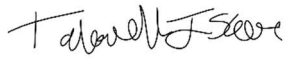
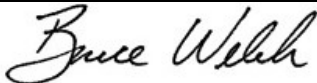


## DATA VALIDATION CHECKLIST – STAGE 2A

<b>Site Name</b>	Joint Base Pearl Harbor - Hickam	<b>Project Name</b>	Red-Hill-Incident
<b>Data Reviewer (signature and date)</b>	 Jan 22, 2022	<b>Technical Reviewer (signature and date)</b>	 Jan 23, 2022
<b>Laboratory Report No.</b>	2112340	<b>Laboratory</b>	Torrent Laboratory, Inc. - Milpitas, CA
<b>Analyses</b>	Semivolatile organic compounds (SVOC) by EPA SW-846 Method 8270 using selected ion monitoring, total petroleum hydrocarbons (TPH) by EPA SW-846 Method 8015B, TPH using silica gel (SG) by EPA SW-846 Method 8015B, total organic carbon (TOC) by SM 5310B, volatile organic compounds (VOC) by EPA SW-846 Method 8260B, gasoline by EPA SW-846 Method 8260, and methane by EPA RSK175		
<b>Samples and Matrix</b>	Three groundwater samples		
<b>Field Duplicate Pairs</b>	None		
<b>Field Blanks</b>	None		

### INTRODUCTION,

This checklist summarizes the Stage 2A validation performed on the subject laboratory report, in accordance with the U.S. Environmental Protection Agency (EPA) *Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use* (January 2009). Analytical data were evaluated in general accordance with the EPA *National Functional Guidelines (NFG) for Organic Superfund Methods Data Review* (November 2020).

### OVERALL EVALUATION

No results were rejected for this data package. All results are usable with the qualifications described in this checklist.

#### Data completeness:

Within Criteria	Exceedance/Notes
N	The laboratory reported water method blanks and water laboratory control samples (LCS) for TPH diesel and motor oil and TPH diesel (SG) and motor oil (SG) in solid units of milligrams per kilogram (mg/Kg), not in water units of milligrams per liter (mg/L). The laboratory was contacted to review this issue, and the laboratory confirmed water method blank and LCS samples in units of mg/Kg are incorrect and the correct units are mg/L. The laboratory provided a revised laboratory report to correct the issue.

## DATA VALIDATION CHECKLIST – STAGE 2A

### Sample preservation, receipt, and holding times:

Within Criteria	Exceedance/Notes
N	<p>All sample containers were received intact and with proper COC documentation. The cooler temperature and sample preservation (as applicable) were verified upon receipt of the samples. No custody seals were present on sample or shipping containers, but no qualifications were applied for this field oversight.</p> <p>The chain of custody requested SVOC by EPA 8270 SIM. The laboratory SVOC prep method was called 3510_BNASIM, but the laboratory analysis method was called SW8270. The laboratory was contacted, and they confirmed the samples were analyzed via EPA 8270 SIM.</p> <p>The data user should note that lead scavenger (ethylene dibromide and ethylene dichloride) by EPA methods 8011/8260 was requested on the chain of custody (COC), but the laboratory reported both ethylene dibromide and ethylene dichloride results by VOC method 8260B, and no qualifications were applied for this variance. Also, the laboratory reported ethylene dibromide as 1,2-dibromoethane and ethylene dichloride as 1,2-dichloroethane.</p> <p>All samples were subcontracted to the Atmospheric Analysis &amp; Consulting Inc. for methane by EPA RSK 175, but the subcontracted results were attached to the laboratory report. The data user should note the methane results from Atmospheric Analysis &amp; Consulting Inc are still pending and if necessary the data validation report will be revised for any methane data quality issues.</p>

### Method blanks:

Within Criteria	Exceedance/Notes
N	<p><b>TPH by 8015B</b></p> <ul style="list-style-type: none"> <li>Batch 1138120: The method blank contained 0.158 mg/L of motor oil, and the motor oil results for samples ERH2319-RHMW06 and ERH2315-RHMW08 exceeded the reporting limit, but are less than 10x the concentration of motor oil in the method blank; therefore, the motor oil result for samples ERH2319-RHMW06 and ERH2315-RHMW08 was qualified as estimated, possibly biased high (flagged J<sub>(B)</sub>). No qualification was applied to motor oil nondetect sample results.</li> </ul> <p><b>VOC by 8260B</b></p> <ul style="list-style-type: none"> <li>Batch 1138098: The method blank contained 0.27 micrograms per liter (µg/L) of n-butylbenzene, however, no qualifications were applied because the n-butylbenzene sample results were nondetect.</li> </ul> <p><b>Gasoline by 8260</b></p> <ul style="list-style-type: none"> <li>Batch 1138099: The method blanks contained 33 µg/L of gasoline; however, no qualifications were applied because the gasoline sample results were nondetect.</li> </ul>

## DATA VALIDATION CHECKLIST – STAGE 2A

### Method blanks continued:

Within Criteria	Exceedance/Notes
N	<b>TOC by 5310B</b> <ul style="list-style-type: none"> <li>Batch 1138204: The method blank contained 0.42 mg/L of TOC; however, no qualifications were applied to the TOC sample results because they exceeded the reporting limit and were greater than 10x the concentration of TOC in the method blank.</li> </ul>

### Field blanks:

Within Criteria	Exceedance/Notes
NA	

### System monitoring compounds (surrogates and labeled compounds):

Within Criteria	Exceedance/Notes
Y	

### MS/MSD:

Within Criteria	Exceedance/Notes
NA	

### Laboratory duplicates:

Within Criteria	Exceedance/Notes
NA	

## DATA VALIDATION CHECKLIST – STAGE 2A

### Field duplicates:

Within Criteria	Exceedance/Notes
NA	

### LCSs/LCSDs:

Within Criteria	Exceedance/Notes
N	The data user should note that the SVOC and VOC full analyte lists were not spiked in the laboratory control sample (LCS). The NFG requires all of the SVOC and VOC target analytes to be spiked in the LCS/LCSD, but no qualifications were applied because the laboratory achieved the method 8270 and 8260 requirements by spiking a representative subset of SVOC and VOC method-specified analytes (as opposed to all reported analytes) in the LCS/LCSD.

### Sample dilutions:

Within Criteria	Exceedance/Notes
Y	All samples were analyzed undiluted.

### Re-extraction and reanalysis:

Within Criteria	Exceedance/Notes
NA	

### MDLs/RLs:

Within Criteria	Exceedance/Notes
Y	Analytes detected between the MDL and RL were not present. The nondetect sample results are reported at the reporting limit (identified as PQL [project quantitation limit] in the laboratory report) and qualified nondetect (flagged U).

## DATA VALIDATION CHECKLIST – STAGE 2A

### Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

### Other [target analyte identification]:

Within Criteria	Exceedance/Notes
N	<b>TPH by SW8015B</b> <ul style="list-style-type: none"> <li>• The diesel result for all samples had contributions from unknown discrete peaks within the diesel quantification range; therefore, the diesel result for all samples was qualified as estimated (flagged J).</li> </ul>

### Overall Qualifications:

See results summary pages attached for changes to the laboratory qualifiers based upon this validation. The following is a list of qualifiers and definitions that may be used for the validation of this data package:

J	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
J+	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased high.
J-	The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample and may be biased low.
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated value is the approximate concentration of the analyte in the sample.
R	The sample result is rejected as unusable due to serious deficiencies in one or more quality control criteria. The analyte may or may not be present in the sample.
U	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit).
UJ	The analyte was analyzed for, but was not detected at or above the associated value (reporting limit), which is considered approximate due to deficiencies in one or more quality control criteria.



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



Talaidh Isaacs 01/22/2022

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

**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	<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	0.132 J	x	mg/L	01/03/22	22:26	SN	462602
TPH as Motor Oil	SW8015B	1	0.11	0.40	0.429 J+(B)		mg/L	01/03/22	22:26	SN	462602
			Acceptance Limits								
Pentacosane (S)	SW8015B		59 - 129		102		%	01/03/22	22:26	SN	462602

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



Talaidh Isaacs 01/22/2022

### 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

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

Prep Method:	3510_TPH SG	Prep Batch Date/Time:	1/3/22 9:29:00AM
Prep Batch ID:	1138121	Prep Analyst:	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 U	ND		mg/L	01/05/22	21:51	SN	462647
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40 U	ND		mg/L	01/05/22	21:51	SN	462647
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		107		%	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	U	ND	ug/L	12/30/21	18:45	JZ	462542
Chloromethane	SW8260B	1	0.17	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Vinyl Chloride	SW8260B	1	0.21	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Bromomethane	SW8260B	1	0.21	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Chloroethane	SW8260B	1	0.11	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Trichlorofluoromethane	SW8260B	1	0.19	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,1-Dichloroethene	SW8260B	1	0.14	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Freon 113	SW8260B	1	0.34	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Methylene Chloride	SW8260B	1	0.13	1.0	U	ND	ug/L	12/30/21	18:45	JZ	462542
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
MTBE	SW8260B	1	0.077	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
tert-Butanol	SW8260B	1	2.9	5.0	U	ND	ug/L	12/30/21	18:45	JZ	462542
DIPE	SW8260B	1	0.12	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,1-Dichloroethane	SW8260B	1	0.12	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
ETBE	SW8260B	1	0.064	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
2,2-Dichloropropane	SW8260B	1	0.094	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Bromochloromethane	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Chloroform	SW8260B	1	0.12	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Carbon Tetrachloride	SW8260B	1	0.16	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,1-Dichloropropene	SW8260B	1	0.19	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Benzene	SW8260B	1	0.065	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
TAME	SW8260B	1	0.072	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,2-Dichloroethane	SW8260B	1	0.11	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Trichloroethylene	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Dibromomethane	SW8260B	1	0.11	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,2-Dichloropropane	SW8260B	1	0.089	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Bromodichloromethane	SW8260B	1	0.076	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Toluene	SW8260B	1	0.14	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Tetrachloroethylene	SW8260B	1	0.24	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Dibromochloromethane	SW8260B	1	0.18	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,3-Dichloropropane	SW8260B	1	0.22	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
1,2-Dibromoethane	SW8260B	1	0.079	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Chlorobenzene	SW8260B	1	0.16	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542
Ethylbenzene	SW8260B	1	0.20	0.50	U	ND	ug/L	12/30/21	18:45	JZ	462542



Talaidh Isaacs 01/22/2022

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



Talaidh Isaacs 01/22/2022

### 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

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

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

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50 U	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



Talaidh Isaacs 01/22/2022

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



Talaidh Isaacs 01/22/2022

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





Talaidh Isaacs 01/22/2022

### 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



Talaidh Isaacs 01/22/2022

### 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

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

Prep Method: 3510_TPH	Prep Batch Date/Time: 1/3/22 9:22:00AM
Prep Batch ID: 1138120	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	0.209 J	x	mg/L	01/03/22	23:59	SN	462602
TPH as Motor Oil	SW8015B	1	0.11	0.40	0.650 J+(B)		mg/L	01/03/22	23:59	SN	462602
			Acceptance Limits								
Pentacosane (S)	SW8015B		59 - 129		101		%	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

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

Prep Method:	3510_TPH SG	Prep Batch Date/Time:	1/3/22 9:29:00AM
Prep Batch ID:	1138121	Prep Analyst:	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 U	ND		mg/L	01/05/22	22:14	SN	462647
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40 U	ND		mg/L	01/05/22	22:14	SN	462647
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		101		%	01/05/22	22:14	SN	462647



Talaidh Isaacs 01/22/2022

### 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

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

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



Talaidh Isaacs 01/22/2022

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



Talaidh Isaacs 01/22/2022

### 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	U	ND	ug/L	12/30/21	19:14	JZ	462542
m,p-Xylene	SW8260B	1	0.39	1.0	U	ND	ug/L	12/30/21	19:14	JZ	462542
o-Xylene	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
Styrene	SW8260B	1	0.11	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
Bromoform	SW8260B	1	0.076	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
Isopropyl Benzene	SW8260B	1	0.22	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
n-Propylbenzene	SW8260B	1	0.30	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
Bromobenzene	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
2-Chlorotoluene	SW8260B	1	0.25	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
4-Chlorotoluene	SW8260B	1	0.22	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
tert-Butylbenzene	SW8260B	1	0.26	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
sec-Butyl Benzene	SW8260B	1	0.30	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
p-Isopropyltoluene	SW8260B	1	0.27	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
n-Butylbenzene	SW8260B	1	0.27	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	U	ND	ug/L	12/30/21	19:14	JZ	462542
Hexachlorobutadiene	SW8260B	1	0.62	2.0	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	U	ND	ug/L	12/30/21	19:14	JZ	462542
Naphthalene	SW8260B	1	1.2	2.0	U	ND	ug/L	12/30/21	19:14	JZ	462542
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	U	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



Talaidh Isaacs 01/22/2022

### 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

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

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

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



Talaidh Isaacs 01/22/2022

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





Talaidh Isaacs 01/22/2022

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



Talaith Isaacs 01/22/2022

**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



Talaidh Isaacs 01/22/2022

### 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

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

Prep Method:	3510_TPH	Prep Batch Date/Time:	1/3/22	9:22:00AM
Prep Batch ID:	1138120	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	0.105 J	x	mg/L	01/04/22	0:22	SN	462602
TPH as Motor Oil	SW8015B	1	0.11	0.40 U	ND		mg/L	01/04/22	0:22	SN	462602
			Acceptance Limits								
Pentacosane (S)	SW8015B		59 - 129		94.6		%	01/04/22	0:22	SN	462602

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



Talaidh Isaacs 01/22/2022

### 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

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

Prep Method:	3510_TPH SG	Prep Batch Date/Time:	1/3/22 9:29:00AM
Prep Batch ID:	1138121	Prep Analyst:	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 U	ND		mg/L	01/05/22	22:38	SN	462647
TPH as Motor Oil (SG)	SW8015B	1	0.11	0.40 U	ND		mg/L	01/05/22	22:38	SN	462647
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		95.2		%	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

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

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



Talaidh Isaacs 01/22/2022

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



Talaidh Isaacs 01/22/2022

### 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	U	ND	ug/L	12/30/21	19:44	JZ	462542
m,p-Xylene	SW8260B	1	0.39	1.0	U	ND	ug/L	12/30/21	19:44	JZ	462542
o-Xylene	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
Styrene	SW8260B	1	0.11	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
Bromoform	SW8260B	1	0.076	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
Isopropyl Benzene	SW8260B	1	0.22	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
n-Propylbenzene	SW8260B	1	0.30	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
Bromobenzene	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,1,1,2-Tetrachloroethane	SW8260B	1	0.079	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
2-Chlorotoluene	SW8260B	1	0.25	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
4-Chlorotoluene	SW8260B	1	0.22	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
tert-Butylbenzene	SW8260B	1	0.26	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
sec-Butyl Benzene	SW8260B	1	0.30	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
p-Isopropyltoluene	SW8260B	1	0.27	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
n-Butylbenzene	SW8260B	1	0.27	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	U	ND	ug/L	12/30/21	19:44	JZ	462542
Hexachlorobutadiene	SW8260B	1	0.62	2.0	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	U	ND	ug/L	12/30/21	19:44	JZ	462542
Naphthalene	SW8260B	1	1.2	2.0	U	ND	ug/L	12/30/21	19:44	JZ	462542
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	U	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



Talaidh Isaacs 01/22/2022

### 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

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

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

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