05	ug/L				
MRL_CHK	Dibenz(a,h)Anthracene		0.05	0.0390	ug/L	78	(50-150)		
MS_202202090971	Dibenz(a,h)Anthracene	ND	2	2.03	ug/L	101	(70-130)		
DUP_202202090920	Dichlorvos (DDVP)	ND		ND	ug/L		(0-20)		
LCS1	Dichlorvos (DDVP)		2	2.46	ug/L	123	(70-130)		
LCS2	Dichlorvos (DDVP)		2	2.43	ug/L	122	(70-130)	20	1.2
MBLK	Dichlorvos (DDVP)			<0.05	ug/L				
MRL_CHK	Dichlorvos (DDVP)		0.05	0.0540	ug/L	108	(50-150)		
MS_202202090971	Dichlorvos (DDVP)	ND	2	2.59	ug/L	129	(70-130)		
DUP_202202090920	Dieldrin	ND		ND	ug/L		(0-20)		
LCS1	Dieldrin		2	1.98	ug/L	99	(70-130)		
LCS2	Dieldrin		2	2.04	ug/L	102	(70-130)	20	3.0
MBLK	Dieldrin			<0.2	ug/L				
MRL_CHK	Dieldrin		0.1	0.110	ug/L	110	(50-150)		
MS_202202090971	Dieldrin	ND	2	2.11	ug/L	105	(70-130)		
DUP_202202090920	Diethylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Diethylphthalate		2	2.27	ug/L	114	(70-130)		
LCS2	Diethylphthalate		2	2.27	ug/L	113	(70-130)	20	0.0
MBLK	Diethylphthalate			<0.5	ug/L				
MRL_CHK	Diethylphthalate		0.15	0.164	ug/L	109	(50-150)		
MS_202202090971	Diethylphthalate	ND	2	2.34	ug/L	117	(70-130)		
DUP_202202090920	Dimethoate	ND		ND	ug/L		(0-20)		
LCS1	Dimethoate		2	2.09	ug/L	<u>104</u>	(35-100)		
LCS2	Dimethoate		2	1.88	ug/L	94	(35-100)	20	11
MBLK	Dimethoate			<0.1	ug/L				
MRL_CHK	Dimethoate		0.1	0.0680	ug/L	68	(35-100)		
MS_202202090971	Dimethoate	ND	2	2.10	ug/L	105	(34-111)		
DUP_202202090920	Dimethylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Dimethylphthalate		2	2.33	ug/L	117	(70-130)		
LCS2	Dimethylphthalate		2	2.29	ug/L	114	(70-130)	20	1.7
MBLK	Dimethylphthalate			<0.5	ug/L				
MRL_CHK	Dimethylphthalate		0.3	0.310	ug/L	103	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

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**Report:** 986258  
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## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202202090971	Dimethylphthalate	ND	2	2.38	ug/L	119	(70-130)		
DUP_202202090920	Di-n-Butylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Di-n-Butylphthalate		4	4.17	ug/L	104	(70-130)		
LCS2	Di-n-Butylphthalate		4	4.30	ug/L	107	(70-130)	20	3.1
MBLK	Di-n-Butylphthalate			<1	ug/L				
MRL_CHK	Di-n-Butylphthalate		0.3	0.351	ug/L	117	(50-150)		
MS_202202090971	Di-n-Butylphthalate	ND	4	4.35	ug/L	109	(70-130)		
DUP_202202090920	Di-N-octylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Di-N-octylphthalate		2	1.92	ug/L	96	(70-130)		
LCS2	Di-N-octylphthalate		2	1.77	ug/L	89	(70-130)	20	8.1
MBLK	Di-N-octylphthalate			<0.1	ug/L				
MRL_CHK	Di-N-octylphthalate		0.1	0.111	ug/L	111	(50-150)		
MS_202202090971	Di-N-octylphthalate	ND	2	1.45	ug/L	73	(70-130)		
DUP_202202090920	Endosulfan I (Alpha)	ND		ND	ug/L		(0-20)		
LCS1	Endosulfan I (Alpha)		2	2.01	ug/L	101	(70-130)		
LCS2	Endosulfan I (Alpha)		2	2.11	ug/L	105	(70-130)	20	4.8
MBLK	Endosulfan I (Alpha)			<0.1	ug/L				
MRL_CHK	Endosulfan I (Alpha)		0.1	0.0980	ug/L	98	(50-150)		
MS_202202090971	Endosulfan I (Alpha)	ND	2	2.12	ug/L	106	(70-130)		
DUP_202202090920	Endosulfan II (Beta)	ND		ND	ug/L		(0-20)		
LCS1	Endosulfan II (Beta)		2	1.96	ug/L	98	(70-130)		
LCS2	Endosulfan II (Beta)		2	2.16	ug/L	108	(70-130)	20	9.7
MBLK	Endosulfan II (Beta)			<0.1	ug/L				
MRL_CHK	Endosulfan II (Beta)		0.1	0.107	ug/L	107	(50-150)		
MS_202202090971	Endosulfan II (Beta)	ND	2	2.13	ug/L	106	(70-130)		
DUP_202202090920	Endosulfan Sulfate	ND		ND	ug/L		(0-20)		
LCS1	Endosulfan Sulfate		2	2.13	ug/L	106	(70-130)		
LCS2	Endosulfan Sulfate		2	2.12	ug/L	106	(70-130)	20	0.47
MBLK	Endosulfan Sulfate			<0.1	ug/L				
MRL_CHK	Endosulfan Sulfate		0.1	0.135	ug/L	135	(50-150)		
MS_202202090971	Endosulfan Sulfate	ND	2	2.22	ug/L	111	(70-130)		
DUP_202202090920	Endrin	ND		ND	ug/L		(0-20)		
LCS1	Endrin		2	2.28	ug/L	114	(70-130)		
LCS2	Endrin		2	2.41	ug/L	121	(70-130)	20	5.5
MBLK	Endrin			<0.1	ug/L				
MRL_CHK	Endrin		0.1	0.122	ug/L	122	(50-150)		
MS_202202090971	Endrin	ND	2	2.28	ug/L	114	(70-130)		
DUP_202202090920	Endrin Aldehyde	ND		ND	ug/L		(0-20)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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**Report:** 986258  
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## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Endrin Aldehyde		2	2.02	ug/L	101	(70-130)		
LCS2	Endrin Aldehyde		2	2.17	ug/L	109	(70-130)	20	6.7
MBLK	Endrin Aldehyde			<0.1	ug/L				
MRL_CHK	Endrin Aldehyde		0.1	0.0960	ug/L	96	(50-150)		
MS_202202090971	Endrin Aldehyde	ND	2	2.03	ug/L	102	(70-130)		
DUP_202202090920	EPTC	ND		ND	ug/L		(0-20)		
LCS1	EPTC		2	2.15	ug/L	108	(70-130)		
LCS2	EPTC		2	2.16	ug/L	108	(70-130)	20	0.46
MBLK	EPTC			<0.1	ug/L				
MRL_CHK	EPTC		0.1	0.101	ug/L	101	(50-150)		
MS_202202090971	EPTC	ND	2	2.22	ug/L	111	(70-130)		
DUP_202202090920	Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Fluoranthene		2	2.17	ug/L	108	(70-130)		
LCS2	Fluoranthene		2	2.19	ug/L	110	(70-130)	20	0.92
MBLK	Fluoranthene			<0.1	ug/L				
MRL_CHK	Fluoranthene		0.05	0.0470	ug/L	94	(50-150)		
MS_202202090971	Fluoranthene	ND	2	2.23	ug/L	111	(70-130)		
DUP_202202090920	Fluorene	ND		ND	ug/L		(0-20)		
LCS1	Fluorene		2	2.16	ug/L	108	(70-130)		
LCS2	Fluorene		2	2.17	ug/L	108	(70-130)	20	0.46
MBLK	Fluorene			<0.05	ug/L				
MRL_CHK	Fluorene		0.05	0.0480	ug/L	96	(50-150)		
MS_202202090971	Fluorene	ND	2	2.22	ug/L	111	(70-130)		
DUP_202202090920	gamma-Chlordane	ND		ND	ug/L		(0-20)		
LCS1	gamma-Chlordane		2	1.98	ug/L	99	(70-130)		
LCS2	gamma-Chlordane		2	2.02	ug/L	101	(70-130)	20	2.0
MBLK	gamma-Chlordane			<0.05	ug/L				
MRL_CHK	gamma-Chlordane		0.05	0.0420	ug/L	84	(50-150)		
MS_202202090971	gamma-Chlordane	ND	2	1.99	ug/L	100	(70-130)		
DUP_202202090920	Heptachlor	ND		ND	ug/L		(0-20)		
LCS1	Heptachlor		2	2.14	ug/L	107	(70-130)		
LCS2	Heptachlor		2	2.19	ug/L	109	(70-130)	20	2.3
MBLK	Heptachlor			<0.04	ug/L				
MRL_CHK	Heptachlor		0.04	0.0530	ug/L	133	(50-150)		
MS_202202090971	Heptachlor	ND	2	2.18	ug/L	109	(70-130)		
DUP_202202090920	Heptachlor Epoxide (isomer B)	ND		ND	ug/L		(0-20)		
LCS1	Heptachlor Epoxide (isomer B)		2	1.97	ug/L	99	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2	2.02	ug/L	101	(70-130)	20	2.5

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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**Report:** 986258  
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## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Heptachlor Epoxide (isomer B)			<0.05	ug/L				
MRL_CHK	Heptachlor Epoxide (isomer B)		0.05	0.0560	ug/L	112	(50-150)		
MS_202202090971	Heptachlor Epoxide (isomer B)	ND	2	2.10	ug/L	105	(70-130)		
DUP_202202090920	Hexachlorobenzene	ND		ND	ug/L		(0-20)		
LCS1	Hexachlorobenzene		2	1.94	ug/L	97	(70-130)		
LCS2	Hexachlorobenzene		2	1.95	ug/L	97	(70-130)	20	0.51
MBLK	Hexachlorobenzene			<0.05	ug/L				
MRL_CHK	Hexachlorobenzene		0.05	0.0570	ug/L	114	(50-150)		
MS_202202090971	Hexachlorobenzene	ND	2	2.04	ug/L	102	(70-130)		
DUP_202202090920	Hexachlorocyclopentadiene	ND		ND	ug/L		(0-20)		
LCS1	Hexachlorocyclopentadiene		2	2.04	ug/L	102	(70-130)		
LCS2	Hexachlorocyclopentadiene		2	2.28	ug/L	114	(70-130)	20	11
MBLK	Hexachlorocyclopentadiene			<0.05	ug/L				
MRL_CHK	Hexachlorocyclopentadiene		0.05	0.0500	ug/L	100	(50-150)		
MS_202202090971	Hexachlorocyclopentadiene	ND	2	2.08	ug/L	104	(70-130)		
DUP_202202090920	Indeno(1,2,3,c,d)Pyrene	ND		ND	ug/L		(0-20)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2	2.33	ug/L	116	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2	2.25	ug/L	113	(70-130)	20	3.5
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.05	ug/L				
MRL_CHK	Indeno(1,2,3,c,d)Pyrene		0.05	0.0410	ug/L	82	(50-150)		
MS_202202090971	Indeno(1,2,3,c,d)Pyrene	ND	2	2.11	ug/L	106	(70-130)		
DUP_202202090920	Isophorone	ND		ND	ug/L		(0-20)		
LCS1	Isophorone		2	2.18	ug/L	109	(70-130)		
LCS2	Isophorone		2	2.15	ug/L	108	(70-130)	20	1.4
MBLK	Isophorone			<0.5	ug/L				
MRL_CHK	Isophorone		0.1	0.0850	ug/L	85	(50-150)		
MS_202202090971	Isophorone	ND	2	2.24	ug/L	112	(70-130)		
DUP_202202090920	Lindane	ND		ND	ug/L		(0-20)		
LCS1	Lindane		2	2.10	ug/L	105	(70-130)		
LCS2	Lindane		2	2.10	ug/L	105	(70-130)	20	0.0
MBLK	Lindane			<0.04	ug/L				
MRL_CHK	Lindane		0.04	0.0440	ug/L	110	(50-150)		
MS_202202090971	Lindane	ND	2	2.16	ug/L	108	(70-130)		
DUP_202202090920	Malathion	ND		ND	ug/L		(0-20)		
LCS1	Malathion		2	2.22	ug/L	111	(70-130)		
LCS2	Malathion		2	2.30	ug/L	115	(70-130)	20	3.1
MBLK	Malathion			<0.1	ug/L				
MRL_CHK	Malathion		0.1	0.100	ug/L	100	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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(I) - Indicates internal standard compound.

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**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202202090971	Malathion	ND	2	2.41	ug/L	121	(70-130)		
DUP_202202090920	Methoxychlor	ND		ND	ug/L		(0-20)		
LCS1	Methoxychlor		2	2.25	ug/L	113	(70-130)		
LCS2	Methoxychlor		2	2.16	ug/L	108	(70-130)	20	4.1
MBLK	Methoxychlor			<0.1	ug/L				
MRL_CHK	Methoxychlor		0.1	0.125	ug/L	125	(50-150)		
MS_202202090971	Methoxychlor	ND	2	2.38	ug/L	119	(70-130)		
DUP_202202090920	Metolachlor	ND		ND	ug/L		(0-20)		
LCS1	Metolachlor		2	2.19	ug/L	109	(70-130)		
LCS2	Metolachlor		2	2.22	ug/L	111	(70-130)	20	1.4
MBLK	Metolachlor			<0.05	ug/L				
MRL_CHK	Metolachlor		0.05	0.0510	ug/L	102	(50-150)		
MS_202202090971	Metolachlor	ND	2	2.26	ug/L	113	(70-130)		
DUP_202202090920	Metribuzin	ND		ND	ug/L		(0-20)		
LCS1	Metribuzin		2	2.26	ug/L	113	(70-130)		
LCS2	Metribuzin		2	2.18	ug/L	109	(70-130)	20	3.1
MBLK	Metribuzin			<0.05	ug/L				
MRL_CHK	Metribuzin		0.05	0.0460	ug/L	92	(50-150)		
MS_202202090971	Metribuzin	ND	2	2.34	ug/L	117	(70-130)		
DUP_202202090920	Molinate	ND		ND	ug/L		(0-20)		
LCS1	Molinate		2	2.27	ug/L	114	(70-130)		
LCS2	Molinate		2	2.17	ug/L	109	(70-130)	20	4.5
MBLK	Molinate			<0.1	ug/L				
MRL_CHK	Molinate		0.1	0.0950	ug/L	95	(50-150)		
MS_202202090971	Molinate	ND	2	2.27	ug/L	113	(70-130)		
DUP_202202090920	Naphthalene	ND		ND	ug/L		(0-20)		
LCS1	Naphthalene		2	1.88	ug/L	94	(70-130)		
LCS2	Naphthalene		2	2.02	ug/L	101	(70-130)	20	7.2
MBLK	Naphthalene			<0.3	ug/L				
MRL_CHK	Naphthalene		0.1	0.0960	ug/L	96	(50-150)		
MS_202202090971	Naphthalene	ND	2	1.99	ug/L	100	(70-130)		
DUP_202202090920	Parathion	ND		ND	ug/L		(0-20)		
LCS1	Parathion		2	2.14	ug/L	107	(70-130)		
LCS2	Parathion		2	2.18	ug/L	109	(70-130)	20	1.9
MBLK	Parathion			<0.1	ug/L				
MRL_CHK	Parathion		0.1	0.135	ug/L	135	(50-150)		
MS_202202090971	Parathion	ND	2	2.22	ug/L	111	(70-130)		
DUP_202202090920	Pendimethalin	ND		ND	ug/L		(0-20)		

Spike recovery is already corrected for native results.

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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Report: 986258  
Project: RED-HILL-INCIDENT  
Group: 525 plus -8260 gas - RUSH

## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Pendimethalin		2	2.04	ug/L	102	(70-130)		
LCS2	Pendimethalin		2	2.12	ug/L	106	(70-130)	20	3.9
MBLK	Pendimethalin			<0.1	ug/L				
MRL_CHK	Pendimethalin		0.1	0.114	ug/L	114	(50-150)		
MS_202202090971	Pendimethalin	ND	2	2.13	ug/L	107	(70-130)		
DUP_202202090920	Permethrin (mixed isomers)	ND		ND	ug/L		(0-20)		
LCS1	Permethrin (mixed isomers)		4	4.06	ug/L	102	(70-130)		
LCS2	Permethrin (mixed isomers)		4	3.96	ug/L	99	(70-130)	20	2.7
MBLK	Permethrin (mixed isomers)			<0.2	ug/L				
MRL_CHK	Permethrin (mixed isomers)		0.2	0.244	ug/L	122	(50-150)		
MS_202202090971	Permethrin (mixed isomers)	ND	4	3.98	ug/L	100	(70-130)		
DUP_202202090920	Perylene-d12 (S)			93.4	%	93	(70-130)		
LCS1	Perylene-d12 (S)		5	94.2	%	94	(70-130)		
LCS2	Perylene-d12 (S)		5	94.2	%	94	(70-130)		
MBLK	Perylene-d12 (S)			75.1	%	75	(70-130)		
MRL_CHK	Perylene-d12 (S)		5	84.2	%	84	(70-130)		
MS_202202090971	Perylene-d12 (S)		5	88.1	%	88	(70-130)		
DUP_202202090920	Phenanthrene	ND		ND	ug/L		(0-20)		
LCS1	Phenanthrene		2	2.03	ug/L	101	(70-130)		
LCS2	Phenanthrene		2	2.05	ug/L	103	(70-130)	20	0.98
MBLK	Phenanthrene			<0.04	ug/L				
MRL_CHK	Phenanthrene		0.02	0.0220	ug/L	110	(50-150)		
MS_202202090971	Phenanthrene	ND	2	2.06	ug/L	103	(70-130)		
DUP_202202090920	Phenanthrene-d10 (I)			93.2	%	93	(50-150)		
LCS1	Phenanthrene-d10 (I)		5	94.6	%	95	(50-150)		
LCS2	Phenanthrene-d10 (I)		5	97.5	%	98	(50-150)		
MBLK	Phenanthrene-d10 (I)			95.7	%	96	(50-150)		
MRL_CHK	Phenanthrene-d10 (I)		5	92.0	%	92	(50-150)		
MS_202202090971	Phenanthrene-d10 (I)		5	96.8	%	97	(50-150)		
DUP_202202090920	Propachlor	ND		ND	ug/L		(0-20)		
LCS1	Propachlor		2	2.37	ug/L	119	(70-130)		
LCS2	Propachlor		2	2.39	ug/L	119	(70-130)	20	0.84
MBLK	Propachlor			<0.05	ug/L				
MRL_CHK	Propachlor		0.05	0.0570	ug/L	114	(50-150)		
MS_202202090971	Propachlor	ND	2	2.44	ug/L	122	(70-130)		
DUP_202202090920	Pyrene	ND		ND	ug/L		(0-20)		
LCS1	Pyrene		2	2.14	ug/L	107	(70-130)		
LCS2	Pyrene		2	2.18	ug/L	109	(70-130)	20	1.4

Spike recovery is already corrected for native results.

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

## State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Pyrene			<0.05	ug/L				
MRL_CHK	Pyrene		0.05	0.0510	ug/L	102	(50-150)		
MS_202202090971	Pyrene	ND	2	2.18	ug/L	109	(70-130)		
DUP_202202090920	Simazine	ND		ND	ug/L		(0-20)		
LCS1	Simazine		2	2.44	ug/L	122	(70-130)		
LCS2	Simazine		2	2.38	ug/L	119	(70-130)	20	2.5
MBLK	Simazine			<0.05	ug/L				
MRL_CHK	Simazine		0.05	0.0720	ug/L	144	(50-150)		
MS_202202090971	Simazine	ND	2	2.44	ug/L	122	(70-130)		
DUP_202202090920	Terbacil	ND		ND	ug/L		(0-20)		
LCS1	Terbacil		2	2.38	ug/L	119	(70-130)		
LCS2	Terbacil		2	2.30	ug/L	115	(70-130)	20	3.4
MBLK	Terbacil			<0.1	ug/L				
MRL_CHK	Terbacil		0.1	0.128	ug/L	128	(50-150)		
MS_202202090971	Terbacil	ND	2	2.47	ug/L	124	(70-130)		
DUP_202202090920	Terbutylazine	ND		ND	ug/L		(0-20)		
LCS1	Terbutylazine		2	2.33	ug/L	116	(70-130)		
LCS2	Terbutylazine		2	2.34	ug/L	117	(70-130)	20	0.43
MBLK	Terbutylazine			<0.1	ug/L				
MRL_CHK	Terbutylazine		0.1	0.101	ug/L	101	(50-150)		
MS_202202090971	Terbutylazine	ND	2	2.38	ug/L	119	(70-130)		
DUP_202202090920	Thiobencarb	ND		ND	ug/L		(0-20)		
LCS1	Thiobencarb		2	2.09	ug/L	104	(70-130)		
LCS2	Thiobencarb		2	2.12	ug/L	106	(70-130)	20	1.4
MBLK	Thiobencarb			<0.2	ug/L				
MRL_CHK	Thiobencarb		0.1	0.102	ug/L	102	(50-150)		
MS_202202090971	Thiobencarb	ND	2	2.22	ug/L	111	(70-130)		
DUP_202202090920	trans-Nonachlor	ND		ND	ug/L		(0-20)		
LCS1	trans-Nonachlor		2	1.85	ug/L	93	(70-130)		
LCS2	trans-Nonachlor		2	1.92	ug/L	96	(70-130)	20	3.7
MBLK	trans-Nonachlor			<0.05	ug/L				
MRL_CHK	trans-Nonachlor		0.05	0.0500	ug/L	100	(50-150)		
MS_202202090971	trans-Nonachlor	ND	2	1.90	ug/L	95	(70-130)		
DUP_202202090920	Trifluralin	ND		ND	ug/L		(0-20)		
LCS1	Trifluralin		2	2.12	ug/L	106	(70-130)		
LCS2	Trifluralin		2	2.12	ug/L	106	(70-130)	20	0.0
MBLK	Trifluralin			<0.1	ug/L				
MRL_CHK	Trifluralin		0.1	0.111	ug/L	111	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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**Report:** 986258  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

State of Hawaii DOH

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202202090971	Trifluralin	ND	2	2.23	ug/L	112	(70-130)		
DUP_202202090920	Triphenylphosphate (S)			99.9	%	100	(70-130)		
LCS1	Triphenylphosphate (S)		5	101	%	101	(70-130)		
LCS2	Triphenylphosphate (S)		5	103	%	103	(70-130)		
MBLK	Triphenylphosphate (S)			99.5	%	99	(70-130)		
MRL_CHK	Triphenylphosphate (S)		5	100	%	100	(70-130)		
MS_202202090971	Triphenylphosphate (S)		5	107	%	107	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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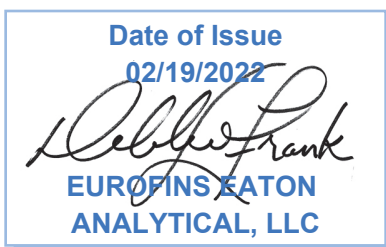
(I) - Indicates internal standard compound.

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## Laboratory Report

for

State of Hawaii DOH  
2385 Waimano Home Road  
Pearl City, HI 96782  
Attention: Melvin Tokuda  
Fax: 808-586-4351



Utah ELCP CA00006

DEB: Debbie L Frank  
Project Manager

Report: 986264  
Project: RED-HILL-INCIDENT  
Group: 525 plus -8260 gas - RUSH

\* Accredited in accordance with TNI 2016 and ISO/IEC 17025:2017.

\* Laboratory certifies that the test results meet all **TNI 2016 and ISO/IEC 17025:2017** requirements unless noted under the individual analysis.

\* As applicable, this report consists of the cover page, State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms.

\* Test results relate only to the sample(s) tested.

\* Test results apply to the sample(s) as received, unless otherwise noted in the comments report (ISO/IEC 17025:2017).

\* This report shall not be reproduced except in full, without the written approval of the laboratory.

\* This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.



## STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	Montana	Cert 0035
Arizona	AZ0778	Nebraska	NE-OS-21-13
Arkansas	CA00006	Nevada	CA00006
California	2813	New Hampshire *	2959
Colorado	CA00006	New Jersey *	CA 008
Connecticut	PH-0107	New Mexico	CA00006
Delaware	CA 006	New York *	11320
Florida *	E871024	North Carolina	06701
Georgia	947	North Dakota	R-009
Guam	21-008R	Ohio - 537.1	87786
Hawaii	CA00006	Oregon *	4034
Idaho	CA00006	Pennsylvania *	68-00565
Illinois	200033	Puerto Rico	CA00006
Indiana	C-CA-01	Rhode Island	LAO00326
Iowa – Asbestos	413	South Carolina	87016
Kansas *	E-10268	South Dakota	CA11320
Kentucky	90107	Tennessee	TN02839
Louisiana *	LA008	Texas *	T104704230-20-18
Maine	CA00006	Utah (Primary AB) *	CA00006
Maryland	224	Vermont	VT0114
Marianas Islands	MP0004	Virginia *	460260
Massachusetts	M-CA006	Washington	C838
Michigan	9906	EPA Region 5	CA00006
Mississippi	CA00006	Los Angeles County Sanitation Districts	10264

\* NELAP/TNI Recognized Accreditation Bodies

# ISO/IEC 17025:2017 Accredited Method List

The test listed below are accredited and met the requirements of ISO/IEC 17025 as verify by A2LA.

Refer to our certificates and scope of accreditations (no. 5890-1 and 5890-2) found at:

<https://www.eurofinsus.com/Eaton>

Test(s)	Method(s)	Potable Water *	Waste Water
Enterococci	Enterolert	x	x
<i>Escherichia coli</i> (Enumeration)	SM 9221 B.1 SM 9221 F	x	
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x
Heterotrophic Bacteria	SM 9215 B	x	
Legionella	Legiolert®	x	
<i>Pseudomonas aeruginosa</i>	Idexx Pseudalert	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x	
Total Microcystins and Nodularins	EPA 546	X	
Yeast and Mold	SM 9610	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x	
1,4-Dioxane	EPA 522	x	
2,3,7,8-TCDD	Modified EPA 1613 B	x	
Acrylamide	* LCMS 2440)	x	
Algal Toxins/Microcystin	* LCMS 3570	x	
Alkalinity	SM 2320B	x	x
Ammonia	EPA 350.1, SM 4500-NH3 H		x
Asbestos	EPA 100.2	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x
BOD/CBOD	SM 5210 B		x
Bromate	* LCMS- 2447	x	
Carbonate as CO3	SM 2330 B	x	x
Carbonyls	EPA 556	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x
Chlorinated Acids	EPA 515.4	x	
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x	
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-CI G	x	
Color	SM2120B	x	
Conductivity	EPA 120.1, SM 2510B	x	x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x	
Cyanide (Amenable)	SM 4500-CN G	x	x
Cyanide (Free)	SM 4500CN F	x	x
Cyanide (Total)	EPA 335.4	x	x
Cyanogen Chloride (Screen)	* 335 Mod (WC-24467)	x	
Diquat and Paraquat	EPA 549.2	x	
DBP and HAA	SM 6251 B	x	
Dissolved Organic Carbon	SM 5310 C	x	
Dissolved Oxygen	SM 4500-O G		x
EDB/DCBP/TCP	EPA 504.1	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x	
EDTA and NTA	* WC-2454	x	
Endothall	EPA 548.1, *(LCMS-2445)	x	
Fluoride	SM 4500F C	x	x
Glyphosate	EPA 547	x	
Glyphosate and AMPA	* LCMS-3618	x	
Gross Alpha and Gross Beta	EPA 900.0	x	x

Test(s)	Method(s)	Potable Water *	Waste Water
Gross Alpha coprecipitation	SM 7110 C	x	x
Hardness	SM 2340 B	x	x
Hexavalent Chromium	EPA 218.6,	x	x
Hexavalent Chromium	EPA 218.7,	x	
Hexavalent Chromium	SM 3500-Cr B		x
Inorganic Anions and DBPs	EPA 300.0	x	x
Norganic Anions and DBPs	EPA 300.1	x	
Kjeldahl Nitrogen	EPA 351.2		x
Metals	EPA 200.7, EPA200.8	x	x
Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Odor	SM2150B	x	
Organohalide Pesticides and PCB	EPA 505	x	
Ortho Phosphate	SM 4500P E	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	
Perchlorate	EPA 331.0	x	
Perchlorate (Low and High Levels)	EPA 314.0	x	
Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
PPCP and EDC	* LCMS-2443	x	
pH	EPA 150.1 SM 4500-H+ B	x	x
Phenolics – Low Level	*WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
Phenylurea Pesticides/Herbicides	* LCMS-2448	x	
Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Radon-222	SM 7500RN	x	
Residue (Filterable)	SM 2540C	x	x
Residue (Non-Filterable)	SM 2540D		x
Residue (Total)	SM 2540B		x
Residue (Volatile)	EPA 160.4		x
Semi-Volatile Compounds	EPA 525.2	x	
Silica	SM 4500-SiO2 C	x	x
Sulfide	SM 4500-S D		x
Sulfite	SM 4500-SO3 B	x	x
Surfactants	SM 5540C	x	x
Taste and Odor	SM 6040 E	x	
Total Organic Carbon	SM 5310 C	x	x
Total Phenols	EPA 420.1		x
Total Phenols	EPA 420.4	x	x
Triazine Pesticides and their Degradates	* LCMS-3617	x	
Turbidity	EPA 180.1	x	x
Uranium by ICP/MS	EPA 200.8	x	
UV 254 Organic Constituents	SM 5910B	x	
VOCs	EPA 524.2	x	
VOCs	*(GCMS 2412) by EPA 524.2 modified	x	

(\*) includes: Bottled Water, Drinking Water and Water as Component of Food & Beverage.

(+) In-House Method

## Acknowledgement of Samples Received

Addr: **State of Hawaii DOH**  
2385 Waimano Home Road  
Pearl City, HI 96782

Attn: Melvin Tokuda  
Phone: 808-586-4280

Client ID: HAWAII-DOH  
Folder #: 986264  
Project: RED-HILL-INCIDENT  
Sample Group: 525 plus -8260 gas - RUSH

Project Manager: Debbie L Frank  
Phone: (626) 386-1149  
PO #: P-CARD

The following samples were received from you on **February 09, 2022** at **1426**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical, LLC.

Sample #	Sample ID	Sample Date
<u>202202090860</u>	020721-35-01	02/07/2022 1050
	Sub Matrix Code: DW Static ID: TREATED-525+MethylNaphthalene TICs 8260 TPH gas	
	TPH as Gas-8260B_CSI	
<u>202202090861</u>	RUSH	02/07/2022 0000
	RUSH	

## Test Description

800 566 LABS (800 566 5227)

## EUROFINS EATON ANALYTICAL USE ONLY:

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

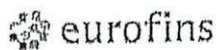
SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

**SAMPLER COMMENTS**

O = Other - Please Identify

PAGE OF





Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

6874

SAMPLE TEMP RECEIVED:

Note: If samples are out of temperature range, let the ASM's know. ASM's will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 618A (Observation = 5.0 °C) (Corr. Factor = 0.1 °C) (Final = 4.9 °C)

TYPE OF ICE: Real ☒ Synthetic ☐ No Ice ☐ CONDITION OF ICE: Frozen ☐ Partially Frozen ☒ Thawed ☐ N/A ☐

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

Compliance Acceptance Criteria:

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

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

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

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

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

6) Chlorine check. Manufacturer: Sansafe. Lot No.: \_\_\_\_\_ Expiration Date: \_\_\_\_\_ Results: \_\_\_\_\_

7) VOA and Radon Headspace:

No Samples with Headspace: ☐

Samples with Headspace (see below): ☐

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

Exempt from headspace concerns: Methods 515.4, HAA(5251,552), 505, SPME, @CH, 532LCMS, 555, 535, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

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

SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
	Gustavo Sanchez	Eurofins Eaton Analytical	2-9-22	1426
SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
		Eurofins Eaton Analytical		

SAMPLES CHECKED AGAINST COC BY: \_\_\_\_\_

Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

**Laboratory Comments**

**Report:** 986264  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

State of Hawaii DOH  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

---

**Folder Comments**

Results for 8260 TPH Gas are submitted by Eurofins Seattle

EEA enters Subcontractor data into EEA system for archive tracking purposes. Please review Subcontract lab report for QC data and Qualifiers that are applicable to the reported data. Significant figures may vary due to system limitations. Please review Subcontractor's report in full.

Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

**Laboratory Hits**

**Report:** 986264  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

**State of Hawaii DOH**  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

Samples Received on:  
02/09/2022 1426

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
----------	---------	-----------	--------	-------------	-------	-----

Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

Laboratory Data

**Report:** 986264  
**Project:** RED-HILL-INCIDENT  
**Group:** 525 plus -8260 gas - RUSH

**State of Hawaii DOH**  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

Samples Received on:  
02/09/2022 1426

Prepared	Analyzed	Prep Batch	Analyzed Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
<b>020721-35-01 (202202090860)</b>						<b>Sampled on 02/07/2022 1050</b>				
Static ID: TREATED-525+MethylNaphthalene										
TICs 8260 TPH gas										
<b>8260B/CA_LUFTMS - TPH as Gas 8260B/CALUFTMS</b>										
02/14/22 15:23				(8260B/CA_LUFTMS	TPH as Gas	ND	ug/L	31	100	1

Rounding on totals after summation.

ND - Analyte was not detected at the calculated MDL.

J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.



## ANALYTICAL REPORT

Eurofins Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

Laboratory Job ID: 580-110247-5  
Client Project/Site: 986264 / 1000014

For:  
Eurofins Eaton Analytical  
750 Royal Oaks Drive  
Suite 100  
Monrovia, California 91016

Attn: Subcontract Eurofins Eaton Analytical

*M. Elaine Walker*

Authorized for release by:  
2/15/2022 6:25:07 PM

Elaine Walker, Project Manager II  
(253)248-4972  
[m.elaine.walker@eurofinset.com](mailto:m.elaine.walker@eurofinset.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

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

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# Case Narrative

Client: Eurofins Eaton Analytical  
Project/Site: 986264 / 1000014

Job ID: 580-110247-5

**Job ID: 580-110247-5**

**Laboratory: Eurofins Seattle**

## Narrative

### Job Narrative 580-110247-5

#### Receipt

The samples were received on 2/11/2022 10:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.9° C.

#### GC/MS VOA

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

## Definitions/Glossary

Client: Eurofins Eaton Analytical  
Project/Site: 986264 / 1000014

Job ID: 580-110247-5

### 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: Eurofins Eaton Analytical  
Project/Site: 986264 / 1000014

Job ID: 580-110247-5

**Client Sample ID: 202202090860**

**Lab Sample ID: 580-110247-5**

**Date Collected: 02/07/22 10:50**

**Matrix: Water**

**Date Received: 02/11/22 10:30**

## Method: 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		100	31	ug/L			02/14/22 15:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		78 - 120					02/14/22 15:23	1

# QC Sample Results

Client: Eurofins Eaton Analytical  
Project/Site: 986264 / 1000014

Job ID: 580-110247-5

## Method: 8260B/CA\_LUFTMS - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-381134/4

Matrix: Water

Analysis Batch: 381134

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		100	31	ug/L			02/14/22 12:37	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		78 - 120					02/14/22 12:37	1

Lab Sample ID: LCS 580-381134/5

Matrix: Water

Analysis Batch: 381134

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)	1000	936		ug/L		94	75 - 127
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	92		78 - 120				

Lab Sample ID: LCSD 580-381134/6

Matrix: Water

Analysis Batch: 381134

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)	1000	943		ug/L		94	75 - 127	1	13
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	91		78 - 120						

# Lab Chronicle

Client: Eurofins Eaton Analytical  
Project/Site: 986264 / 1000014

Job ID: 580-110247-5

**Client Sample ID: 202202090860**

**Lab Sample ID: 580-110247-5**

**Date Collected: 02/07/22 10:50**

**Matrix: Water**

**Date Received: 02/11/22 10:30**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	381134	02/14/22 15:23	B1M	FGS SEA

**Laboratory References:**

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

## Accreditation/Certification Summary

Client: Eurofins Eaton Analytical  
Project/Site: 986264 / 1000014

Job ID: 580-110247-5

### Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-004	02-19-25
ANAB	Dept. of Defense ELAP	L2236	01-19-25
ANAB	Dept. of Energy	L2236	01-19-25
ANAB	ISO/IEC 17025	L2236	01-19-25
California	State	2954	07-07-22
Florida	NELAP	E87575	06-30-22
Louisiana	NELAP	03073	06-30-22
Maine	State	2020012	05-02-22
Montana (UST)	State	NA	04-14-27
New Jersey	NELAP	WA014	06-30-22
New York	NELAP	11662	04-01-22
Oregon	NELAP	4167	07-07-22
US Fish & Wildlife	US Federal Programs	058448	05-31-22
USDA	US Federal Programs	P330-20-00031	02-10-23
Washington	State	C788	07-13-22
Wisconsin	State	399133460	08-31-22



Sample Summary

Client: Eurofins Eaton Analytical  
Project/Site: 986264 / 1000014

Job ID: 580-110247-5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-110247-5	202202090860	Water	02/07/22 10:50	02/11/22 10:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Date: 2/10/2022

Submittal Form



Eaton Analytical

**Ship To:**  
Eurofins Frontier Global Sciences, LLC  
5755 8th St E  
TACOMA, WA 98424

Phone: 253-922-2310 Fax:

**Folder #:**  
986264

**Report Due:**  
02/14/2022

\*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers! Report & Invoice must have the Folder # 986264 Job # 1000014

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report. Results must have Complete data & QC with Approval Signature

Reports: Jackie Contreras Sub-Contracting Administrator  
EMAIL TO: Eaton-MonroviaSubContract@eurofinset.com  
Eurofins Eaton Analytical, LLC 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016  
Phone (626) 386-1165 Fax (626) 386-1122  
Invoices to: Eurofins Eaton Analytical, LLC  
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # and Exp Date for requested tests + matrix  
Samples from: HAWAII

RED HIII - 2-3 day rush

Sample ID 202202090860	Client Sample ID for reference on/ 020721-35-01	Sample Date & Time 02/07/22 1050 DW	Clip Code	PWSID	JLS
Sample type:	Sample Event:	Facility ID:	Sample Point ID:	Static ID:	

Method  
8260B/CA\_LUFTMS

Prep Method  
TPH as Gas 8260B/CALUFTMS

Analysis Requested

Relinquished by:	Sample Control	Date	02-10-22	Time	10:32
Received by:		Date	2/1/22	Time	10:30
Relinquished by:	Sample Control	Date		Time	
Received by:		Date		Time	

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS  
An Acknowledgement of Receipt is requested to attn Jackie Contreras

Fid PD  
LG BW/wet Bulk  
TR 8 3.9/3.7

## Login Sample Receipt Checklist

Client: Eurofins Eaton Analytical

Job Number: 580-110247-5

Login Number: 110247

List Number: 1

Creator: Vallelunga, Diana L

List Source: Eurofins Seattle

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.	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	
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	

750 Royal Oak Drive, Suite 100  
Monrovia, California 91016-3629  
Tel: (626) 386-1100  
Fax: (626) 988-3757  
1 800 566 LABS or 1 800 566 5227

## Laboratory Report

for

State of Hawaii DOH  
2385 Waimano Home Road  
Pearl City, HI 96782  
Attention: Melvin Tokuda  
Fax: 808-586-4351

Date of Issue  
02/15/2022

*Rachelle Arada*  
EUROFINS EATON  
ANALYTICAL, LLC



Utah ELCP CA00006

DEB: Debbie L Frank  
Project Manager

Re(ort): 986278  
Project: RED-HILL-INCIDENT  
Urou( : Rp SH TPH 8015 - sExtractable  
URO-DRO-ORO-ReQ onG Sam( ling)

\* Accredited in accordance with TNI 2016 and ISO/IEC 17025:2017.

\* Laboratory certifies that the test results meet all **TNI 2016 and ISO/IEC 17025:2017** requirements noted under the individual analysis.

\* A (licable, this report contains the cover ( age, State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Sample Received, Comment/ Hit Report, Data Report, QC Summary, QC Report and Regulatory Form.

\* Test results relate only to the sample tested.

\* Test results ( ly to the sample received, unless otherwise noted in the comment report (ISO/IEC 17025:2017).

\* This report shall not be reduced except in full, without the written approval of the laboratory.

\* This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.

## STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	Montana	Cert 0035
Arizona	AZ0778	Nebraska	NE-OS-21-13
Arkansas	CA00006	Nevada	CA00006
California	2813	New Hampshire *	2959
Colorado	CA00006	New Jersey *	CA 008
Connecticut	PH-0107	New Mexico	CA00006
Delaware	CA 006	New York *	11320
Florida *	E871024	North Carolina	06701
Georgia	947	North Dakota	R-009
Guam	21-008R	Ohio - 537.1	87786
Hawaii	CA00006	Oregon *	4034
Idaho	CA00006	Pennsylvania *	68-00565
Illinois	200033	Puerto Rico	CA00006
Indiana	C-CA-01	Rhode Island	LAO00326
Iowa – Asbestos	413	South Carolina	87016
Kansas *	E-10268	South Dakota	CA11320
Kentucky	90107	Tennessee	TN02839
Louisiana *	LA008	Texas *	T104704230-20-18
Maine	CA00006	Utah (Primary AB) *	CA00006
Maryland	224	Vermont	VT0114
Marianas Islands	MP0004	Virginia *	460260
Massachusetts	M-CA006	Washington	C838
Michigan	9906	EPA Region 5	CA00006
Mississippi	CA00006	Los Angeles County Sanitation Districts	10264

\* NELAP/TNI Recognized Accreditation Bodies

# ISO/IEC 17025:2017 Accredited Method List

The test listed below are accredited and met the requirements of ISO/IEC 17025 as verify by A2LA.

Refer to our certificates and scope of accreditations (no. 5890-1 and 5890-2) found at:

<https://www.eurofinsus.com/Eaton>

Test(s)	Method(s)	Potable Water *	Waste Water
Enterococci	Enterolert	x	x
<i>Escherichia coli</i> (Enumeration)	SM 9221 B.1 SM 9221 F	x	
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x
Heterotrophic Bacteria	SM 9215 B	x	
Legionella	Legiolert®	x	
<i>Pseudomonas aeruginosa</i>	Idexx Pseudalert	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x	
Total Microcystins and Nodularins	EPA 546	X	
Yeast and Mold	SM 9610	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x	
1,4-Dioxane	EPA 522	x	
2,3,7,8-TCDD	Modified EPA 1613 B	x	
Acrylamide	* LCMS 2440)	x	
Algal Toxins/Microcystin	* LCMS 3570	x	
Alkalinity	SM 2320B	x	x
Ammonia	EPA 350.1, SM 4500-NH3 H		x
Asbestos	EPA 100.2	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x
BOD/CBOD	SM 5210 B		x
Bromate	* LCMS- 2447	x	
Carbonate as CO3	SM 2330 B	x	x
Carbonyls	EPA 556	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x
Chlorinated Acids	EPA 515.4	x	
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x	
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-CI G	x	
Color	SM2120B	x	
Conductivity	EPA 120.1, SM 2510B	x	x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x	
Cyanide (Amenable)	SM 4500-CN G	x	x
Cyanide (Free)	SM 4500CN F	x	x
Cyanide (Total)	EPA 335.4	x	x
Cyanogen Chloride (Screen)	* 335 Mod (WC-24467)	x	
Diquat and Paraquat	EPA 549.2	x	
DBP and HAA	SM 6251 B	x	
Dissolved Organic Carbon	SM 5310 C	x	
Dissolved Oxygen	SM 4500-O G		x
EDB/DCBP/TCP	EPA 504.1	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x	
EDTA and NTA	* WC-2454	x	
Endothall	EPA 548.1, *(LCMS-2445)	x	
Fluoride	SM 4500F C	x	x
Glyphosate	EPA 547	x	
Glyphosate and AMPA	* LCMS-3618	x	
Gross Alpha and Gross Beta	EPA 900.0	x	x

Test(s)	Method(s)	Potable Water *	Waste Water
Gross Alpha coprecipitation	SM 7110 C	x	x
Hardness	SM 2340 B	x	x
Hexavalent Chromium	EPA 218.6,	x	x
Hexavalent Chromium	EPA 218.7,	x	
Hexavalent Chromium	SM 3500-Cr B		x
Inorganic Anions and DBPs	EPA 300.0	x	x
Norganic Anions and DBPs	EPA 300.1	x	
Kjeldahl Nitrogen	EPA 351.2		x
Metals	EPA 200.7, EPA200.8	x	x
Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Odor	SM2150B	x	
Organohalide Pesticides and PCB	EPA 505	x	
Ortho Phosphate	SM 4500P E	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	
Perchlorate	EPA 331.0	x	
Perchlorate (Low and High Levels)	EPA 314.0	x	
Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
PPCP and EDC	* LCMS-2443	x	
pH	EPA 150.1 SM 4500-H+ B	x	x
Phenolics – Low Level	*WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
Phenylurea Pesticides/Herbicides	* LCMS-2448	x	
Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Radon-222	SM 7500RN	x	
Residue (Filterable)	SM 2540C	x	x
Residue (Non-Filterable)	SM 2540D		x
Residue (Total)	SM 2540B		x
Residue (Volatile)	EPA 160.4		x
Semi-Volatile Compounds	EPA 525.2	x	
Silica	SM 4500-SiO2 C	x	x
Sulfide	SM 4500-S D		x
Sulfite	SM 4500-SO3 B	x	x
Surfactants	SM 5540C	x	x
Taste and Odor	SM 6040 E	x	
Total Organic Carbon	SM 5310 C	x	x
Total Phenols	EPA 420.1		x
Total Phenols	EPA 420.4	x	x
Triazine Pesticides and their Degradates	* LCMS-3617	x	
Turbidity	EPA 180.1	x	x
Uranium by ICP/MS	EPA 200.8	x	
UV 254 Organic Constituents	SM 5910B	x	
VOCs	EPA 524.2	x	
VOCs	*(GCMS 2412) by EPA 524.2 modified	x	

(\*) includes: Bottled Water, Drinking Water and Water as Component of Food & Beverage.

(+) In-House Method

## Acknowledgement of Samples Received

Addr: **State of Hawaii DOH**  
2385 Waimano Home Road  
Pearl City, HI 96782

Attn: Melvin Tokuda  
Phone: 808-586-4280

Client ID: HAWAII-DOH  
Folder #: 986278  
Project: RED-HILL-INCIDENT  
Sample Group: RUSH TPH 8015 - (Extractable  
GRO-DRO-ORO-Response Sampling)  
Project Manager: Debbie L Frank  
Phone: (626) 386-1149  
PO #: P-CARD

The following samples were received from you on **February 09, 2022** at **1020**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical, LLC.

Sample #	Sample ID	Sample Date
202202090886	020721-35-01	02/07/2022 1050
	@8015_C_C9-C40_ASSETS	
202202090887	RUSH	02/07/2022 1050
	RUSH	

### Test Description

@8015\_C\_C9-C40\_ASSETS -- 8015 C9-C40





Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

**Laboratory Comments**

**Report:** 986278  
**Project:** RED-HILL-INCIDENT  
**Group:** RUSH TPH 8015 - (Extractable  
GRO-DRO-ORO-Response  
Sampling)

State of Hawaii DOH  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

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**Folder Comments**

Results for TPH Carbon Chain 8015 are submitted by ASSET Laboratories

EEA enters Subcontractor data into EEA system for archive tracking purposes. Please review Subcontract lab report for QC data and Qualifiers that are applicable to the reported data. Significant figures may vary due to system limitations. Please review Subcontractor's report in full.

Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

**Laboratory Hits**

**Report:** 986278  
**Project:** RED-HILL-INCIDENT  
**Group:** RUSH TPH 8015 - (Extractable  
GRO-DRO-ORO-Response  
Sampling)

**State of Hawaii DOH**  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

Samples Received on:  
02/09/2022 1020

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
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Tel: (626) 386-1100  
Fax: (626) 988-3757  
1 800 566 LABS (1 800 566 5227)

## Laboratory Data

**Report:** 986278  
**Project:** RED-HILL-INCIDENT  
**Group:** RUSH TPH 8015 - (Extractable  
GRO-DRO-ORO-Response Sampling)

**State of Hawaii DOH**  
Melvin Tokuda  
2385 Waimano Home Road  
Pearl City, HI 96782

Samples Received on:  
02/09/2022 1020

Prepared	Analyzed	Prep Batch	Analyzed Batch	Method	Analyte	Result	Units	MDL	MRL	Dilution
<b>020721-35-01 (202202090886)</b>						<b>Sampled on 02/07/2022 1050</b>				
<b>EPA 8015 - 8015 C9-C40</b>										
02/12/22 14:29				(EPA 8015)	C11-C12	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C13-C14	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C15-C16	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C17-C18	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C19-C20	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C21-C22	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C23-C24	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C25-C26	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C27-C28	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C29-C32	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C33-C36	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C37-C40	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C9-C10	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	C9-C40	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	Diesel Range Organic C9-C25	ND	ug/L	33	50	1
02/12/22 14:29				(EPA 8015)	Oil Range Organic C24-C40	ND	ug/L	33	50	1

Rounding on totals after summation.

ND - Analyte was not detected at the calculated MDL.

J - The analyte was either detected at or greater than the MDL and less than the MRL, or did not meet any one of the required QC criteria.

(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

February 14, 2022

Debbie Frank  
Eurofins  
750 Royal Oaks Drive Suite 100  
Monrovia, CA 91016-3629  
TEL: (626) 386-1158  
FAX:

Workorder No.: N049376

RE: HAWAII-DOH

Attention: Debbie Frank

Enclosed are the results for sample(s) received on February 09, 2022 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

A handwritten signature in black ink, appearing to read "Nancy Sibucan", with a small "for" written above it.

Nancy Sibucan  
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.



**ASSET LABORATORIES**  
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CALIFORNIA | P: 562.219.7435 F: 562.219.7436  
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EPA ID CA01638

NEVADA | P: 702.307.2659 F: 702.307.2691  
3151 W. Post Rd., Las Vegas, NV 89118  
ELAP Cert 2676 | NV Cert NV00922  
ORELAP/NELAP Cert 4046

**CLIENT:** Eurofins  
**Project:** HAWAII-DOH  
**Lab Order:** N049376

**CASE NARRATIVE****SAMPLE RECEIVING/GENERAL COMMENTS:**

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Results were J-Flag. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" Flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.

## ASSET Laboratories

Date: 14-Feb-22

CLIENT: Eurofins  
Project: HAWAII-DOH  
Lab Order: N049376  
Contract No:

### Work Order Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N049376-001A	986278_202202090886_0207 21-35-01	Water	2/7/2022 10:50:00 AM	2/9/2022	2/14/2022



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ELAP Cert 2676 | NV Cert NV00922  
ORELAP/NELAP Cert 4046

## ASSET Laboratories

## ANALYTICAL RESULTS

Print Date: 14-Feb-22

<b>CLIENT:</b>	Eurofins	<b>Client Sample ID:</b>	986278_202202090886_020721-35-01
<b>Lab Order:</b>	N049376	<b>Collection Date:</b>	2/7/2022 10:50:00 AM
<b>Project:</b>	HAWAII-DOH	<b>Matrix:</b>	WATER
<b>Lab ID:</b>	N049376-001		

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed
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## TPH CARBON CHAIN EPA 8015

## EPA 3510C

## EPA 8015B(M)

RunID: NV00922-GC1_220211B	QC Batch: 91423	PrepDate: 2/9/2022	Analyst: MCC
C9-C10	ND 33	50	ug/L 1 2/12/2022 02:29 PM
DRO C9-C25	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C11-C12	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C13-C14	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C15-C16	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C17-C18	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C19-C20	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C21-C22	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C23-C24	ND 33	50	ug/L 1 2/12/2022 02:29 PM
ORO C24-C40	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C25-C26	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C27-C28	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C29-C32	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C33-C36	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C37-C40	ND 33	50	ug/L 1 2/12/2022 02:29 PM
C9-C40	ND 33	50	ug/L 1 2/12/2022 02:29 PM
Surr: p-Terphenyl	46.2 0	33-138	%REC 1 2/12/2022 02:29 PM

**Qualifiers:**

B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
	Results are wet unless otherwise specified

E	Value above quantitation range
J	Analyte detected below quantitation limits
S	Spike/Surrogate outside of limits due to matrix interference
DO	Surrogate Diluted Out



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ORELAP/NELAP Cert 4046

**"Serving Clients with Passion and Professionalism"**

CLIENT: Eurofins  
 Work Order: N049376  
 Project: HAWAII-DOH

## ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DM\_W\_CC

Sample ID: <b>MB-91423</b>	SampType: <b>MBLK</b>	TestCode: <b>8015DM_W_C</b>		Units: <b>ug/L</b>	Prep Date: <b>2/9/2022</b>				RunNo: <b>160177</b>		
Client ID: <b>PBW</b>	Batch ID: <b>91423</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>			Analysis Date: <b>2/12/2022</b>				SeqNo: <b>4532028</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
C9-C10	ND	50									
DRO C9-C25	ND	50									
C11-C12	ND	50									
C13-C14	ND	50									
C15-C16	ND	50									
C17-C18	ND	50									
C19-C20	ND	50									
C21-C22	ND	50									
C23-C24	ND	50									
ORO C24-C40	ND	50									
C25-C26	ND	50									
C27-C28	ND	50									
C29-C32	ND	50									
C33-C36	ND	50									
C37-C40	ND	50									
C9-C40	ND	50									
Surr: p-Terphenyl	54.852		80.00		68.6	33	138				

Sample ID: <b>LCS-91423</b>	SampType: <b>LCS</b>	TestCode: <b>8015DM_W_C</b> Units: <b>ug/L</b>				Prep Date: <b>2/9/2022</b>			RunNo: <b>160177</b>		
Client ID: <b>LCSW</b>	Batch ID: <b>91423</b>	TestNo: <b>EPA 8015B(M EPA 3510C</b>				Analysis Date: <b>2/12/2022</b>			SeqNo: <b>4532029</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C28)	604.809	50	1000	0	60.5	48	120				
Surr: p-Terphenyl	50.618		80.00		63.3	33	138				

## Qualifiers:

- |   |  |    |                                     |   |  |
|---|--|----|-------------------------------------|---|--|
| B | Analyte detected in the associated Method Blank              | E  | Value above quantitation range      | H | Holding times for preparation or analysis exceeded |
| J | Analyte detected below quantitation limits                   | ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits               |
| S | Spike/Surrogate outside of limits due to matrix interference | DO | Surrogate Diluted Out               |   | Calculations are based on raw values               |



CLIENT: Eurofins  
Work Order: N049376  
Project: HAWAII-DOH

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015DM\_W\_CC

Sample ID: LCSD-91423	SampType: LCSD	TestCode: 8015DM_W_C	Units: ug/L	Prep Date: 2/9/2022	RunNo: 160177						
Client ID: LCSS02	Batch ID: 91423	TestNo: EPA 8015B(M EPA 3510C	Analysis Date: 2/12/2022	SeqNo: 4532030							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (C10-C28)	596.409	50	1000	0	59.6	48	120	604.8	1.40	20	
Surr: p-Terphenyl	60.632		80.00		75.8	33	138		0	0	

Qualifiers:

- B

Analyte detected in the associated Method Blank
- E

Value above quantitation range
- H

Holding times for preparation or analysis exceeded
- J

Analyte detected below quantitation limits
- ND

Not Detected at the Reporting Limit
- R

RPD outside accepted recovery limits
- S

Spike/Surrogate outside of limits due to matrix interference
- DO

Surrogate Diluted Out
- Calculations are based on raw values



## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 2/9/2022

Workorder: N049376

Rep sample Temp (Deg C): 4.9

IR Gun ID: 3

Temp Blank: ☐ Yes ☒ No

Carrier name: FedEx

Last 4 digits of Tracking No.: 1214

Packing Material Used: Bubble Wrap

Cooling process: ☒ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

### Sample Receipt Checklist

- |   |   |                             |   |
|---|---|-----------------------------|---|
| 1. Shipping container/cooler in good condition?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | Not Present <input type="checkbox"/>            |
| 2. Custody seals intact, signed, dated on shipping container/cooler?                    | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 3. Custody seals intact on sample bottles?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | Not Present <input checked="" type="checkbox"/> |
| 4. Chain of custody present?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 5. Sampler's name present in COC?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 6. Chain of custody signed when relinquished and received?                              | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 7. Chain of custody agrees with sample labels?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 8. Samples in proper container/bottle?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 9. Sample containers intact?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 10. Sufficient sample volume for indicated test?  | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 11. All samples received within holding time?   | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |   |
| 12. Temperature of rep sample or Temp Blank within acceptable limit?                    | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/>                     |
| 13. Water - VOA vials have zero headspace?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
| 15. Did the bottle labels indicate correct preservatives used?                          | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
| 16. Were there Non-Conformance issues at login?   | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |
| Was Client notified?  | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |

Comments:

For:

Checklist Completed By: GGJ YRJ 2/9/2022

Reviewed By: ABC 2/10/2022

WORK ORDER Summary

10-Feb-22  
WorkOrder: N049376  
Date Received: 2/9/2022

Client ID: EUROF01  
Project: HAWAII-DOH  
Comments: J-Flag Results  
QC Level: RTNE

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N049376-001A	986278_202202090886_0207 21 25 01	2/7/2022 10:50:00 AM	2/11/2022	Water	EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			2/11/2022		EPA 8015B(M)	TPH Carbon Chain EPA 8015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N049376-002A	FOLDER	2/11/2022	2/11/2022		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB
			2/11/2022		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

ORIGIN ID:NAXA (808) 586-4258  
SEILA ARONI  
DEPARTMENT OF HEALTH/SDWB  
2385 WAIMANO HOME RD.  
ULUAKUPU BLDG. 4  
PEARL CITY, HI 96782  
UNITED STATES US

SHIP DATE: 08FEB22  
ACTWGT: 65.00 LB  
CAD: 101971153/INET4460

BILL SENDER

TO **MARLON CARTIN**  
**ASSET LABORATORIES**  
**3151 W POST RD**

**LAS VEGAS NV 89118**

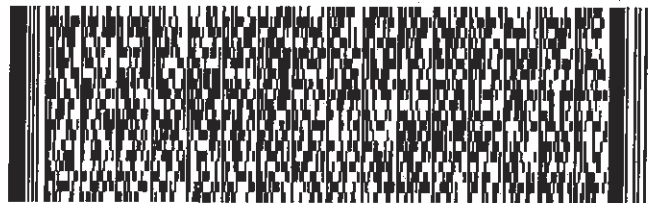
(702) 307-2659

REF:

INV:  
PC:

DEPT.

56D12027C/FE4A



422012281081uv

1 of 2

WED - 09 FEB 10:30A

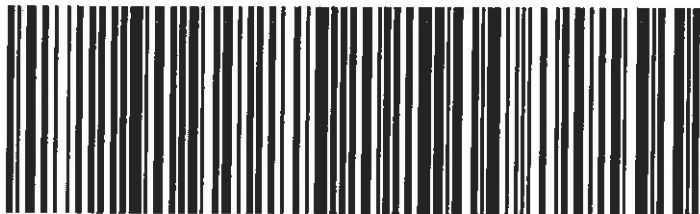
PRIORITY OVERNIGHT

TRK# 7759 8833 1214  
0201

## MASTER ##

**WR LASA**

89118  
NV-US LAS



4.9°C 1R#3

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

**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number. Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on [fedex.com](http://fedex.com). FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

## ***APPENDIX 2***

### ***The Regulated Public Water System's Water Quality is Compliant***

February 17, 2022

From: Naval Facilities Engineering Systems Command Representative, IDWS Team  
To: Interagency Drinking Water System Team

SUBJ: SUMMARY OF LINE OF EVIDENCE OBJECTIVE 1B – THE REGULATED PUBLIC WATER SYSTEM’S WATER QUALITY IS COMPLIANT

Encl: (1) 1b.1 Source Water and Entry Point of Distribution Sample

1. Enclosure (1) documents completion of Line of Evidence 1b, the regulated public water system’s water quality is compliant. On the evening of November 28, 2021, the Red Hill Shaft was secured from operation and all pumping operations ceased. The Aiea/Halawa shaft briefly served as the secondary source starting on November 28, 2021, but it was shut down on December 3, 2021 to prevent potential westward contaminant migration in the aquifer and because there were concerns over high chloride concentrations caused by saltwater intrusion. Since December 3, 2021, the Waiawa Shaft has been the sole water source providing potable water to the distribution network. It is located 5.5 miles west of the Red Hill Fuel Facility, and testing has not detected any water quality issues at this source.
2. On January 11, 2022, water from the Waiawa shaft was sampled at the entry point to the distribution system (EPD). The results of the analysis are presented in Enclosure (1), Field Sample ID 20111-WS-ZT01. On January 13, 2022, additional samples were taken at the Waiawa shaft source. The results of these samples are also presented in Enclosure (1), Field Sample IDs 220113-WS-ZT01 and 220113-WS-ZT03. This data shows that the water from the Waiawa shaft does not exceed State of Hawaii and Federal Drinking Water standards, Maximum Contaminate Levels, Environmental Action Levels and Incident Specific Parameters, and the regulated public water system’s water quality is complaint.
3. I certify under penalty of law that I have personally examined and I am familiar with the information submitted and I believe the submitted information is true, accurate, and complete.

RODRIGUEZ.ALBERTO  
.MAURICIO.13963161  
68  
A. M. Rodriguez  
LT, CEC, USN

Digitally signed by  
RODRIGUEZ.ALBERTO.MAURICIO.  
1396316168  
Date: 2022.02.19 17:19:01 -10'00'

Section 1b.1 Source Water and Entry Point of Distribution Sample

1b.1 Source Water and Entry Point of Distribution Sample

Well Shaft Sampling

Chemistry Results

Drinking Water Sampling, JBPHH, Oahu Hawaii

Section 1b.1 Source Water and Entry Point of Distribution Sample

Location ID:			I1-SHFTWAIA	I1-SHFTWAIA	I1-SHFTWAIA
Location Type:			Well	Well	Well
Residence:			Waiawa Shaft	Waiawa Shaft	Waiawa Shaft
Field Sample ID:			220111-WS-ZT01	220113-WS-ZT01	220113-WS-ZT03
Sample Date:			2022-01-11	2022-01-13	2022-01-13
Sample Type:			N (PostChlorination Sample)	N (PreChlorination Sample)	N (PreChlorination Sample)
			Environmental Action Levels Table D-1A Groundwater Action Levels	DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents	Environmental Protection Agency Maximum Contaminant Levels
GENCHEM (mg/L)	Incident Specific Parameters			SDG: 2A12046	SDG: 810121191
Total Organic Carbon	2	None	None	None	0.190 U -- 0.250 U
			Environmental Action Levels Table D-1A Groundwater Action Levels	DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents	Environmental Protection Agency Maximum Contaminant Levels
HC (µg/L)	Incident Specific Parameters			SDG: 5801092421	SDG: 5801092721 SDG: 5801092711
Petroleum Hydrocarbons (as Diesel)	200	400	None	None	90.0 U 91.0 U 92.0 U
Petroleum Hydrocarbons (as Gasoline)	200	300	None	None	31.0 U 31.0 U 31.0 U
Petroleum Hydrocarbons (as Motor Oil)	200	500	None	None	180 U 180 U 180 U
			Environmental Action Levels Table D-1A Groundwater Action Levels	DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents	Environmental Protection Agency Maximum Contaminant Levels
HERB (µg/L)	Incident Specific Parameters				SDG: 980559
Pentachlorophenol	None	None	None	None	-- -- 0.0200 U
			Environmental Action Levels Table D-1A Groundwater Action Levels	DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents	Environmental Protection Agency Maximum Contaminant Levels
HG (µg/L)	Incident Specific Parameters			SDG: 2A12046	
Mercury	0.025	0.025	2	2	0.0170 U -- --
			Environmental Action Levels Table D-1A Groundwater Action Levels	DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents	Environmental Protection Agency Maximum Contaminant Levels
METAL (µg/L)	Incident Specific Parameters			SDG: 2A12046	SDG: 980559
Antimony	6	6	6	6	0.0915 J -- 0.110 U
Arsenic	10	10	10	10	0.207 J -- 0.210 U
Barium	220	220	2000	2000	1.72 -- 1.80 J
Beryllium	0.66	0.66	4	4	0.0624 U -- 0.0910 U
Cadmium	3	3	5	5	0.0416 U -- 0.0290 U
Chromium	11	11	100	100	1.46 -- 1.50
Copper	2.9	2.9	1300	1300	21.2 -- 46.0
Lead	15	5.6	15	15	0.265 -- 0.0630 J
Selenium	5	5	50	50	0.704 -- 0.350 J
Thallium	2	2	2	2	0.0210 U -- 0.0410 U
			Environmental Action Levels Table D-1A Groundwater Action Levels	DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents	Environmental Protection Agency Maximum Contaminant Levels
SVOC (µg/L)	Incident Specific Parameters			SDG: 2A12046	SDG: 5801092721 SDG: 810121191



**1b.1 Source Water and Entry Point of Distribution Sample**

**Well Shaft Sampling**

**Chemistry Results**

Drinking Water Sampling, JBPHH, Oahu Hawaii

	EPD				Shaft	Shaft
1,2,4-Trichlorobenzene	70	70	70	70	--	0.0930 U
1,2-Dichlorobenzene	10	10	600	600	--	0.0520 U
1,3-Dichlorobenzene	None	None	None	None	--	0.0410 U
1,4-Dichlorobenzene	5	5	75	None	--	0.0410 U
1-Methylnaphthalene	2.1	10	None	None	0.00801 U	0.0190 U
2,4,5-Trichlorophenol	None	None	None	None	--	0.100 U
2,4,6-Trichlorophenol	None	None	None	None	--	0.100 U
2,4-Dichlorophenol	None	None	None	None	--	0.210 U
2,4-Dimethylphenol	None	None	None	None	--	0.170 U
2,4-Dinitrophenol	None	None	None	None	--	1.70 U
2,4-Dinitrotoluene	None	None	None	None	--	0.100 U
2,6-Dinitrotoluene	None	None	None	None	--	0.100 U
2-Chloronaphthalene	None	None	None	None	--	0.0720 U
2-Chlorophenol	None	None	None	None	--	0.0520 U
2-Ethylhexyl adipate	None	None	None	None	0.00962 U	--
2-Methylnaphthalene	4.7	10	None	None	0.00904 U	0.0190 U
2-Methylphenol (o-Cresol)	None	None	None	None	--	0.0520 U
2-Nitroaniline	None	None	None	None	--	0.100 U
3,3'-Dichlorobenzidine	None	None	None	None	--	0.270 U
3-Nitroaniline	None	None	None	None	--	0.170 U
4,6-Dinitro-2-methylphenol	None	None	None	None	--	0.570 U
4-Bromophenyl phenyl ether	None	None	None	None	--	0.0620 U
4-Chloro-3-methylphenol	None	None	None	None	--	0.130 U
4-Chloroaniline	None	None	None	None	--	0.610 U
4-Chlorophenyl phenyl ether	None	None	None	None	--	0.0520 U
4-Nitroaniline	None	None	None	None	--	0.220 U
4-Nitrophenol	None	None	None	None	--	1.80 U
Acenaphthene	None	None	None	None	--	0.0520 U
Acenaphthylene	None	None	None	None	--	0.0620 U
Alachlor	None	None	None	None	0.0110 U	0.0480 U
Anthracene	None	None	None	None	--	0.0520 U
Atrazine	None	None	None	None	0.00734 U	0.0290 U
Benzo(a)anthracene	None	None	None	None	--	0.0520 U
Benzo(a)pyrene	0.06	0.06	0.2	0.2	0.0117 UJ	0.00960 U
Benzo(b)fluoranthene	None	None	None	None	--	0.0410 U
Benzo(g,h,i)perylene	None	None	None	None	--	0.0410 U
Benzo(k)fluoranthene	None	None	None	None	--	0.0520 U
Benzyl butyl phthalate	None	None	None	None	--	0.280 U
Bis(2-chloroethoxy)methane	None	None	None	None	--	0.0520 U
Bis(2-chloroethyl) ether (2-Chloroethyl ether)	None	None	None	None	--	0.0310 U
Bis(2-ethylhexyl)phthalate	3	3	6	6	0.437 U	0.580 U
Carbazole	None	None	None	None	--	0.100 U
Chlordane	None	None	None	None	0.0669 U	0.0320 U
Chrysene	None	None	None	None	--	0.0410 U

Section 1b.1 Source Water and Entry Point of Distribution Sample

1b.1 Source Water and Entry Point of Distribution Sample

Well Shaft Sampling

Chemistry Results

Drinking Water Sampling, JBPHH, Oahu Hawaii

Drinking Water Sampling, JBPHH, Oahu Hawaii					EPD	Shaft	Shaft
Cresols, m- & p-	None	None	None	None	--	0.100 U	--
Dibenz(a,h)anthracene	None	None	None	None	--	0.0720 U	--
Dibenzofuran	None	None	None	None	--	0.100 U	--
Diethyl phthalate	None	None	None	None	--	0.160 U	--
Dimethyl phthalate	None	None	None	None	--	0.0620 U	--
Di-n-butyl phthalate	None	None	None	None	--	0.200 U	--
di-n-Octyl phthalate	None	None	None	None	--	0.130 U	--
Diocetyl adipate	None	None	None	None	--	--	0.580 U
Endrin	None	None	None	None	0.00991 U	--	0.00500 U
Fluoranthene	None	None	None	None	--	0.0620 U	--
Fluorene	None	None	None	None	--	0.0520 U	--
gamma-BHC (Lindane)	None	None	None	None	0.00633 U	--	0.00700 U
Heptachlor	None	None	None	None	0.00965 U	--	0.00300 U
Heptachlor epoxide	None	None	None	None	0.0122 U	--	0.00500 U
Hexachlorobenzene	0.0003	0.0003	1	1	0.0980 U	0.0410 U	0.00960 U
Hexachlorobutadiene	None	None	None	None	--	0.0620 U	--
Hexachlorocyclopentadiene	50	None	50	50	0.00594 U	0.140 U	0.00960 U
Hexachloroethane	None	None	None	None	--	0.0520 U	--
Indeno(1,2,3-c,d)pyrene	None	None	None	None	--	0.130 U	--
Isophorone	None	None	None	None	--	0.100 U	--
Methoxychlor	None	None	None	None	0.00863 U	--	0.0320 U
Naphthalene	12	17	None	None	0.0103 U	0.170 U	0.0190 U
Nitrobenzene	None	None	None	None	--	0.0410 U	--
N-Nitrosodi-n-propylamine	None	None	None	None	--	0.0620 UJ	--
N-Nitrosodiphenylamine	None	None	None	None	--	0.0720 U	--
PCB, Total	None	None	None	None	0.100 U	--	--
PCB-1016 (Aroclor 1016)	None	None	None	None	0.0157 U	--	0.0220 U
PCB-1221 (Aroclor 1221)	None	None	None	None	0.0436 U	--	0.0790 U
PCB-1232 (Aroclor 1232)	None	None	None	None	0.0102 U	--	0.0850 U
PCB-1242 (Aroclor 1242)	None	None	None	None	0.0737 U	--	0.0720 U
PCB-1248 (Aroclor 1248)	None	None	None	None	0.0941 U	--	0.0230 U
PCB-1254 (Aroclor 1254)	None	None	None	None	0.0869 U	--	0.0350 U
PCB-1260 (Aroclor 1260)	None	None	None	None	0.0379 U	--	0.0330 U
Pentachlorophenol	None	None	None	None	0.0242 U	0.530 U	--
Phenanthrene	None	None	None	None	--	0.120 U	--
Phenol	None	None	None	None	--	0.370 U	--
Pyrene	None	None	None	None	--	0.0410 U	--
Simazine	None	None	None	None	0.00734 U	--	0.0290 U
	Incident Specific Parameters	Environmental Action Levels Table D-1A Groundwater Action Levels	DOH Safe Drinking Water Branch (SDWB) Regulatory Constituents	Environmental Protection Agency Maximum Contaminant Levels	SDG: 2A12046	SDG: 5801092721	SDG: C22A017REV1
VOC (µg/L)							
1,1,1-Trichloroethane	11	11	200	200	0.256 U	0.390 U	0.119 U
1,1,2,2-Tetrachloroethane	None	None	None	None	--	0.520 U	--
1,1,2-Trichloroethane	5	5	3	5	0.190 U	0.240 U	0.288 U

Section 1b.1 Source Water and Entry Point of Distribution Sample

1b.1 Source Water and Entry Point of Distribution Sample

Well Shaft Sampling

Chemistry Results

Drinking Water Sampling, JBPHH, Oahu Hawaii

					EPD	Shaft	Shaft
1,1-Dichloroethane	None	None	None	None	--	0.220 U	--
1,1-Dichloroethene	7	7	7	7	0.160 U	0.280 U	0.128 U
1,2,4-Trichlorobenzene	70	70	70	70	0.170 U	--	0.318 U
1,2-Dichlorobenzene	10	10	600	600	0.190 U	--	0.272 U
1,2-Dichloroethane	5	5	5	5	0.243 U	0.420 U	0.0884 U
1,2-Dichloroethene	None	None	None	None	--	0.390 U	--
1,2-Dichloropropane	5	5	5	5	0.130 U	0.180 U	0.129 U
1,4-Dichlorobenzene	5	5	75	None	0.180 U	--	0.245 U
2-Butanone (MEK)	None	None	None	None	--	4.70 U	--
2-Hexanone	None	None	None	None	--	4.00 U	--
4-Methyl-2-pentanone (MIBK)	None	None	None	None	--	2.50 U	--
Acetone	None	None	None	None	--	3.20 U	--
Benzene	5	5	5	5	0.150 U	0.240 U	0.0846 U
Bromodichloromethane	None	None	None	None	--	0.290 U	--
Bromoform	None	None	None	None	--	0.510 U	--
Bromomethane	None	None	None	None	--	0.210 U	--
Carbon disulfide	None	None	None	None	--	0.530 U	--
Carbon Tetrachloride	5	5	5	5	0.270 U	0.300 U	0.165 U
Chlorobenzene	25	25	100	100	0.150 U	0.440 U	0.146 U
Chloroethane	None	None	None	None	--	0.350 U	--
Chloroform	None	None	None	None	--	0.260 U	--
Chloromethane	None	None	None	None	--	0.280 U	--
cis-1,2-Dichloroethene	70	70	70	70	0.250 U	0.350 U	0.0570 U
cis-1,3-Dichloropropene	None	None	None	None	--	0.200 U	--
Dibromochloromethane	None	None	None	None	--	0.430 U	--
Ethylbenzene	700	7.3	700	700	0.210 U	0.500 U	0.141 U
m,p-Xylene	10000	13	None	None	0.330 U	0.530 U	0.317 U
Methylene chloride	5	5	5	5	0.303 U	1.40 U	2.15 U
o-Xylene	10000	13	None	None	0.200 U	0.390 U	0.157 U
Styrene	10	10	100	100	0.190 U	0.530 U	0.224 U
Tetrachloroethene (PCE)	5	5	5	5	0.180 U	0.410 U	0.125 U
Toluene	1000	9.8	1000	1000	0.294 U	0.390 U	0.120 U
trans-1,2-Dichloroethene	100	100	100	100	0.259 U	0.390 U	0.0958 U
trans-1,3-Dichloropropene	None	None	None	None	--	0.410 U	--
Trichloroethene (TCE)	5	5	5	5	0.180 U	0.260 U	0.0574 U
Vinyl chloride	2	2	2	2	0.180 U	0.220 U	0.611 U
Xylenes, Total	10000	13	10000	10000	--	0.530 U	--

Notes:

-- indicates that the sample was Not Analyzed for the analyte

Results highlighted yellow exceed the ISP  
Results in purple font also exceed the EALs  
Results in green font also exceed the DOH MCL  
Results in blue font also exceed the EPA MCL

µg/L = Micrograms per Liter