



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.: 2201118

Dear Yvonne Parry:

Torrent Laboratory, Inc. received 4 sample(s) on January 15, 2022 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, appearing to read "Patti L Sandrock", is written over a light blue horizontal line.

Patti L Sandrock
QA Officer

January 20, 2022

Date



Date: 1/20/2022

Client: Tetra Tech Inc(HI)

Project: HDOH Red Hill

Work Order: 2201118

CASE NARRATIVE

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: 01/15/22

Date Reported: 01/20/22

ERH2400 - OWDFMW05A

2201118-001

<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	19.4	mg/L
TPH as Diesel	SW8015B	1	0.037	0.10	0.102	mg/L

ERH2402 - OWDFMW07A

2201118-002

<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	27.7	mg/L

ERH2404- OWDFMW08A

2201118-003

<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	20.0	mg/L
TPH as Diesel (SG)	SW8015B	1	0.037	0.10	0.0529	mg/L
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40	0.143	mg/L

ERH2398 - OWDRMW04A

2201118-004

<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	20.0	mg/L
Chloroform	SW8260B	1	0.12	0.50	2.0	ug/L



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2400-OWDFMW05A	Lab Sample ID:	2201118-001A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: 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	01/19/22	13:09	TA	462923
N-Nitrosdimethylamine	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Aniline	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Phenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Bis(2-chloroethyl) ether	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2-Chlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
1,3-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
1,4-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Benzyl Alcohol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
1,2-Dichlorobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2-Methylphenol (o-Cresol)	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Bis(2-chloroisopropyl)ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
3-/4-Methylphenol (p-/m-Cresol)	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
N-nitroso-di-n-propylamine	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Hexachloroethane	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Nitrobenzene	SW8270	1	0.900	18	ND		ug/L	01/19/22	13:09	TA	462923
Isophorone	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2-Nitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2,4-Dimethylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Benzoic Acid	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Bis(2-Chloroethoxy)methane	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2,4-Dichlorophenol	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:09	TA	462923
1,2,4-Trichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2,6-Dichlorophenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Naphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
4-Chloroaniline	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Hexachloro-1,3-butadiene	SW8270	1	0.450	18	ND		ug/L	01/19/22	13:09	TA	462923
4-Chloro-3-methylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2-Methylnaphthalene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
1-Methylnaphthalene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Hexachlorocyclopentadiene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2,4,6-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2,4,5-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2-Chloronaphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
2-Nitroaniline	SW8270	1	0.900	9.0	ND		ug/L	01/19/22	13:09	TA	462923
1,4-Dinitrobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Dimethyl phthalate	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
1,3-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Acenaphthylene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2400-OWDFMW05A	Lab Sample ID:	2201118-001A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: 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	01/19/22	13:09	TA	462923
1,2-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
3-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Acenaphthene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2,4-Dinitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
4-Nitrophenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Dibenzofuran	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
2,4-Dinitrotoluene	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2,3,5,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
2,3,4,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Diethylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Fluorene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
4-Chlorophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
4-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
4,6-Dinitro-2-methylphenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Diphenylamine	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Azobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
4-Bromophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Hexachlorobenzene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Pentachlorophenol	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Phenanthrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Carbazole	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Di-n-butylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Benzidine	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Benzyl butyl phthalate	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Benz[a]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
3,3-Dichlorobenzidine	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Chrysene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Bis(2-Ethylhexyl)phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Di-n-octyl phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:09	TA	462923
Benzo[b]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Benzo[k]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Benzo[a]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Indeno[1,2,3-cd]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Dibenz[a,h]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923
Benzo[g,h,i]perylene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:09	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2400-OWDFMW05A	Lab Sample ID:	2201118-001A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Acceptance Limits											
2-Fluorophenol (S)	SW8270		15 - 105		27.2		%	01/19/22	13:09	TA	462923
Phenol-d6 (S)	SW8270		15 - 100		16.3		%	01/19/22	13:09	TA	462923
Nitrobenzene-d5 (S)	SW8270		30 - 100		95.3		%	01/19/22	13:09	TA	462923
2-Fluorobiphenyl (S)	SW8270		30 - 105		96.5		%	01/19/22	13:09	TA	462923
2,4,6-Tribromophenol (S)	SW8270		15 - 125		79.3		%	01/19/22	13:09	TA	462923
p-Terphenyl-d14 (S)	SW8270		30 - 125		106		%	01/19/22	13:09	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2400-OWDFMW05A	Lab Sample ID:	2201118-001A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: 3510_TPH	Prep Batch Date/Time: 1/19/22	10:03:00AM
Prep Batch ID: 1138517	Prep Analyst: NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel	SW8015B	1	0.037	0.10	0.102	x	mg/L	01/20/22	12:16	SN	462914
TPH as Motor Oil	SW8015B	1	0.11	0.40	ND		mg/L	01/20/22	12:16	SN	462914
Acceptance Limits											
Pentacosane (S)	SW8015B		59 - 129		95.6		%	01/20/22	12:16	SN	462914

NOTE: x- Chromatographic pattern does not resemble typical diesel reference standard; unknown organics within diesel range slightly heavier than diesel quantified as diesel.



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2400-OWDFMW05A	Lab Sample ID:	2201118-001A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: 3510_TPH SG	Prep Batch Date/Time: 1/20/22	10:14:00AM
Prep Batch ID: 1138518	Prep Analyst:	AKIZ

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	01/20/22	16:27	SN	462920
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40	ND		mg/L	01/20/22	16:27	SN	462920
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		91.5		%	01/20/22	16:27	SN	462920



SAMPLE RESULTS

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

Date/Time Received: 01/15/22, 11:30 am
Date Reported: 01/20/22

Client Sample ID:	ERH2400 -OWDFMW05A	Lab Sample ID:	2201118-001B
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: TOC-W-P	Prep Batch Date/Time: 1/18/22	1:00:00PM
Prep Batch ID: 1138476	Prep Analyst: ERAGUDO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TOC	A5310B	1	0.40	2.0	19.4		mg/L	01/18/22	3:50	ERR	462875



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2400 - OWDFMW05A	Lab Sample ID:	2201118-001C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: 5030VOC	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138439	Prep Analyst: 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	01/17/22	17:09	JZ	462845
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/17/22	17:09	JZ	462845
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	01/17/22	17:09	JZ	462845
DIPE	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
TAME	SW8260B	1	0.072	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	01/17/22	17:09	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2400 - OWDFMW05A	Lab Sample ID:	2201118-001C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: 5030VOC	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138439	Prep Analyst:	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	01/17/22	17:09	JZ	462845
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/17/22	17:09	JZ	462845
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:09	JZ	462845
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/17/22	17:09	JZ	462845
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/17/22	17:09	JZ	462845
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/17/22	17:09	JZ	462845
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/17/22	17:09	JZ	462845
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/17/22	17:09	JZ	462845
(S) Dibromofluoromethane	SW8260B		61.2 - 131		105		%	01/17/22	17:09	JZ	462845
(S) Toluene-d8	SW8260B		75.1 - 127		96.0		%	01/17/22	17:09	JZ	462845
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		95.2		%	01/17/22	17:09	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2400 - OWDFMW05A	Lab Sample ID:	2201118-001C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 9:40		
SDG:			

Prep Method: 5030GRO	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138440	Prep Analyst: JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	01/17/22	17:09	JZ	462845
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		87.4		%	01/17/22	17:09	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: 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	01/19/22	13:39	TA	462923
N-Nitrosdimethylamine	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Aniline	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Phenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Bis(2-chloroethyl) ether	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2-Chlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
1,3-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
1,4-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Benzyl Alcohol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
1,2-Dichlorobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2-Methylphenol (o-Cresol)	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Bis(2-chloroisopropyl)ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
3-/4-Methylphenol (p-/m-Cresol)	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
N-nitroso-di-n-propylamine	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Hexachloroethane	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Nitrobenzene	SW8270	1	0.900	18	ND		ug/L	01/19/22	13:39	TA	462923
Isophorone	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2-Nitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2,4-Dimethylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Benzoic Acid	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Bis(2-Chloroethoxy)methane	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2,4-Dichlorophenol	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:39	TA	462923
1,2,4-Trichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2,6-Dichlorophenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Naphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
4-Chloroaniline	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Hexachloro-1,3-butadiene	SW8270	1	0.450	18	ND		ug/L	01/19/22	13:39	TA	462923
4-Chloro-3-methylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2-Methylnaphthalene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
1-Methylnaphthalene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Hexachlorocyclopentadiene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2,4,6-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2,4,5-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2-Chloronaphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
2-Nitroaniline	SW8270	1	0.900	9.0	ND		ug/L	01/19/22	13:39	TA	462923
1,4-Dinitrobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Dimethyl phthalate	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
1,3-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Acenaphthylene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst:	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	01/19/22	13:39	TA	462923
1,2-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
3-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Acenaphthene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2,4-Dinitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
4-Nitrophenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Dibenzofuran	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
2,4-Dinitrotoluene	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2,3,5,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
2,3,4,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Diethylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Fluorene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
4-Chlorophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
4-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
4,6-Dinitro-2-methylphenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Diphenylamine	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Azobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
4-Bromophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Hexachlorobenzene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Pentachlorophenol	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Phenanthrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Carbazole	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Di-n-butylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Benzidine	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Benzyl butyl phthalate	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Benz[a]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
3,3-Dichlorobenzidine	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Chrysene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Bis(2-Ethylhexyl)phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Di-n-octyl phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	13:39	TA	462923
Benzo[b]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Benzo[k]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Benzo[a]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Indeno[1,2,3-cd]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Dibenz[a,h]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923
Benzo[g,h,i]perylene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	13:39	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Acceptance Limits											
2-Fluorophenol (S)	SW8270		15 - 105		43.7		%	01/19/22	13:39	TA	462923
Phenol-d6 (S)	SW8270		15 - 100		25.0		%	01/19/22	13:39	TA	462923
Nitrobenzene-d5 (S)	SW8270		30 - 100		96.1		%	01/19/22	13:39	TA	462923
2-Fluorobiphenyl (S)	SW8270		30 - 105		95.3		%	01/19/22	13:39	TA	462923
2,4,6-Tribromophenol (S)	SW8270		15 - 125		114		%	01/19/22	13:39	TA	462923
p-Terphenyl-d14 (S)	SW8270		30 - 125		106		%	01/19/22	13:39	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: 3510_TPH	Prep Batch Date/Time: 1/19/22	10:03:00AM
Prep Batch ID: 1138517	Prep Analyst: NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel	SW8015B	1	0.053	0.14	ND		mg/L	01/20/22	12:39	SN	462914
TPH as Motor Oil	SW8015B	1	0.16	0.57	ND		mg/L	01/20/22	12:39	SN	462914
			Acceptance Limits								
Pentacosane (S)	SW8015B		59 - 129		97.0		%	01/20/22	12:39	SN	462914



SAMPLE RESULTS

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

Date/Time Received: 01/15/22, 11:30 am
Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: 3510_TPH SG	Prep Batch Date/Time: 1/20/22	10:14:00AM
Prep Batch ID: 1138518	Prep Analyst:	AKIZ

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	01/20/22	16:50	SN	462920
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40	ND		mg/L	01/20/22	16:50	SN	462920
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		84.9		%	01/20/22	16:50	SN	462920



SAMPLE RESULTS

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

Date/Time Received: 01/15/22, 11:30 am
Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002B
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: TOC-W-P	Prep Batch Date/Time: 1/18/22	1:00:00PM
Prep Batch ID: 1138476	Prep Analyst:	ERAGUDO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TOC	A5310B	1	0.40	2.0	27.7		mg/L	01/18/22	4:07	ERR	462875



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: 5030VOC	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138439	Prep Analyst: 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	01/17/22	18:39	JZ	462845
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/17/22	18:39	JZ	462845
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	01/17/22	18:39	JZ	462845
DIPE	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
TAME	SW8260B	1	0.072	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	01/17/22	18:39	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: 5030VOC	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138439	Prep Analyst: 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	01/17/22	18:39	JZ	462845
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/17/22	18:39	JZ	462845
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:39	JZ	462845
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/17/22	18:39	JZ	462845
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/17/22	18:39	JZ	462845
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/17/22	18:39	JZ	462845
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/17/22	18:39	JZ	462845
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/17/22	18:39	JZ	462845
(S) Dibromofluoromethane	SW8260B		61.2 - 131		110		%	01/17/22	18:39	JZ	462845
(S) Toluene-d8	SW8260B		75.1 - 127		93.2		%	01/17/22	18:39	JZ	462845
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		93.6		%	01/17/22	18:39	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2402 - OWDFMW07A	Lab Sample ID:	2201118-002C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 13:00		
SDG:			

Prep Method: 5030GRO	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138440	Prep Analyst: JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	01/17/22	18:39	JZ	462845
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		72.4		%	01/17/22	18:39	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: 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	01/19/22	14:08	TA	462923
N-Nitrosdimethylamine	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Aniline	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Phenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Bis(2-chloroethyl) ether	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2-Chlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
1,3-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
1,4-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Benzyl Alcohol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
1,2-Dichlorobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2-Methylphenol (o-Cresol)	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Bis(2-chloroisopropyl)ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
3-/4-Methylphenol (p-/m-Cresol)	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
N-nitroso-di-n-propylamine	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Hexachloroethane	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Nitrobenzene	SW8270	1	0.900	18	ND		ug/L	01/19/22	14:08	TA	462923
Isophorone	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2-Nitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2,4-Dimethylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Benzoic Acid	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Bis(2-Chloroethoxy)methane	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2,4-Dichlorophenol	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:08	TA	462923
1,2,4-Trichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2,6-Dichlorophenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Naphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
4-Chloroaniline	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Hexachloro-1,3-butadiene	SW8270	1	0.450	18	ND		ug/L	01/19/22	14:08	TA	462923
4-Chloro-3-methylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2-Methylnaphthalene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
1-Methylnaphthalene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Hexachlorocyclopentadiene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2,4,6-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2,4,5-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2-Chloronaphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
2-Nitroaniline	SW8270	1	0.900	9.0	ND		ug/L	01/19/22	14:08	TA	462923
1,4-Dinitrobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Dimethyl phthalate	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
1,3-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Acenaphthylene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: 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	01/19/22	14:08	TA	462923
1,2-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
3-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Acenaphthene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2,4-Dinitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
4-Nitrophenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Dibenzofuran	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
2,4-Dinitrotoluene	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2,3,5,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
2,3,4,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Diethylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Fluorene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
4-Chlorophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
4-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
4,6-Dinitro-2-methylphenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Diphenylamine	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Azobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
4-Bromophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Hexachlorobenzene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Pentachlorophenol	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Phenanthrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Carbazole	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Di-n-butylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Benzidine	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Benzyl butyl phthalate	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Benz[a]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
3,3-Dichlorobenzidine	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Chrysene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Bis(2-Ethylhexyl)phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Di-n-octyl phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:08	TA	462923
Benzo[b]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Benzo[k]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Benzo[a]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Indeno[1,2,3-cd]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Dibenzo[a,h]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923
Benzo[g,h,i]perylene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:08	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Acceptance Limits											
2-Fluorophenol (S)	SW8270		15 - 105		44.2		%	01/19/22	14:08	TA	462923
Phenol-d6 (S)	SW8270		15 - 100		25.1		%	01/19/22	14:08	TA	462923
Nitrobenzene-d5 (S)	SW8270		30 - 100		94.3		%	01/19/22	14:08	TA	462923
2-Fluorobiphenyl (S)	SW8270		30 - 105		105		%	01/19/22	14:08	TA	462923
2,4,6-Tribromophenol (S)	SW8270		15 - 125		122		%	01/19/22	14:08	TA	462923
p-Terphenyl-d14 (S)	SW8270		30 - 125		106		%	01/19/22	14:08	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: 3510_TPH	Prep Batch Date/Time: 1/19/22	10:03:00AM
Prep Batch ID: 1138517	Prep Analyst:	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel	SW8015B	1	0.037	0.10	ND		mg/L	01/20/22	13:03	SN	462914
TPH as Motor Oil	SW8015B	1	0.11	0.40	ND		mg/L	01/20/22	13:03	SN	462914
			Acceptance Limits								
Pentacosane (S)	SW8015B		59 - 129		96.8		%	01/20/22	13:03	SN	462914



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: 3510_TPH SG	Prep Batch Date/Time: 1/20/22	10:14:00AM
Prep Batch ID: 1138518	Prep Analyst:	AKIZ

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
<i>The results shown below are reported using their MDL.</i>											
TPH as Diesel (SG)	SW8015B	1	0.037	0.10	0.0529	J	mg/L	01/20/22	17:13	SN	462920
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40	0.143	J	mg/L	01/20/22	17:13	SN	462920
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		101		%	01/20/22	17:13	SN	462920



SAMPLE RESULTS

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

Date/Time Received: 01/15/22, 11:30 am
Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003B
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: TOC-W-P	Prep Batch Date/Time: 1/18/22	1:00:00PM
Prep Batch ID: 1138476	Prep Analyst: ERAGUDO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TOC	A5310B	1	0.40	2.0	20.0		mg/L	01/18/22	16:25	ERR	462875



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: 5030VOC	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138439	Prep Analyst: 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	01/17/22	17:39	JZ	462845
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/17/22	17:39	JZ	462845
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	01/17/22	17:39	JZ	462845
DIPE	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Chloroform	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
TAME	SW8260B	1	0.072	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	01/17/22	17:39	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: 5030VOC	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138439	Prep Analyst:	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	01/17/22	17:39	JZ	462845
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/17/22	17:39	JZ	462845
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,1,1,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	17:39	JZ	462845
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/17/22	17:39	JZ	462845
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/17/22	17:39	JZ	462845
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/17/22	17:39	JZ	462845
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/17/22	17:39	JZ	462845
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/17/22	17:39	JZ	462845
(S) Dibromofluoromethane	SW8260B		61.2 - 131		109		%	01/17/22	17:39	JZ	462845
(S) Toluene-d8	SW8260B		75.1 - 127		96.3		%	01/17/22	17:39	JZ	462845
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		96.6		%	01/17/22	17:39	JZ	462845



SAMPLE RESULTS

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

Date/Time Received: 01/15/22, 11:30 am
Date Reported: 01/20/22

Client Sample ID:	ERH2404- OWDFMW08A	Lab Sample ID:	2201118-003C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 10:00		
SDG:			

Prep Method: 5030GRO	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138440	Prep Analyst: JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	01/17/22	17:39	JZ	462845
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		79.3		%	01/17/22	17:39	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: 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	01/19/22	14:38	TA	462923
N-Nitrosdimethylamine	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Aniline	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Phenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Bis(2-chloroethyl) ether	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2-Chlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
1,3-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
1,4-Dichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Benzyl Alcohol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
1,2-Dichlorobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2-Methylphenol (o-Cresol)	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Bis(2-chloroisopropyl)ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
3-/4-Methylphenol (p-/m-Cresol)	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
N-nitroso-di-n-propylamine	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Hexachloroethane	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Nitrobenzene	SW8270	1	0.900	18	ND		ug/L	01/19/22	14:38	TA	462923
Isophorone	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2-Nitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2,4-Dimethylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Benzoic Acid	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Bis(2-Chloroethoxy)methane	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2,4-Dichlorophenol	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:38	TA	462923
1,2,4-Trichlorobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2,6-Dichlorophenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Naphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
4-Chloroaniline	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Hexachloro-1,3-butadiene	SW8270	1	0.450	18	ND		ug/L	01/19/22	14:38	TA	462923
4-Chloro-3-methylphenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2-Methylnaphthalene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
1-Methylnaphthalene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Hexachlorocyclopentadiene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2,4,6-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2,4,5-Trichlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2-Chloronaphthalene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
2-Nitroaniline	SW8270	1	0.900	9.0	ND		ug/L	01/19/22	14:38	TA	462923
1,4-Dinitrobenzene	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Dimethyl phthalate	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
1,3-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Acenaphthylene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst:	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	01/19/22	14:38	TA	462923
1,2-Dinitrobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
3-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Acenaphthene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2,4-Dinitrophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
4-Nitrophenol	SW8270	1	0.900	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Dibenzofuran	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
2,4-Dinitrotoluene	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2,3,5,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
2,3,4,6-Tetrachlorophenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Diethylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Fluorene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
4-Chlorophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
4-Nitroaniline	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
4,6-Dinitro-2-methylphenol	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Diphenylamine	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Azobenzene	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
4-Bromophenyl phenyl ether	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Hexachlorobenzene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Pentachlorophenol	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Phenanthrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Carbazole	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Di-n-butylphthalate	SW8270	1	0.450	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Benzidine	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Benzyl butyl phthalate	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Benz[a]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
3,3-Dichlorobenzidine	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Chrysene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Bis(2-Ethylhexyl)phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Di-n-octyl phthalate	SW8270	1	0.180	3.6	ND		ug/L	01/19/22	14:38	TA	462923
Benzo[b]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Benzo[k]fluoranthene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Benzo[a]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Indeno[1,2,3-cd]pyrene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Dibenz[a,h]anthracene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923
Benzo[g,h,i]perylene	SW8270	1	0.180	0.54	ND		ug/L	01/19/22	14:38	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: 3510_BNASIM	Prep Batch Date/Time: 1/19/22	10:32:00AM
Prep Batch ID: 1138480	Prep Analyst: NDUM	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
Acceptance Limits											
2-Fluorophenol (S)	SW8270		15 - 105		46.9		%	01/19/22	14:38	TA	462923
Phenol-d6 (S)	SW8270		15 - 100		26.6		%	01/19/22	14:38	TA	462923
Nitrobenzene-d5 (S)	SW8270		30 - 100		88.6		%	01/19/22	14:38	TA	462923
2-Fluorobiphenyl (S)	SW8270		30 - 105		99.9		%	01/19/22	14:38	TA	462923
2,4,6-Tribromophenol (S)	SW8270		15 - 125		113		%	01/19/22	14:38	TA	462923
p-Terphenyl-d14 (S)	SW8270		30 - 125		106		%	01/19/22	14:38	TA	462923



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: 3510_TPH	Prep Batch Date/Time: 1/19/22	10:03:00AM
Prep Batch ID: 1138517	Prep Analyst:	NDUM

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel	SW8015B	1	0.037	0.10	ND		mg/L	01/20/22	13:26	SN	462914
TPH as Motor Oil	SW8015B	1	0.11	0.40	ND		mg/L	01/20/22	13:26	SN	462914
			Acceptance Limits								
Pentacosane (S)	SW8015B		59 - 129		97.6		%	01/20/22	13:26	SN	462914



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: 3510_TPH SG	Prep Batch Date/Time: 1/20/22	10:14:00AM
Prep Batch ID: 1138518	Prep Analyst:	AKIZ

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	01/20/22	17:37	SN	462920
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40	ND		mg/L	01/20/22	17:37	SN	462920
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		83.0		%	01/20/22	17:37	SN	462920



SAMPLE RESULTS

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

Date/Time Received: 01/15/22, 11:30 am
Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004B
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: TOC-W-P	Prep Batch Date/Time: 1/18/22	1:00:00PM
Prep Batch ID: 1138476	Prep Analyst: ERAGUDO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TOC	A5310B	1	0.40	2.0	20.0		mg/L	01/18/22	16:41	ERR	462875



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: 5030VOC	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138439	Prep Analyst: 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	01/17/22	18:09	JZ	462845
Chloromethane	SW8260B	1	0.17	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Vinyl Chloride	SW8260B	1	0.21	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Bromomethane	SW8260B	1	0.21	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Chloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Trichlorofluoromethane	SW8260B	1	0.19	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,1-Dichloroethene	SW8260B	1	0.14	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Freon 113	SW8260B	1	0.34	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Methylene Chloride	SW8260B	1	0.13	1.0	ND		ug/L	01/17/22	18:09	JZ	462845
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
MTBE	SW8260B	1	0.077	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
tert-Butanol	SW8260B	1	2.9	5.0	ND		ug/L	01/17/22	18:09	JZ	462845
DIPE	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,1-Dichloroethane	SW8260B	1	0.12	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
ETBE	SW8260B	1	0.064	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
2,2-Dichloropropane	SW8260B	1	0.094	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Bromochloromethane	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Chloroform	SW8260B	1	0.12	0.50	2.0		ug/L	01/17/22	18:09	JZ	462845
Carbon Tetrachloride	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,1-Dichloropropene	SW8260B	1	0.19	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Benzene	SW8260B	1	0.065	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
TAME	SW8260B	1	0.072	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,2-Dichloroethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Trichloroethylene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Dibromomethane	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,2-Dichloropropane	SW8260B	1	0.089	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Bromodichloromethane	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Toluene	SW8260B	1	0.14	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Tetrachloroethylene	SW8260B	1	0.24	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Dibromochloromethane	SW8260B	1	0.18	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,3-Dichloropropane	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,2-Dibromoethane	SW8260B	1	0.079	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Chlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Ethylbenzene	SW8260B	1	0.20	0.50	ND		ug/L	01/17/22	18:09	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: 5030VOC	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138439	Prep Analyst:	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	01/17/22	18:09	JZ	462845
m,p-Xylene	SW8260B	1	0.39	1.0	ND		ug/L	01/17/22	18:09	JZ	462845
o-Xylene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Styrene	SW8260B	1	0.11	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Bromoform	SW8260B	1	0.076	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Isopropyl Benzene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
n-Propylbenzene	SW8260B	1	0.30	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
Bromobenzene	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
2-Chlorotoluene	SW8260B	1	0.25	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
4-Chlorotoluene	SW8260B	1	0.22	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
tert-Butylbenzene	SW8260B	1	0.26	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
sec-Butyl Benzene	SW8260B	1	0.30	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
p-Isopropyltoluene	SW8260B	1	0.27	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
n-Butylbenzene	SW8260B	1	0.27	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	ND		ug/L	01/17/22	18:09	JZ	462845
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	ND		ug/L	01/17/22	18:09	JZ	462845
Hexachlorobutadiene	SW8260B	1	0.62	2.0	ND		ug/L	01/17/22	18:09	JZ	462845
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	ND		ug/L	01/17/22	18:09	JZ	462845
Naphthalene	SW8260B	1	1.2	2.0	ND		ug/L	01/17/22	18:09	JZ	462845
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	ND		ug/L	01/17/22	18:09	JZ	462845
(S) Dibromofluoromethane	SW8260B		61.2 - 131		112		%	01/17/22	18:09	JZ	462845
(S) Toluene-d8	SW8260B		75.1 - 127		96.3		%	01/17/22	18:09	JZ	462845
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120		92.1		%	01/17/22	18:09	JZ	462845



SAMPLE RESULTS

Report prepared for:

Yvonne Parry
Tetra Tech Inc (HI)

Date/Time Received: 01/15/22, 11:30 am

Date Reported: 01/20/22

Client Sample ID:	ERH2398 - OWDRMW04A	Lab Sample ID:	2201118-004C
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/13/22 / 12:30		
SDG:			

Prep Method: 5030GRO	Prep Batch Date/Time: 1/17/22	12:01:00PM
Prep Batch ID: 1138440	Prep Analyst: JZHAO	

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50	ND		ug/L	01/17/22	18:09	JZ	462845
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		81.0		%	01/17/22	18:09	JZ	462845



MB Summary Report

Work Order:	2201118	Prep Method:	5030VOC	Prep Date:	01/17/22	Prep Batch:	1138439
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	1/17/2022	Analytical Batch:	462845
Units:	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

Work Order:	2201118	Prep Method:	5030VOC	Prep Date:	01/17/22	Prep Batch:	1138439
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	1/17/2022	Analytical Batch:	462845
Units:	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	ND		
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			105		
(S) Toluene-d8			97.6		
(S) 4-Bromofluorobenzene			94.0		

Work Order:	2201118	Prep Method:	5030GRO	Prep Date:	01/17/22	Prep Batch:	1138440
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	1/17/2022	Analytical Batch:	462845
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline)	29	50	ND		
(S) 4-Bromofluorobenzene			78.0		

Work Order:	2201118	Prep Method:	TOC-W-P	Prep Date:	01/18/22	Prep Batch:	1138476
Matrix:	Water	Analytical Method:	A5310B	Analyzed Date:	1/18/2022	Analytical Batch:	462875
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TOC	0.40	2.0	0.50		



MB Summary Report

Work Order:	2201118	Prep Method:	3510_BNASIM	Prep Date:	01/19/22	Prep Batch:	1138480
Matrix:	Water	Analytical Method:	SW8270	Analyzed Date:	1/19/2022	Analytical Batch:	462923
Units:	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

Work Order:	2201118	Prep Method:	3510_BNASIM	Prep Date:	01/19/22	Prep Batch:	1138480
Matrix:	Water	Analytical Method:	SW8270	Analyzed Date:	1/19/2022	Analytical Batch:	462923
Units:	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)			51.9	
Phenol-d6 (S)			30.1	
Nitrobenzene-d5 (S)			96.4	
2-Fluorobiphenyl (S)			105	
2,4,6-Tribromophenol (S)			119	
p-Terphenyl-d14 (S)			113	



MB Summary Report

Work Order:	2201118	Prep Method:	3510_TPH	Prep Date:	01/19/22	Prep Batch:	1138517
Matrix:	Water	Analytical Method:	SW8015B	Analyzed Date:	1/20/2022	Analytical Batch:	462914
Units:	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	ND	
Pentacosane (S)			95.1	

Work Order:	2201118	Prep Method:	3510_TPH SG	Prep Date:	01/20/22	Prep Batch:	1138518
Matrix:	Water	Analytical Method:	SW8015B	Analyzed Date:	1/20/2022	Analytical Batch:	462920
Units:	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)			92.0	



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	2201118	Prep Method:	5030VOC	Prep Date:	01/17/22	Prep Batch:	1138439
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	1/17/2022	Analytical Batch:	462845
Units:	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	110	99.0	10.7	61.4 - 129	30	
Benzene	0.16	0.50	ND	17.9	118	107	9.95	66.9 - 140	30	
Trichloroethylene	0.15	0.50	ND	17.9	113	100	11.6	69.3 - 144	30	
Toluene	0.14	0.50	ND	17.9	119	106	11.9	76.6 - 123	30	
Chlorobenzene	0.16	0.50	ND	17.9	112	99.5	12.1	73.9 - 137	30	
(S) Dibromofluoromethane				17.9	113	102		61.2 - 131		
(S) Toluene-d8				17.9	114	102		75.1 - 127		
(S) 4-Bromofluorobenzene				17.9	102	93.6		64.1 - 120		

Work Order:	2201118	Prep Method:	5030GRO	Prep Date:	01/17/22	Prep Batch:	1138440
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	1/17/2022	Analytical Batch:	462845
Units:	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	ND	238	96.0	104	7.56	52.4 - 127	30	
(S) 4-Bromofluorobenzene				11.9	89.3	92.4		41.5 - 125		

Work Order:	2201118	Prep Method:	TOC-W-P	Prep Date:	01/18/22	Prep Batch:	1138476
Matrix:	Water	Analytical Method:	A5310B	Analyzed Date:	1/18/2022	Analytical Batch:	462875
Units:	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	0.50	10	99.8	98.3	1.51	80 - 120	20	



LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	2201118	Prep Method:	3510_BNASIM	Prep Date:	01/19/22	Prep Batch:	1138480
Matrix:	Water	Analytical Method:	SW8270	Analyzed Date:	1/19/2022	Analytical Batch:	462923
Units:	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	28.2	30.1	6.35	15 - 95	30	
2-Chlorophenol	0.45	3.6	ND	2.000	63.4	69.8	9.74	15 - 105	30	
1,4-Dichlorobenzene	0.45	3.6	ND	2.000	67.0	67.2	0.000	35 - 105	30	
N-nitroso-di-n-propylamine	0.90	3.6	ND	2.000	81.7	84.5	3.61	40 - 115	30	
1,2,4-Trichlorobenzene	0.45	3.6	ND	2.000	77.0	77.6	0.647	45 - 110	30	
4-Chloro-3-methylphenol	0.90	3.6	ND	2.000	72.4	77.5	6.67	15 - 110	30	
Acenaphthene	0.18	0.54	ND	2.000	83.0	84.7	6.35	45 - 110	30	
4-Nitrophenol	0.90	3.6	ND	2.000	81.3	89.7	9.36	15 - 140	30	
2,4-Dinitrotoluene	0.18	0.54	ND	2.000	91.0	93.9	3.24	40 - 115	30	
Pentachlorophenol	0.18	0.54	ND	2.000	119	119	3.52	15 - 120	30	
Pyrene	0.18	0.54	ND	2.000	89.3	88.7	1.12	45 - 125	30	
2-Fluorophenol (S)				1111	51.6	56.9		15 - 105		
Phenol-d6 (S)				1111	30.7	35.1		15 - 100		
Nitrobenzene-d5 (S)				555.6	100	102		30 - 105		
2-Fluorobiphenyl (S)				555.6	98.2	98.4		30 - 105		
2,4,6-Tribromophenol (S)				1111	123	124		15 - 125		
p-Terphenyl-d14 (S)				555.6	107	107		30 - 125		

Work Order:	2201118	Prep Method:	3510_TPH	Prep Date:	01/19/22	Prep Batch:	1138517
Matrix:	Water	Analytical Method:	SW8015B	Analyzed Date:	1/20/2022	Analytical Batch:	462914
Units:	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	74.3	66.5	11.1	52 - 115	30	
Pentacosane (S)				200	100	98.1		59 - 129		

Work Order:	2201118	Prep Method:	3510_TPH SG	Prep Date:	01/20/22	Prep Batch:	1138518
Matrix:	Water	Analytical Method:	SW8015B	Analyzed Date:	1/20/2022	Analytical Batch:	462920
Units:	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	75.9	66.6	13.1	42 - 115	30	
TPH as Motor Oil (SG)			ND	200				40 - 129		



Laboratory Qualifiers and Definitions

DEFINITIONS:

Accuracy/Bias (% Recovery) - The closeness of agreement between an observed value and an accepted reference value.
Blank (Method/Preparation Blank) -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.
Duplicate - 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)
Laboratory Control Sample (LCS ad LCSD) - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
Matrix - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
Matrix Spike (MS/MSD) - 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.
Method Detection Limit (MDL) - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
Practical Quantitation Limit/Reporting Limit/Limit of Quantitation (PQL/RL/LOQ) - 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.
Precision (%RPD) - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
Surrogate (S) or (Surr) - 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
Tentatively Identified Compound (TIC) - 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.
Units: the unit of measure used to express the reported result - mg/L and mg/Kg (equivalent to PPM - parts per million in liquid and solid), ug/L and ug/Kg (equivalent to PPB - parts per billion in liquid and solid), ug/m3 , mg/m3 , ppbv and ppmv (all units of measure for reporting concentrations in air), % (equivalent to 10000 ppm or 1,000,000 ppb), ug/Wipe (concentration found on the surface of a single Wipe usually taken over a 100cm2 surface)

LABORATORY QUALIFIERS

<p>B - Indicates when the analyte is found in the associated method or preparation blank</p> <p>D - Surrogate is not recoverable due to the necessary dilution of the sample</p> <p>E - 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.</p> <p>H- Indicates that the recommended holding time for the analyte or compound has been exceeded</p> <p>J- Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather the quantitative</p> <p>NA - Not Analyzed</p> <p>N/A - Not Applicable</p> <p>ND - Not Detected at a concentration greater than the PQL/RL or, if reported to the MDL, at greater than the MDL.</p> <p>NR - 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</p> <p>R- The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts</p> <p>S- 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</p> <p>X -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.</p>



Sample Receipt Checklist

Client Name: Tetra Tech Inc (HI)

Date and Time Received: 1/15/2022 11:30:00AM

Project Name: HDOH Red Hill

Received By: Lorna Imbat

Work Order No.: 2201118

Physically Logged By: Lorna Imbat

Checklist Completed By: Lorna Imbat

Carrier Name: FedEx

Chain of Custody (COC) Information

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

Sample Receipt Information

Custody seals intact on shipping container/cooler?	<u>Not Present</u>
Shipping Container/Cooler In Good Condition?	<u>Yes</u>
Samples in proper container/bottle?	<u>Yes</u>
Samples containers intact?	<u>Yes</u>
Sufficient sample volume for indicated test?	<u>No</u>

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	<u>Yes</u>	
Container/Temp Blank temperature in compliance?	<u>Yes</u>	Temperature: 2.0 °C
Water-VOA vials have zero headspace?	<u>Yes</u>	
Water-pH acceptable upon receipt?	<u>Yes</u>	
pH Checked by: Lorna Imbat	pH Adjusted by: n/a	

Comments:

Missing VOAs for sample ERH2402-OWDFMW07A. As per client request 1/17/22, sample volume aliquoted from 3rd unpreserved amber (containing headspace) into HCL vials for VOCs, TOC and Methane analyses.



Login Summary Report

Client ID: TL5162 Tetra Tech Inc (HI)
Project Name: HDOH Red Hill
Project # : 103S518817512
Report Due Date: 1/20/2022

QC Level: II
TAT Requested: 3 Day Std:3
Date Received: 1/15/2022
Time Received: 11:30 am

Comments:
Work Order # : **2201118**

<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>
2201118-001A	ERH2400-OWDFMW05 A	01/13/22 9:40	Water	02/27/22			SVOC_W_SIMFull TPHDOSG_W_8015B TPHDO_W_8015B(M)	
2201118-001B	ERH2400 -OWDFMW05A	01/13/22 9:40	Water	02/27/22			TOC_5310B	
2201118-001C	ERH2400 - OWDFMW05A	01/13/22 9:40	Water	02/27/22			VOC_W_8260B VOC_W_GRO	
2201118-001D	ERH2400 - OWDFMW05A	01/13/22 9:40	Water	02/27/22			Sub_RSK-175	Yes
2201118-002A	ERH2402 - OWDFMW07A	01/13/22 13:00	Water	02/27/22			SVOC_W_SIMFull TPHDOSG_W_8015B TPHDO_W_8015B(M)	
2201118-002B	ERH2402 - OWDFMW07A	01/13/22 13:00	Water	02/27/22			TOC_5310B	
Sample Note:	Did not receive voas for sample -002; sample volume aliquoted from n/p amber (containing headspace) into HCL vials for VOCs, TOC and Methane analyses.							
2201118-002C	ERH2402 - OWDFMW07A	01/13/22 13:00	Water	02/27/22			VOC_W_8260B VOC_W_GRO	
Sample Note:	Did not receive voas for sample -002; sample volume aliquoted from n/p amber (containing headspace) into HCL vials for VOCs, TOC and Methane analyses.							
2201118-002D	ERH2402 - OWDFMW07A	01/13/22 13:00	Water	02/27/22			Sub_RSK-175	Yes
Sample Note:	Did not receive voas for sample -002; sample volume aliquoted from n/p amber (containing headspace) into HCL vials for VOCs, TOC and Methane analyses.							
2201118-003A	ERH2404- OWDFMW08A	01/13/22 10:00	Water	02/27/22			SVOC_W_SIMFull TPHDOSG_W_8015B TPHDO_W_8015B(M)	
2201118-003B	ERH2404- OWDFMW08A	01/13/22 10:00	Water	02/27/22				



Login Summary Report

Client ID: TL5162 Tetra Tech Inc (HI)
Project Name: HDOH Red Hill
Project # : 103S518817512
Report Due Date: 1/20/2022

QC Level: II
TAT Requested: 3 Day Std:3
Date Received: 1/15/2022
Time Received: 11:30 am

Comments:
Work Order # : **2201118**

<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>
2201118-003C	ERH2404-OWDFMW08A	01/13/22 10:00	Water	02/27/22			TOC_5310B	
2201118-003D	ERH2404-OWDFMW08A	01/13/22 10:00	Water	02/27/22			VOC_W_8260B VOC_W_GRO	
2201118-004A	ERH2398 - OWDRMW04A	01/13/22 12:30	Water	02/27/22			Sub_RSK-175	Yes
2201118-004B	ERH2398 - OWDRMW04A	01/13/22 12:30	Water	02/27/22			SVOC_W_SIMFull TPHDOSG_W_8015B TPHDO_W_8015B(M)	
2201118-004C	ERH2398 - OWDRMW04A	01/13/22 12:30	Water	02/27/22			TOC_5310B	
2201118-004D	ERH2398 - OWDRMW04A	01/13/22 12:30	Water	02/27/22			VOC_W_8260B VOC_W_GRO	
							Sub_RSK-175	Yes

