



Tetra Tech Inc (HI)  
737 Bishop St, Suite 2340  
Honolulu, Hawaii 96813  
Tel: 808-441-6600  
Email: Yvonne.parry@Tetrattech.com  
RE: HDOH Red Hill

Work Order No.: 2112340

Dear Yvonne Parry:

Torrent Laboratory, Inc. received 3 sample(s) on December 30, 2021 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

A handwritten signature in blue ink that reads "Kathie Evans". The signature is written in a cursive style and is positioned above a horizontal line.

Kathie Evans  
Project Manager

January 07, 2022

Date



**Date:** 1/7/2022

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**Client:** Tetra Tech Inc (HI)

**Project:** HDOH Red Hill

**Work Order:** 2112340

### **CASE NARRATIVE**

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Unless otherwise indicated in the following narrative, no issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.

This report shall not be reproduced, except in full, without the written approval of Torrent Laboratory, Inc

Methane analysis was sub-contracted to ELAP certified laboratory AAC. Sub-contract data will follow under a separate cover.



### Sample Result Summary

Report prepared for: Yvonne Parry  
Tetra Tech Inc (HI)

Date Received: 12/30/21

Date Reported: 01/07/22

ERH2319-RHMW06

2112340-001

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
TOC	A5310B	1	0.40	2.0	18.7	mg/L
TPH as Diesel	SW8015B	1	0.037	0.10	0.132	mg/L
TPH as Motor Oil	SW8015B	1	0.11	0.40	0.429	mg/L

ERH2315-RHMW08

2112340-002

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
TOC	A5310B	1	0.40	2.0	26.5	mg/L
TPH as Diesel	SW8015B	1	0.037	0.10	0.209	mg/L
TPH as Motor Oil	SW8015B	1	0.11	0.40	0.650	mg/L

ERH2297-RHMW15 (Zone 5)

2112340-003

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
TOC	A5310B	1	0.40	2.0	11.5	mg/L
TPH as Diesel	SW8015B	1	0.037	0.10	0.105	mg/L



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b> NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Pyridine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
N-Nitrosdimethylamine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Aniline	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Phenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Bis(2-chloroethyl) ether	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2-Chlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
1,3-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
1,4-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Benzyl Alcohol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
1,2-Dichlorobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2-Methylphenol (o-Cresol)	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Bis(2-chloroisopropyl)ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
3-/4-Methylphenol (p-/m-Cresol)	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
N-nitroso-di-n-propylamine	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Hexachloroethane	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Nitrobenzene	SW8270	1	0.900	18	ND		ug/L	01/03/22	20:03	TA	462669
Isophorone	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2-Nitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2,4-Dimethylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Benzoic Acid	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Bis(2-Chloroethoxy)methane	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2,4-Dichlorophenol	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:03	TA	462669
1,2,4-Trichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2,6-Dichlorophenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Naphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
4-Chloroaniline	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Hexachloro-1,3-butadiene	SW8270	1	0.450	18	ND		ug/L	01/03/22	20:03	TA	462669
4-Chloro-3-methylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2-Methylnaphthalene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
1-Methylnaphthalene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Hexachlorocyclopentadiene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2,4,6-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2,4,5-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2-Chloronaphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
2-Nitroaniline	SW8270	1	0.900	9.0	ND		ug/L	01/03/22	20:03	TA	462669
1,4-Dinitrobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Dimethyl phthalate	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
1,3-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Acenaphthylene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b> NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
2,6-Dinitrotoluene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
1,2-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
3-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Acenaphthene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2,4-Dinitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
4-Nitrophenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Dibenzofuran	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
2,4-Dinitrotoluene	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2,3,5,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
2,3,4,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Diethylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Fluorene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
4-Chlorophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
4-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
4,6-Dinitro-2-methylphenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Diphenylamine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Azobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
4-Bromophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Hexachlorobenzene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Pentachlorophenol	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Phenanthrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Carbazole	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Di-n-butylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Benzidine	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Benzyl butyl phthalate	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Benz[a]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
3,3-Dichlorobenzidine	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Chrysene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Bis(2-Ethylhexyl)phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Di-n-octyl phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:03	TA	462669
Benzo[b]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Benzo[k]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Benzo[a]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Indeno[1,2,3-cd]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Dibenz[a,h]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669
Benzo[g,h,i]perylene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:03	TA	462669



## SAMPLE RESULTS

**Report prepared for:**

Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am

**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Acceptance Limits											
2-Fluorophenol (S)	SW8270		15 - 105		<b>32.6</b>		%	01/03/22	20:03	TA	462669
Phenol-d6 (S)	SW8270		15 - 100		<b>21.5</b>		%	01/03/22	20:03	TA	462669
Nitrobenzene-d5 (S)	SW8270		30 - 100		<b>75.8</b>		%	01/03/22	20:03	TA	462669
2-Fluorobiphenyl (S)	SW8270		30 - 105		<b>82.8</b>		%	01/03/22	20:03	TA	462669
2,4,6-Tribromophenol (S)	SW8270		15 - 125		<b>116</b>		%	01/03/22	20:03	TA	462669
p-Terphenyl-d14 (S)	SW8270		30 - 125		<b>89.8</b>		%	01/03/22	20:03	TA	462669



## SAMPLE RESULTS

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Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_TPH	<b>Prep Batch Date/Time:</b> 1/3/22	9:22:00AM
<b>Prep Batch ID:</b> 1138120	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel	SW8015B	1	0.037	0.10	<b>0.132</b>	x	mg/L	01/03/22	22:26	SN	462602
TPH as Motor Oil	SW8015B	1	0.11	0.40	<b>0.429</b>		mg/L	01/03/22	22:26	SN	462602
Acceptance Limits											
Pentacosane (S)	SW8015B		59 - 129		<b>102</b>		%	01/03/22	22:26	SN	462602

**NOTE:** x- Diesel result due to unknown organics and presence of discrete peaks within diesel quantified range



### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_TPH SG	<b>Prep Batch Date/Time:</b> 1/3/22	9:29:00AM
<b>Prep Batch ID:</b> 1138121	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel (SG)	SW8015B	1	0.037	0.10	ND		mg/L	01/05/22	21:51	SN	462647
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40	ND		mg/L	01/05/22	21:51	SN	462647
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		<b>107</b>		%	01/05/22	21:51	SN	462647





### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001B
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> TOC-W-P	<b>Prep Batch Date/Time:</b> 1/4/22	1:26:00PM
<b>Prep Batch ID:</b> 1138204	<b>Prep Analyst:</b>	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TOC	A5310B	1	0.40	2.0	18.7		mg/L	01/04/22	13:26	BJAY	462640



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> 5030VOC	<b>Prep Batch Date/Time:</b> 12/30/21	11:03:00AM
<b>Prep Batch ID:</b> 1138098	<b>Prep Analyst:</b> JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	12/30/21	18:45	JZ	462542
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	12/30/21	18:45	JZ	462542
DIPE	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
TAME	SW8260B	1	0.072	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	12/30/21	18:45	JZ	462542



## SAMPLE RESULTS

**Report prepared for:**

Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am

**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> 5030VOC	<b>Prep Batch Date/Time:</b> 12/30/21	11:03:00AM
<b>Prep Batch ID:</b> 1138098	<b>Prep Analyst:</b>	JZHAO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	12/30/21	18:45	JZ	462542
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,1,1,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	18:45	JZ	462542
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	12/30/21	18:45	JZ	462542
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	12/30/21	18:45	JZ	462542
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	12/30/21	18:45	JZ	462542
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	12/30/21	18:45	JZ	462542
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	12/30/21	18:45	JZ	462542
(S) Dibromofluoromethane	SW8260B		61.2 - 131		<b>106</b>		%	12/30/21	18:45	JZ	462542
(S) Toluene-d8	SW8260B		75.1 - 127		<b>94.7</b>		%	12/30/21	18:45	JZ	462542
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		<b>90.5</b>		%	12/30/21	18:45	JZ	462542



### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2319-RHMW06	<b>Lab Sample ID:</b>	2112340-001C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:45		
<b>SDG:</b>			

<b>Prep Method:</b> 5030GRO	<b>Prep Batch Date/Time:</b> 12/30/21	11:30:00AM
<b>Prep Batch ID:</b> 1138099	<b>Prep Analyst:</b> JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	12/30/21	18:45	JZ	462542
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		77.5		%	12/30/21	18:45	JZ	462542



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b> NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Pyridine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
N-Nitrosdimethylamine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Aniline	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Phenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Bis(2-chloroethyl) ether	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2-Chlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
1,3-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
1,4-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Benzyl Alcohol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
1,2-Dichlorobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2-Methylphenol (o-Cresol)	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Bis(2-chloroisopropyl)ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
3-/4-Methylphenol (p-/m-Cresol)	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
N-nitroso-di-n-propylamine	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Hexachloroethane	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Nitrobenzene	SW8270	1	0.900	18	ND		ug/L	01/03/22	20:33	TA	462669
Isophorone	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2-Nitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2,4-Dimethylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Benzoic Acid	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Bis(2-Chloroethoxy)methane	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2,4-Dichlorophenol	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:33	TA	462669
1,2,4-Trichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2,6-Dichlorophenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Naphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
4-Chloroaniline	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Hexachloro-1,3-butadiene	SW8270	1	0.450	18	ND		ug/L	01/03/22	20:33	TA	462669
4-Chloro-3-methylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2-Methylnaphthalene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
1-Methylnaphthalene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Hexachlorocyclopentadiene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2,4,6-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2,4,5-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2-Chloronaphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
2-Nitroaniline	SW8270	1	0.900	9.0	ND		ug/L	01/03/22	20:33	TA	462669
1,4-Dinitrobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Dimethyl phthalate	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
1,3-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Acenaphthylene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
2,6-Dinitrotoluene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
1,2-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
3-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Acenaphthene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2,4-Dinitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
4-Nitrophenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Dibenzofuran	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
2,4-Dinitrotoluene	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2,3,5,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
2,3,4,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Diethylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Fluorene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
4-Chlorophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
4-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
4,6-Dinitro-2-methylphenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Diphenylamine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Azobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
4-Bromophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Hexachlorobenzene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Pentachlorophenol	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Phenanthrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Carbazole	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Di-n-butylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Benzidine	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Benzyl butyl phthalate	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Benz[a]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
3,3-Dichlorobenzidine	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Chrysene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Bis(2-Ethylhexyl)phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Di-n-octyl phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	20:33	TA	462669
Benzo[b]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Benzo[k]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Benzo[a]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Indeno[1,2,3-cd]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Dibenz[a,h]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669
Benzo[g,h,i]perylene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	20:33	TA	462669



## SAMPLE RESULTS

**Report prepared for:**

Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am

**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b> NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Acceptance Limits											
2-Fluorophenol (S)	SW8270		15 - 105		<b>34.3</b>		%	01/03/22	20:33	TA	462669
Phenol-d6 (S)	SW8270		15 - 100		<b>20.9</b>		%	01/03/22	20:33	TA	462669
Nitrobenzene-d5 (S)	SW8270		30 - 100		<b>75.0</b>		%	01/03/22	20:33	TA	462669
2-Fluorobiphenyl (S)	SW8270		30 - 105		<b>82.5</b>		%	01/03/22	20:33	TA	462669
2,4,6-Tribromophenol (S)	SW8270		15 - 125		<b>119</b>		%	01/03/22	20:33	TA	462669
p-Terphenyl-d14 (S)	SW8270		30 - 125		<b>88.9</b>		%	01/03/22	20:33	TA	462669



### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_TPH	<b>Prep Batch Date/Time:</b> 1/3/22	9:22:00AM
<b>Prep Batch ID:</b> 1138120	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel	SW8015B	1	0.037	0.10	<b>0.209</b>	x	mg/L	01/03/22	23:59	SN	462602
TPH as Motor Oil	SW8015B	1	0.11	0.40	<b>0.650</b>		mg/L	01/03/22	23:59	SN	462602
Acceptance Limits											
Pentacosane (S)	SW8015B		59 - 129		<b>101</b>		%	01/03/22	23:59	SN	462602

**NOTE:** x- Diesel result due to unknown organics and presence of discrete peaks within diesel quantified range





### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_TPH SG	<b>Prep Batch Date/Time:</b> 1/3/22	9:29:00AM
<b>Prep Batch ID:</b> 1138121	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel (SG)	SW8015B	1	0.037	0.10	ND		mg/L	01/05/22	22:14	SN	462647
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40	ND		mg/L	01/05/22	22:14	SN	462647
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		<b>101</b>		%	01/05/22	22:14	SN	462647



### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
 Tetra Tech Inc (HI)
 
**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002B
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> TOC-W-P	<b>Prep Batch Date/Time:</b> 1/4/22	1:26:00PM
<b>Prep Batch ID:</b> 1138204	<b>Prep Analyst:</b>	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TOC	A5310B	1	0.40	2.0	26.5		mg/L	01/04/22	13:26	BJAY	462640



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> 5030VOC	<b>Prep Batch Date/Time:</b> 12/30/21	11:03:00AM
<b>Prep Batch ID:</b> 1138098	<b>Prep Analyst:</b> JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	12/30/21	19:14	JZ	462542
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	12/30/21	19:14	JZ	462542
DIPE	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
TAME	SW8260B	1	0.072	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	12/30/21	19:14	JZ	462542



## SAMPLE RESULTS

**Report prepared for:**

Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am

**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> 5030VOC	<b>Prep Batch Date/Time:</b> 12/30/21	11:03:00AM
<b>Prep Batch ID:</b> 1138098	<b>Prep Analyst:</b> JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	12/30/21	19:14	JZ	462542
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:14	JZ	462542
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	12/30/21	19:14	JZ	462542
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	12/30/21	19:14	JZ	462542
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	12/30/21	19:14	JZ	462542
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	12/30/21	19:14	JZ	462542
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	12/30/21	19:14	JZ	462542
(S) Dibromofluoromethane	SW8260B		61.2 - 131		<b>108</b>		%	12/30/21	19:14	JZ	462542
(S) Toluene-d8	SW8260B		75.1 - 127		<b>93.1</b>		%	12/30/21	19:14	JZ	462542
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		<b>99.4</b>		%	12/30/21	19:14	JZ	462542



### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2315-RHMW08	<b>Lab Sample ID:</b>	2112340-002C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 12:45		
<b>SDG:</b>			

<b>Prep Method:</b> 5030GRO	<b>Prep Batch Date/Time:</b> 12/30/21	11:30:00AM
<b>Prep Batch ID:</b> 1138099	<b>Prep Analyst:</b> JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	12/30/21	19:14	JZ	462542
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		<b>83.5</b>		%	12/30/21	19:14	JZ	462542



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b> NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Pyridine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
N-Nitrosdimethylamine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Aniline	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Phenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Bis(2-chloroethyl) ether	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2-Chlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
1,3-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
1,4-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Benzyl Alcohol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
1,2-Dichlorobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2-Methylphenol (o-Cresol)	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Bis(2-chloroisopropyl)ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
3-/4-Methylphenol (p-/m-Cresol)	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
N-nitroso-di-n-propylamine	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Hexachloroethane	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Nitrobenzene	SW8270	1	0.900	18	ND		ug/L	01/03/22	21:54	TA	462669
Isophorone	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2-Nitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2,4-Dimethylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Benzoic Acid	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Bis(2-Chloroethoxy)methane	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2,4-Dichlorophenol	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	21:54	TA	462669
1,2,4-Trichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2,6-Dichlorophenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Naphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
4-Chloroaniline	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Hexachloro-1,3-butadiene	SW8270	1	0.450	18	ND		ug/L	01/03/22	21:54	TA	462669
4-Chloro-3-methylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2-Methylnaphthalene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
1-Methylnaphthalene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Hexachlorocyclopentadiene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2,4,6-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2,4,5-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2-Chloronaphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
2-Nitroaniline	SW8270	1	0.900	9.0	ND		ug/L	01/03/22	21:54	TA	462669
1,4-Dinitrobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Dimethyl phthalate	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
1,3-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Acenaphthylene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
2,6-Dinitrotoluene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
1,2-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
3-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Acenaphthene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2,4-Dinitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
4-Nitrophenol	SW8270	1	0.900	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Dibenzofuran	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
2,4-Dinitrotoluene	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2,3,5,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
2,3,4,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Diethylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Fluorene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
4-Chlorophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
4-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
4,6-Dinitro-2-methylphenol	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Diphenylamine	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Azobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
4-Bromophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Hexachlorobenzene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Pentachlorophenol	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Phenanthrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Carbazole	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Di-n-butylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Benzidine	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Benzyl butyl phthalate	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Benz[a]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
3,3-Dichlorobenzidine	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Chrysene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Bis(2-Ethylhexyl)phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Di-n-octyl phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/03/22	21:54	TA	462669
Benzo[b]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Benzo[k]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Benzo[a]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Indeno[1,2,3-cd]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Dibenz[a,h]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669
Benzo[g,h,i]perylene	SW8270	1	0.180	0.54	ND		ug/L	01/03/22	21:54	TA	462669



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/3/22	4:22:00PM
<b>Prep Batch ID:</b> 1138159	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Acceptance Limits											
2-Fluorophenol (S)	SW8270		15 - 105		31.2		%	01/03/22	21:54	TA	462669
Phenol-d6 (S)	SW8270		15 - 100		18.2		%	01/03/22	21:54	TA	462669
Nitrobenzene-d5 (S)	SW8270		30 - 100		73.5		%	01/03/22	21:54	TA	462669
2-Fluorobiphenyl (S)	SW8270		30 - 105		79.1		%	01/03/22	21:54	TA	462669
2,4,6-Tribromophenol (S)	SW8270		15 - 125		89.5		%	01/03/22	21:54	TA	462669
p-Terphenyl-d14 (S)	SW8270		30 - 125		85.6		%	01/03/22	21:54	TA	462669





## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_TPH	<b>Prep Batch Date/Time:</b> 1/3/22	9:22:00AM
<b>Prep Batch ID:</b> 1138120	<b>Prep Analyst:</b> NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel	SW8015B	1	0.037	0.10	<b>0.105</b>	x	mg/L	01/04/22	0:22	SN	462602
TPH as Motor Oil	SW8015B	1	0.11	0.40	ND		mg/L	01/04/22	0:22	SN	462602
Acceptance Limits											
Pentacosane (S)	SW8015B		59 - 129		<b>94.6</b>		%	01/04/22	0:22	SN	462602

**NOTE:** x- Diesel result due to unknown organics and presence of discrete peaks within diesel quantified range



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_TPH SG	<b>Prep Batch Date/Time:</b> 1/3/22	9:29:00AM
<b>Prep Batch ID:</b> 1138121	<b>Prep Analyst:</b>	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel (SG)	SW8015B	1	0.037	0.10	ND		mg/L	01/05/22	22:38	SN	462647
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40	ND		mg/L	01/05/22	22:38	SN	462647
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		<b>95.2</b>		%	01/05/22	22:38	SN	462647



### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
 Tetra Tech Inc (HI)
 
**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003B
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> TOC-W-P	<b>Prep Batch Date/Time:</b> 1/4/22	1:26:00PM
<b>Prep Batch ID:</b> 1138204	<b>Prep Analyst:</b>	BJAY

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TOC	A5310B	1	0.40	2.0	11.5		mg/L	01/04/22	13:26	BJAY	462640



## SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> 5030VOC	<b>Prep Batch Date/Time:</b> 12/30/21	11:03:00AM
<b>Prep Batch ID:</b> 1138098	<b>Prep Analyst:</b> JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Dichlorodifluoromethane	SW8260B	1	0.26	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	12/30/21	19:44	JZ	462542
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	12/30/21	19:44	JZ	462542
DIPE	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
TAME	SW8260B	1	0.072	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	12/30/21	19:44	JZ	462542



## SAMPLE RESULTS

**Report prepared for:**

Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am

**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> 5030VOC	<b>Prep Batch Date/Time:</b> 12/30/21	11:03:00AM
<b>Prep Batch ID:</b> 1138098	<b>Prep Analyst:</b> JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
1,1,1,2-Tetrachloroethane	SW8260B	1	0.087	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	12/30/21	19:44	JZ	462542
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,1,1,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	12/30/21	19:44	JZ	462542
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	12/30/21	19:44	JZ	462542
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	12/30/21	19:44	JZ	462542
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	12/30/21	19:44	JZ	462542
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	12/30/21	19:44	JZ	462542
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	12/30/21	19:44	JZ	462542
(S) Dibromofluoromethane	SW8260B		61.2 - 131		<b>113</b>		%	12/30/21	19:44	JZ	462542
(S) Toluene-d8	SW8260B		75.1 - 127		<b>95.1</b>		%	12/30/21	19:44	JZ	462542
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		<b>97.8</b>		%	12/30/21	19:44	JZ	462542



### SAMPLE RESULTS

**Report prepared for:** Yvonne Parry  
Tetra Tech Inc (HI)

**Date/Time Received:** 12/30/21, 11:30 am  
**Date Reported:** 01/07/22

<b>Client Sample ID:</b>	ERH2297-RHMW15 (Zone 5)	<b>Lab Sample ID:</b>	2112340-003C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	12/28/21 / 9:50		
<b>SDG:</b>			

<b>Prep Method:</b> 5030GRO	<b>Prep Batch Date/Time:</b> 12/30/21	11:30:00AM
<b>Prep Batch ID:</b> 1138099	<b>Prep Analyst:</b> JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	12/30/21	19:44	JZ	462542
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		<b>79.9</b>		%	12/30/21	19:44	JZ	462542



## MB Summary Report

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	5030VOC	<b>Prep Date:</b>	12/30/21	<b>Prep Batch:</b>	1138098
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8260B	<b>Analyzed Date:</b>	12/30/2021	<b>Analytical Batch:</b>	462542
<b>Units:</b>	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	0.26	0.50	ND		
Chloromethane	0.17	0.50	ND		
Vinyl Chloride	0.21	0.50	ND		
Bromomethane	0.21	0.50	ND		
Chloroethane	0.11	0.50	ND		
Trichlorofluoromethane	0.19	0.50	ND		
1,1-Dichloroethene	0.14	0.50	ND		
Freon 113	0.34	0.50	ND		
Methylene Chloride	0.13	1.0	ND		
trans-1,2-Dichloroethene	0.16	0.50	ND		
MTBE	0.077	0.50	ND		
tert-Butanol	2.9	5.0	ND		
DIPE	0.12	0.50	ND		
1,1-Dichloroethane	0.12	0.50	ND		
ETBE	0.064	0.50	ND		
cis-1,2-Dichloroethene	0.15	0.50	ND		
2,2-Dichloropropane	0.094	0.50	ND		
Bromochloromethane	0.15	0.50	ND		
Chloroform	0.12	0.50	ND		
Carbon Tetrachloride	0.16	0.50	ND		
1,1,1-Trichloroethane	0.16	0.50	ND		
1,1-Dichloropropene	0.19	0.50	ND		
Benzene	0.065	0.50	ND		
TAME	0.072	0.50	ND		
1,2-Dichloroethane	0.11	0.50	ND		
Trichloroethylene	0.15	0.50	ND		
Dibromomethane	0.11	0.50	ND		
1,2-Dichloropropane	0.089	0.50	ND		
Bromodichloromethane	0.076	0.50	ND		
cis-1,3-Dichloropropene	0.078	0.50	ND		
Toluene	0.14	0.50	ND		
Tetrachloroethylene	0.24	0.50	ND		
trans-1,3-Dichloropropene	0.22	0.50	ND		
1,1,2-Trichloroethane	0.076	0.50	ND		
Dibromochloromethane	0.18	0.50	ND		
1,3-Dichloropropane	0.22	0.50	ND		
1,2-Dibromoethane	0.079	0.50	ND		
Chlorobenzene	0.16	0.50	ND		
Ethylbenzene	0.20	0.50	ND		
1,1,1,2-Tetrachloroethane	0.087	0.50	ND		
m,p-Xylene	0.39	1.0	ND		
o-Xylene	0.15	0.50	ND		
Styrene	0.11	0.50	ND		
Bromoform	0.076	0.50	ND		
Isopropyl Benzene	0.22	0.50	ND		



## MB Summary Report

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	5030VOC	<b>Prep Date:</b>	12/30/21	<b>Prep Batch:</b>	1138098
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8260B	<b>Analyzed Date:</b>	12/30/2021	<b>Analytical Batch:</b>	462542
<b>Units:</b>	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
n-Propylbenzene	0.30	0.50	ND		
Bromobenzene	0.15	0.50	ND		
1,1,2,2-Tetrachloroethane	0.079	0.50	ND		
2-Chlorotoluene	0.25	0.50	ND		
1,3,5-Trimethylbenzene	0.24	0.50	ND		
1,2,3-Trichloropropane	0.15	0.50	ND		
4-Chlorotoluene	0.22	0.50	ND		
tert-Butylbenzene	0.26	0.50	ND		
1,2,4-Trimethylbenzene	0.23	0.50	ND		
sec-Butyl Benzene	0.30	0.50	ND		
p-Isopropyltoluene	0.27	0.50	ND		
1,3-Dichlorobenzene	0.17	0.50	ND		
1,4-Dichlorobenzene	0.18	0.50	ND		
n-Butylbenzene	0.27	0.50	0.27		
1,2-Dichlorobenzene	0.16	0.50	ND		
1,2-Dibromo-3-Chloropropane	0.76	2.0	ND		
Hexachlorobutadiene	0.62	2.0	ND		
1,2,4-Trichlorobenzene	0.93	2.0	ND		
Naphthalene	1.2	2.0	ND		
1,2,3-Trichlorobenzene	1.2	2.0	ND		
(S) Dibromofluoromethane			106		
(S) Toluene-d8			96.3		
(S) 4-Bromofluorobenzene			98.6		

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	5030GRO	<b>Prep Date:</b>	12/30/21	<b>Prep Batch:</b>	1138099
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8260B	<b>Analyzed Date:</b>	12/30/2021	<b>Analytical Batch:</b>	462542
<b>Units:</b>	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline)	29	50	32		
(S) 4-Bromofluorobenzene			84.3		

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	3510_TPH	<b>Prep Date:</b>	01/03/22	<b>Prep Batch:</b>	1138120
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8015B	<b>Analyzed Date:</b>	1/4/2022	<b>Analytical Batch:</b>	462602
<b>Units:</b>	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH as Diesel	0.037	0.10	ND		
TPH as Motor Oil	0.11	0.40	0.158		
Pentacosane (S)			111		





### MB Summary Report

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	3510_TPH SG	<b>Prep Date:</b>	01/03/22	<b>Prep Batch:</b>	1138121
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8015B	<b>Analyzed Date:</b>	1/5/2022	<b>Analytical Batch:</b>	462647
<b>Units:</b>	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
TPH as Diesel (SG)	0.037	0.10	ND	
TPH as Motor Oil (SG)	0.11	0.40	ND	
Pentacosane (S)			81.6	



## MB Summary Report

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	3510_BNASIM	<b>Prep Date:</b>	01/03/22	<b>Prep Batch:</b>	1138159
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8270	<b>Analyzed Date:</b>	1/3/2022	<b>Analytical Batch:</b>	462669
<b>Units:</b>	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Pyridine	0.45	3.6	ND		
N-Nitrosodimethylamine	0.45	3.6	ND		
Aniline	0.90	3.6	ND		
Phenol	0.45	3.6	ND		
Bis(2-chloroethyl) ether	0.90	3.6	ND		
2-Chlorophenol	0.45	3.6	ND		
1,3-Dichlorobenzene	0.45	3.6	ND		
1,4-Dichlorobenzene	0.45	3.6	ND		
Benzyl Alcohol	0.90	3.6	ND		
1,2-Dichlorobenzene	0.90	3.6	ND		
2-Methylphenol (o-Cresol)	0.90	3.6	ND		
Bis(2-chloroisopropyl)ether	0.45	3.6	ND		
3-/4-Methylphenol (p-/m-Cresol)	0.45	3.6	ND		
N-nitroso-di-n-propylamine	0.90	3.6	ND		
Hexachloroethane	0.45	3.6	ND		
Nitrobenzene	0.90	18	ND		
Isophorone	0.90	3.6	ND		
2-Nitrophenol	0.45	3.6	ND		
2,4-Dimethylphenol	0.90	3.6	ND		
Benzoic Acid	0.45	3.6	ND		
Bis(2-Chloroethoxy)methane	0.90	3.6	ND		
2,4-Dichlorophenol	0.18	3.6	ND		
1,2,4-Trichlorobenzene	0.45	3.6	ND		
2,6-Dichlorophenol	0.90	3.6	ND		
Naphthalene	0.18	0.54	ND		
4-Chloroaniline	0.18	3.6	ND		
Hexachloro-1,3-butadiene	0.45	18	ND		
4-Chloro-3-methylphenol	0.90	3.6	ND		
2-Methylnaphthalene	0.90	3.6	ND		
1-Methylnaphthalene	0.45	3.6	ND		
Hexachlorocyclopentadiene	0.45	3.6	ND		
2,4,6-Trichlorophenol	0.45	3.6	ND		
2,4,5-Trichlorophenol	0.45	3.6	ND		
2-Chloronaphthalene	0.18	0.54	ND		
2-Nitroaniline	0.90	9.0	ND		
1,4-Dinitrobenzene	0.90	3.6	ND		
Dimethyl phthalate	0.90	3.6	ND		
1,3-Dinitrobenzene	0.45	3.6	ND		
Acenaphthylene	0.18	0.54	ND		
2,6-Dinitrotoluene	0.45	3.6	ND		
1,2-Dinitrobenzene	0.45	3.6	ND		
3-Nitroaniline	0.45	3.6	ND		
Acenaphthene	0.45	3.6	ND		
2,4-Dinitrophenol	0.45	3.6	ND		
4-Nitrophenol	0.90	3.6	ND		



## MB Summary Report

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	3510_BNASIM	<b>Prep Date:</b>	01/03/22	<b>Prep Batch:</b>	1138159
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8270	<b>Analyzed Date:</b>	1/3/2022	<b>Analytical Batch:</b>	462669
<b>Units:</b>	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier
Dibenzofuran	0.18	0.54	ND	
2,4-Dinitrotoluene	0.18	3.6	ND	
2,3,5,6-Tetrachlorophenol	0.45	3.6	ND	
2,3,4,6-Tetrachlorophenol	0.45	3.6	ND	
Diethylphthalate	0.45	3.6	ND	
Fluorene	0.45	3.6	ND	
4-Chlorophenyl phenyl ether	0.45	3.6	ND	
4-Nitroaniline	0.45	3.6	ND	
4,6-Dinitro-2-methylphenol	0.45	3.6	ND	
Diphenylamine	0.45	3.6	ND	
Azobenzene	0.45	3.6	ND	
4-Bromophenyl phenyl ether	0.45	3.6	ND	
Hexachlorobenzene	0.18	0.54	ND	
Pentachlorophenol	0.18	0.54	ND	
Phenanthrene	0.18	0.54	ND	
Anthracene	0.18	0.54	ND	
Carbazole	0.18	0.54	ND	
Di-n-butylphthalate	0.45	3.6	ND	
Fluoranthene	0.18	0.54	ND	
Benzidine	0.18	0.54	ND	
Pyrene	0.18	0.54	ND	
Benzyl butyl phthalate	0.18	0.54	ND	
Benz[a]anthracene	0.18	0.54	ND	
3,3-Dichlorobenzidine	0.18	0.54	ND	
Chrysene	0.18	0.54	ND	
Bis(2-Ethylhexyl)phthalate	0.18	3.6	ND	
Di-n-octyl phthalate	0.18	3.6	ND	
Benzo[b]fluoranthene	0.18	0.54	ND	
Benzo[k]fluoranthene	0.18	0.54	ND	
Benzo[a]pyrene	0.18	0.54	ND	
Indeno[1,2,3-cd]pyrene	0.18	0.54	ND	
Dibenz[a,h]anthracene	0.18	0.54	ND	
Benzo[g,h,i]perylene	0.18	0.54	ND	
2-Fluorophenol (S)			42.1	
Phenol-d6 (S)			24.2	
Nitrobenzene-d5 (S)			79.0	
2-Fluorobiphenyl (S)			87.7	
2,4,6-Tribromophenol (S)			101	
p-Terphenyl-d14 (S)			93.7	



### MB Summary Report

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	TOC-W-P	<b>Prep Date:</b>	01/04/22	<b>Prep Batch:</b>	1138204
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	A5310B	<b>Analyzed Date:</b>	1/4/2022	<b>Analytical Batch:</b>	462640
<b>Units:</b>	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TOC	0.40	2.0	0.42		



## LCS/LCSD Summary Report

*Raw values are used in quality control assessment.*

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	5030VOC	<b>Prep Date:</b>	12/30/21	<b>Prep Batch:</b>	1138098
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8260B	<b>Analyzed Date:</b>	12/30/2021	<b>Analytical Batch:</b>	462542
<b>Units:</b>	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.9	101	101	0.000	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	113	114	0.494	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	102	109	6.90	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	115	115	0.487	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	107	112	4.08	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	110	109		61.2 - 131		
(S) Toluene-d8				17.9	109	114		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	104	102		64.1 - 120		

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	5030GRO	<b>Prep Date:</b>	12/30/21	<b>Prep Batch:</b>	1138099
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8260B	<b>Analyzed Date:</b>	12/30/2021	<b>Analytical Batch:</b>	462542
<b>Units:</b>	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	29	50	32	238	101	88.6	13.3	52.4 - 127	30	
(S) 4-Bromofluorobenzene				11.9	91.1	81.0		41.5 - 125		

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	3510_TPH	<b>Prep Date:</b>	01/03/22	<b>Prep Batch:</b>	1138120
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8015B	<b>Analyzed Date:</b>	1/4/2022	<b>Analytical Batch:</b>	462602
<b>Units:</b>	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel	0.037	0.10	ND	1.0	92.7	92.9	0.216	52 - 115	30	
Pentacosane (S)				200	98.9	103		59 - 129		

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	3510_TPH SG	<b>Prep Date:</b>	01/03/22	<b>Prep Batch:</b>	1138121
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8015B	<b>Analyzed Date:</b>	1/5/2022	<b>Analytical Batch:</b>	462647
<b>Units:</b>	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel (SG)	0.037	0.10	ND	1.0	82.4	65.6	22.7	42 - 115	30	
TPH as Motor Oil (SG)			ND	200				40 - 129		



## LCS/LCSD Summary Report

*Raw values are used in quality control assessment.*

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	3510_BNASIM	<b>Prep Date:</b>	01/03/22	<b>Prep Batch:</b>	1138159
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	SW8270	<b>Analyzed Date:</b>	1/3/2022	<b>Analytical Batch:</b>	462669
<b>Units:</b>	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
Phenol	0.45	3.6	ND	2.000	25.7	24.9	3.16	15 - 95	30	
2-Chlorophenol	0.45	3.6	ND	2.000	61.5	57.2	7.59	15 - 105	30	
1,4-Dichlorobenzene	0.45	3.6	ND	2.000	67.2	71.5	6.50	35 - 105	30	
N-nitroso-di-n-propylamine	0.90	3.6	ND	2.000	89.9	91.7	1.65	40 - 115	30	
1,2,4-Trichlorobenzene	0.45	3.6	ND	2.000	75.2	79.5	5.83	45 - 110	30	
4-Chloro-3-methylphenol	0.90	3.6	ND	2.000	72.1	68.3	4.98	15 - 110	30	
Acenaphthene	0.18	0.54	ND	2.000	86.7	89.6	3.16	45 - 110	30	
4-Nitrophenol	0.90	3.6	ND	2.000	80.0	75.6	5.79	15 - 140	30	
2,4-Dinitrotoluene	0.18	0.54	ND	2.000	91.6	95.5	4.28	40 - 115	30	
Pentachlorophenol	0.18	0.54	ND	2.000	96.6	104	7.96	15 - 120	30	
Pyrene	0.18	0.54	ND	2.000	97.1	99.4	2.54	45 - 125	30	
2-Fluorophenol (S)				1111	43.7	40.6		15 - 105		
Phenol-d6 (S)				1111	25.0	23.5		15 - 100		
Nitrobenzene-d5 (S)				555.6	87.6	91.5		30 - 100		
2-Fluorobiphenyl (S)				555.6	96.4	98.2		30 - 105		
2,4,6-Tribromophenol (S)				1111	109	110		15 - 125		
p-Terphenyl-d14 (S)				555.6	91.2	91.5		30 - 125		

<b>Work Order:</b>	2112340	<b>Prep Method:</b>	TOC-W-P	<b>Prep Date:</b>	01/04/22	<b>Prep Batch:</b>	1138204
<b>Matrix:</b>	Water	<b>Analytical Method:</b>	A5310B	<b>Analyzed Date:</b>	1/4/2022	<b>Analytical Batch:</b>	462640
<b>Units:</b>	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TOC	0.40	2.0	0.42	10	95.9	96.7	0.831	80 - 120	20	



## Laboratory Qualifiers and Definitions

### DEFINITIONS:

<b>Accuracy/Bias (% Recovery)</b> - The closeness of agreement between an observed value and an accepted reference value.
<b>Blank (Method/Preparation Blank)</b> -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
<b>Duplicate</b> - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
<b>Laboratory Control Sample (LCS ad LCSD)</b> - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
<b>Matrix</b> - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
<b>Matrix Spike (MS/MSD)</b> - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
<b>Method Detection Limit (MDL)</b> - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
<b>Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ)</b> - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs/RLs/LODs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
<b>Precision (%RPD)</b> - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
<b>Surrogate (S) or (Surr)</b> - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
<b>Tentatively Identified Compound (TIC)</b> - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
<b>Units:</b> the unit of measure used to express the reported result - <b>mg/L</b> and <b>mg/Kg</b> (equivalent to PPM - parts per million in <b>liquid</b> and <b>solid</b> ), <b>ug/L</b> and <b>ug/Kg</b> (equivalent to PPB - parts per billion in <b>liquid</b> and <b>solid</b> ), <b>ug/m3</b> , <b>mg/m3</b> , <b>ppbv</b> and <b>ppmv</b> (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), <b>ug/Wipe</b> ( concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

### LABORATORY QUALIFIERS:

<b>B</b> - Indicates when the analyte is found in the associated method or preparation blank
<b>D</b> - Surrogate is not recoverable due to the necessary dilution of the sample
<b>E</b> - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
<b>H</b> - Indicates that the recommended holding time for the analyte or compound has been exceeded
<b>J</b> - Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative
<b>NA</b> - Not Analyzed
<b>N/A</b> - Not Applicable
<b>ND</b> - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.
<b>NR</b> - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
<b>R</b> - The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
<b>S</b> - Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
<b>X</b> -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.



## Sample Receipt Checklist

Client Name: Tetra Tech Inc (HI)

Date and Time Received: 12/30/2021 11:30:00AM

Project Name: HDOH Red Hill

Received By: Katherene Evans

Work Order No.: 2112340

Physically Logged By: Katherene Evans

Checklist Completed By: Katherene Evans

Carrier Name: Client Drop Off

### Chain of Custody (COC) Information

Chain of custody present? Yes  
Chain of custody signed when relinquished and received? Yes  
Chain of custody agrees with sample labels? Yes  
Custody seals intact on sample bottles? Not Present

### Sample Receipt Information

Custody seals intact on shipping container/cooler? Not Present  
Shipping Container/Cooler In Good Condition? Yes  
Samples in proper container/bottle? Yes  
Samples containers intact? Yes  
Sufficient sample volume for indicated test? Yes

### Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes  
Container/Temp Blank temperature in compliance? Yes      Temperature: 5.0 °C  
Water-VOA vials have zero headspace? Yes  
Water-pH acceptable upon receipt? Yes  
pH Checked by: na      pH Adjusted by: na

### Comments:





## Login Summary Report

**Client ID:** TL5162      Tetra Tech Inc (HI)  
**Project Name:** HDOH Red Hill  
**Project # :** 103S518817512  
**Report Due Date:** 1/7/2022

**QC Level:** II  
**TAT Requested:** 5+ day:5  
**Date Received:** 12/30/2021  
**Time Received:** 11:30 am

**Comments:**  
**Work Order # :** **2112340**

<u>WO Sample ID</u>	<u>Client Sample ID</u>	<u>Collection Date/Time</u>	<u>Matrix</u>	<u>Scheduled Disposal</u>	<u>Sample On Hold</u>	<u>Test On Hold</u>	<u>Requested Tests</u>	<u>Subbed</u>
2112340-001A	ERH2319-RHMW06	12/28/21 9:45	Water	02/11/22			SVOC_W_SIMFull TPHDOSG_W_8015B TPHDO_W_8015B(M)	
<b>Sample Note:</b> SVOCs by SIM and TPH d/mo w& w/o silica gel. 3 ambers provided per sample								
2112340-001B	ERH2319-RHMW06	12/28/21 9:45	Water	02/11/22			TOC_5310B	
2112340-001C	ERH2319-RHMW06	12/28/21 9:45	Water	02/11/22			VOC_W_8260B VOC_W_GRO	
<b>Sample Note:</b> 2 VOAs per sample for 001/003, 3 VOAs for 002								
2112340-001D	ERH2319-RHMW06	12/28/21 9:45	Water	02/11/22			Sub_RSK-175	Yes
2112340-002A	ERH2315-RHMW08	12/28/21 12:45	Water	02/11/22			SVOC_W_SIMFull TPHDOSG_W_8015B TPHDO_W_8015B(M)	
2112340-002B	ERH2315-RHMW08	12/28/21 12:45	Water	02/11/22			TOC_5310B	
2112340-002C	ERH2315-RHMW08	12/28/21 12:45	Water	02/11/22			VOC_W_8260B VOC_W_GRO	
2112340-002D	ERH2315-RHMW08	12/28/21 12:45	Water	02/11/22			Sub_RSK-175	Yes
2112340-003A	ERH2297-RHMW15 (Zone 5)	12/28/21 9:50	Water	02/11/22			SVOC_W_SIMFull TPHDOSG_W_8015B TPHDO_W_8015B(M)	
2112340-003B	ERH2297-RHMW15 (Zone 5)	12/28/21 9:50	Water	02/11/22			TOC_5310B	
2112340-003C	ERH2297-RHMW15 (Zone 5)	12/28/21 9:50	Water	02/11/22			VOC_W_8260B VOC_W_GRO	
2112340-003D	ERH2297-RHMW15 (Zone 5)	12/28/21 9:50	Water	02/11/22			Sub_RSK-175	Yes



## CHAIN-OF-CUSTODY RECORD



Client Name/Account #: TetraTech, Inc.

Address: 737 Bishop St., Suite 2340

City/State/Zip: Honolulu, HI 96813

Project Manager: Yvonne Parry

Telephone Number: 808.393.8829 email yvonne.parry@tetratech.com

Sampler Name: (Print) Jason Turban, Anay Schende

Sampler Signature *Jason Turban*

Report To: Yvonne Parry

Invoice To: Yvonne Parry

Project ID: HDOH Red Hill

Project #: 103S518817512

Sample ID / Description	Date Sampled	Time Sampled	No. of Containers Shipped	Grab	Composite	Multi-incremental Sample	Preservative										Matrix										Analyze For:										RUSH TAT (Pre-Schedule)	Standard TAT	SAMPLER
							Ice	HNO <sub>3</sub> (Red Label)	HCl (VOA; Blue Label)	NaOH (Orange Label)	H <sub>2</sub> SO <sub>4</sub> Plastic (Yellow Label)	H <sub>2</sub> SO <sub>4</sub> Glass (Yellow Label)	None (1-L Amber)	Other (one MeOH VOA)	Groundwater	Wastewater	Drinking Water	Sludge	Soil	Other (specify):	Analyses pending	TPH-G EPA 8260	TPH-D,O EPA 8015	TPH-sgc EPA 3630/8015	VOCs EPA 8260	SVOC EPA 8270 SIM	TOC EPA9060A	METHANE RSK175M	LEAD SCAVENGER EPA 8011/8260										
001 ERH2319 - RHMW06	12/28/21	0945	8	X			X		5						3	X																				X	JT		
002 ERH2315 - RHMW08	12/28/21	1245	9	X			X		6						3	X																			X	JT			
003 ERH2297 - RHMW15 (Zone 5)	12/28/21	0950	8	X			X		5						3	X																			X	AS			
Special Instructions:							Method of Shipment: FEDEX										Laboratory Comments:										Temperature Upon Receipt: 5.1°C #2												
Relinquished by: <i>Eric Jensen</i> Eric Jensen							Date: 12/29/2021			Time: 1145			Received by: <i>Kathie EUB</i>			Date: 12-30-21			Time: 1:30			VOCs Free of Headspace? Y N																	
Relinquished by:							Date:			Time:			Received by Laboratory:			Date:			Time:																				