
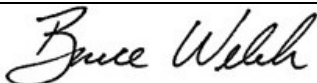


## DATA VALIDATION CHECKLIST – STAGE 2A

<b>Site Name</b>	Joint Base Pearl Harbor - Hickam	<b>Project Name</b>	Red-Hill-Incident
<b>Data Reviewer (signature and date)</b>	 Jan 24, 2022	<b>Technical Reviewer (signature and date)</b>	 Jan 26, 2022
<b>Laboratory Report No.</b>	2201105	<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 8260B, gasoline by EPA SW-846 Method 8260, and methane by EPA RSK175		
<b>Samples and Matrix</b>	One groundwater sample (ERH2420/RHMW09)		
<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 rejection or qualification of results was required for this data package. All results are usable as reported by the laboratory.

### Data completeness:

Within Criteria	Exceedance/Notes
N	The laboratory reported water method blanks and water laboratory control samples for TPH diesel and motor oil and TPH diesel (SG) and motor oil (SG) in solid units of milligrams per kilogram (mg/Kg). 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 milligrams per liter (mg/L). The laboratory provided revised laboratory reports to correct the issue.

## DATA VALIDATION CHECKLIST – STAGE 2A

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

Within Criteria	Exceedance/Notes
N	<p>All samples were subcontracted to the Atmospheric Analysis &amp; Consulting Inc. for methane by EPA RSK 175. 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> <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>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>

### Method blanks:

Within Criteria	Exceedance/Notes
N	<p><b>VOCs by 8260B</b></p> <ul style="list-style-type: none"> <li>Batch 1138434: The method blank contained 0.30 micrograms per liter (µg/L) of methylene chloride; however, no qualification was applied because the methylene chloride sample result was nondetect.</li> </ul> <p><b>Gasoline by 8260B</b></p> <ul style="list-style-type: none"> <li>Batch 1138435: The method blank contained 42 µg/L of gasoline; however, no qualification was applied because the gasoline sample result was non-detect.</li> </ul> <p><b>TOC by 5310</b></p> <ul style="list-style-type: none"> <li>Batch 1138476: The method blank contained 0.50 mg/L of TOC; however, no qualification was applied because the TOC sample result exceeded the reporting limit and is greater than 10x the concentration of TOC in the method blank.</li> </ul>

### Field blanks:

Within Criteria	Exceedance/Notes
NA	

## DATA VALIDATION CHECKLIST – STAGE 2A

### 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
Y	Laboratory duplicate analysis was performed only for the TOC analysis.

### Field duplicates:

Within Criteria	Exceedance/Notes
NA	

### LCSs/LCSDs:

Within Criteria	Exceedance/Notes
N	Only method-specified analytes (as opposed to all reported analytes) were spiked in the LCS/LCSD. 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	ERH2420/RHMMW09 was analyzed undiluted.

## DATA VALIDATION CHECKLIST – STAGE 2A

### 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). The data user should note the diesel, motor oil, diesel (SG), and motor oil (SG) reporting limits were increased due to the limited sample volume.

### Tentatively identified compounds:

Within Criteria	Exceedance/Notes
NA	

### Other [NA]:

Within Criteria	Exceedance/Notes
NA	

## DATA VALIDATION CHECKLIST – STAGE 2A

### 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.



Talaidh Isaacs 01/24/2022

### SAMPLE RESULTS

Report prepared for:

Yvonne Parry  
Tetra Tech Inc (HI)

Date/Time Received: 01/14/22, 10:55 am

Date Reported: 01/21/22

<b>Client Sample ID:</b>	ERH2420/ RHMW09	<b>Lab Sample ID:</b>	2201105-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	01/12/22 / 10:15		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/19/22 10:32:00AM
<b>Prep Batch ID:</b> 1138480	<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	01/19/22	12:40	TA	462923
N-Nitrosdimethylamine	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Aniline	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Phenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Bis(2-chloroethyl) ether	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2-Chlorophenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
1,3-Dichlorobenzene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
1,4-Dichlorobenzene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Benzyl Alcohol	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
1,2-Dichlorobenzene	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2-Methylphenol (o-Cresol)	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Bis(2-chloroisopropyl)ether	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
3-/4-Methylphenol (p-/m-Cresol)	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
N-nitroso-di-n-propylamine	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Hexachloroethane	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Nitrobenzene	SW8270	1	0.900	18 U	ND		ug/L	01/19/22	12:40	TA	462923
Isophorone	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2-Nitrophenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2,4-Dimethylphenol	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Benzoic Acid	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Bis(2-Chloroethoxy)methane	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2,4-Dichlorophenol	SW8270	1	0.180	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
1,2,4-Trichlorobenzene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2,6-Dichlorophenol	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Naphthalene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
4-Chloroaniline	SW8270	1	0.180	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Hexachloro-1,3-butadiene	SW8270	1	0.450	18 U	ND		ug/L	01/19/22	12:40	TA	462923
4-Chloro-3-methylphenol	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2-Methylnaphthalene	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
1-Methylnaphthalene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Hexachlorocyclopentadiene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2,4,6-Trichlorophenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2,4,5-Trichlorophenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2-Chloronaphthalene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
2-Nitroaniline	SW8270	1	0.900	9.0 U	ND		ug/L	01/19/22	12:40	TA	462923
1,4-Dinitrobenzene	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Dimethyl phthalate	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
1,3-Dinitrobenzene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Acenaphthylene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923



Talaidh Isaacs 01/24/2022

### SAMPLE RESULTS

Report prepared for:

Yvonne Parry  
Tetra Tech Inc (HI)

Date/Time Received: 01/14/22, 10:55 am

Date Reported: 01/21/22

<b>Client Sample ID:</b>	ERH2420/ RHMW09	<b>Lab Sample ID:</b>	2201105-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	01/12/22 / 10:15		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/19/22 10:32:00AM
<b>Prep Batch ID:</b> 1138480	<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	01/19/22	12:40	TA	462923
1,2-Dinitrobenzene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
3-Nitroaniline	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Acenaphthene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2,4-Dinitrophenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
4-Nitrophenol	SW8270	1	0.900	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Dibenzofuran	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
2,4-Dinitrotoluene	SW8270	1	0.180	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2,3,5,6-Tetrachlorophenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
2,3,4,6-Tetrachlorophenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Diethylphthalate	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Fluorene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
4-Chlorophenyl phenyl ether	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
4-Nitroaniline	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
4,6-Dinitro-2-methylphenol	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Diphenylamine	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Azobenzene	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
4-Bromophenyl phenyl ether	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Hexachlorobenzene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Pentachlorophenol	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Phenanthrene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Anthracene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Carbazole	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Di-n-butylphthalate	SW8270	1	0.450	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Fluoranthene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Benzidine	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Pyrene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Benzyl butyl phthalate	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Benz[a]anthracene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
3,3-Dichlorobenzidine	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Chrysene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Bis(2-Ethylhexyl)phthalate	SW8270	1	0.180	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Di-n-octyl phthalate	SW8270	1	0.180	3.6 U	ND		ug/L	01/19/22	12:40	TA	462923
Benzo[b]fluoranthene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Benzo[k]fluoranthene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Benzo[a]pyrene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Indeno[1,2,3-cd]pyrene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Dibenz[a,h]anthracene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923
Benzo[g,h,i]perylene	SW8270	1	0.180	0.54 U	ND		ug/L	01/19/22	12:40	TA	462923



Talaidh Isaacs 01/24/2022

### SAMPLE RESULTS

Report prepared for:

Yvonne Parry  
Tetra Tech Inc (HI)

Date/Time Received: 01/14/22, 10:55 am

Date Reported: 01/21/22

<b>Client Sample ID:</b>	ERH2420/ RHMW09	<b>Lab Sample ID:</b>	2201105-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	01/12/22 / 10:15		
<b>SDG:</b>			

<b>Prep Method:</b> 3510_BNASIM	<b>Prep Batch Date/Time:</b> 1/19/22 10:32:00AM
<b>Prep Batch ID:</b> 1138480	<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>44.9</b>		%	01/19/22	12:40	TA	462923
Phenol-d6 (S)	SW8270		15 - 100		<b>24.7</b>		%	01/19/22	12:40	TA	462923
Nitrobenzene-d5 (S)	SW8270		30 - 100		<b>92.0</b>		%	01/19/22	12:40	TA	462923
2-Fluorobiphenyl (S)	SW8270		30 - 105		<b>102</b>		%	01/19/22	12:40	TA	462923
2,4,6-Tribromophenol (S)	SW8270		15 - 125		<b>125</b>		%	01/19/22	12:40	TA	462923
p-Terphenyl-d14 (S)	SW8270		30 - 125		<b>102</b>		%	01/19/22	12:40	TA	462923





Talaidh Isaacs 01/24/2022

**SAMPLE RESULTS**

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

Date/Time Received: 01/14/22, 10:55 am  
Date Reported: 01/21/22

Client Sample ID:	ERH2420/ RHMW09	Lab Sample ID:	2201105-001A
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/12/22 / 10:15		
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	0.044	0.12 U	ND	x	mg/L	01/20/22	21:24	SN	462914
TPH as Motor Oil	SW8015B	1	0.13	0.47 U	ND		mg/L	01/20/22	21:24	SN	462914
			Acceptance Limits								
Pentacosane (S)	SW8015B		59 - 129		94.2		%	01/20/22	21:24	SN	462914

**NOTE:** Reporting limits increased due to limited sample available for extraction  
x- Diesel result due to unknown organics within diesel quantified range



Talaidh Isaacs 01/24/2022

**SAMPLE RESULTS**

Report prepared for:

Yvonne Parry  
Tetra Tech Inc (HI)

Date/Time Received: 01/14/22, 10:55 am  
Date Reported: 01/21/22

<b>Client Sample ID:</b>	ERH2420/ RHMW09	<b>Lab Sample ID:</b>	2201105-001A
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	01/12/22 / 10:15		
<b>SDG:</b>			

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

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH as Diesel (SG)	SW8015B	1	0.044	0.12 U	ND		mg/L	01/21/22	11:12	SN	462952
TPH as Motor Oil (SG)	SW8015B	1	0.13	0.47 U	ND		mg/L	01/21/22	11:12	SN	462952
			Acceptance Limits								
Pentacosane (S)	SW8015B		40 - 129		83.7		%	01/21/22	11:12	SN	462952

**NOTE:** Reporting limits increased due to limited sample available for extraction



Talaidh Isaacs 01/24/2022

### SAMPLE RESULTS

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

Date/Time Received: 01/14/22, 10:55 am  
Date Reported: 01/21/22

Client Sample ID:	ERH2420/ RHMW09	Lab Sample ID:	2201105-001B
Project Name/Location:	HDOH Red Hill	Sample Matrix:	Water
Project Number:	103S518817512		
Date/Time Sampled:	01/12/22 / 10:15		
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	11.0		mg/L	01/18/22	15:20	ERR	462875



Talaidh Isaacs 01/24/2022

### SAMPLE RESULTS

Report prepared for:

Yvonne Parry  
Tetra Tech Inc (HI)

Date/Time Received: 01/14/22, 10:55 am

Date Reported: 01/21/22

<b>Client Sample ID:</b>	ERH2420/ RHMW09	<b>Lab Sample ID:</b>	2201105-001C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	01/12/22 / 10:15		
<b>SDG:</b>			

<b>Prep Method:</b> 5030VOC	<b>Prep Batch Date/Time:</b> 1/14/22 11:45:00AM
<b>Prep Batch ID:</b> 1138434	<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	01/14/22	19:25	JZ	462836
Chloromethane	SW8260B	1	0.17	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Vinyl Chloride	SW8260B	1	0.21	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Bromomethane	SW8260B	1	0.21	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Chloroethane	SW8260B	1	0.11	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Trichlorofluoromethane	SW8260B	1	0.19	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,1-Dichloroethene	SW8260B	1	0.14	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Freon 113	SW8260B	1	0.34	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Methylene Chloride	SW8260B	1	0.13	1.0	U ND		ug/L	01/14/22	19:25	JZ	462836
trans-1,2-Dichloroethene	SW8260B	1	0.16	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
MTBE	SW8260B	1	0.077	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
tert-Butanol	SW8260B	1	2.9	5.0	U ND		ug/L	01/14/22	19:25	JZ	462836
DIPE	SW8260B	1	0.12	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,1-Dichloroethane	SW8260B	1	0.12	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
ETBE	SW8260B	1	0.064	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
cis-1,2-Dichloroethene	SW8260B	1	0.15	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
2,2-Dichloropropane	SW8260B	1	0.094	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Bromochloromethane	SW8260B	1	0.15	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Chloroform	SW8260B	1	0.12	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Carbon Tetrachloride	SW8260B	1	0.16	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,1,1-Trichloroethane	SW8260B	1	0.16	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,1-Dichloropropene	SW8260B	1	0.19	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Benzene	SW8260B	1	0.065	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
TAME	SW8260B	1	0.072	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,2-Dichloroethane	SW8260B	1	0.11	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Trichloroethylene	SW8260B	1	0.15	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Dibromomethane	SW8260B	1	0.11	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,2-Dichloropropane	SW8260B	1	0.089	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Bromodichloromethane	SW8260B	1	0.076	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
cis-1,3-Dichloropropene	SW8260B	1	0.078	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Toluene	SW8260B	1	0.14	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Tetrachloroethylene	SW8260B	1	0.24	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
trans-1,3-Dichloropropene	SW8260B	1	0.22	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,1,2-Trichloroethane	SW8260B	1	0.076	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Dibromochloromethane	SW8260B	1	0.18	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,3-Dichloropropane	SW8260B	1	0.22	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
1,2-Dibromoethane	SW8260B	1	0.079	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Chlorobenzene	SW8260B	1	0.16	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836
Ethylbenzene	SW8260B	1	0.20	0.50	U ND		ug/L	01/14/22	19:25	JZ	462836



Talaidh Isaacs 01/24/2022

**SAMPLE RESULTS**

Report prepared for:

Yvonne Parry  
Tetra Tech Inc (HI)

Date/Time Received: 01/14/22, 10:55 am

Date Reported: 01/21/22

<b>Client Sample ID:</b>	ERH2420/ RHMW09	<b>Lab Sample ID:</b>	2201105-001C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	01/12/22 / 10:15		
<b>SDG:</b>			

<b>Prep Method:</b> 5030VOC	<b>Prep Batch Date/Time:</b> 1/14/22 11:45:00AM
<b>Prep Batch ID:</b> 1138434	<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	01/14/22	19:25	JZ	462836
m,p-Xylene	SW8260B	1	0.39	1.0	U	ND	ug/L	01/14/22	19:25	JZ	462836
o-Xylene	SW8260B	1	0.15	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
Styrene	SW8260B	1	0.11	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
Bromoform	SW8260B	1	0.076	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
Isopropyl Benzene	SW8260B	1	0.22	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
n-Propylbenzene	SW8260B	1	0.30	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
Bromobenzene	SW8260B	1	0.15	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,1,2,2-Tetrachloroethane	SW8260B	1	0.079	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
2-Chlorotoluene	SW8260B	1	0.25	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,3,5-Trimethylbenzene	SW8260B	1	0.24	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,2,3-Trichloropropane	SW8260B	1	0.15	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
4-Chlorotoluene	SW8260B	1	0.22	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
tert-Butylbenzene	SW8260B	1	0.26	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,2,4-Trimethylbenzene	SW8260B	1	0.23	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
sec-Butyl Benzene	SW8260B	1	0.30	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
p-Isopropyltoluene	SW8260B	1	0.27	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,3-Dichlorobenzene	SW8260B	1	0.17	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,4-Dichlorobenzene	SW8260B	1	0.18	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
n-Butylbenzene	SW8260B	1	0.27	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,2-Dichlorobenzene	SW8260B	1	0.16	0.50	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,2-Dibromo-3-Chloropropane	SW8260B	1	0.76	2.0	U	ND	ug/L	01/14/22	19:25	JZ	462836
Hexachlorobutadiene	SW8260B	1	0.62	2.0	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,2,4-Trichlorobenzene	SW8260B	1	0.93	2.0	U	ND	ug/L	01/14/22	19:25	JZ	462836
Naphthalene	SW8260B	1	1.2	2.0	U	ND	ug/L	01/14/22	19:25	JZ	462836
1,2,3-Trichlorobenzene	SW8260B	1	1.2	2.0	U	ND	ug/L	01/14/22	19:25	JZ	462836
(S) Dibromofluoromethane	SW8260B		61.2 - 131			<b>106</b>	%	01/14/22	19:25	JZ	462836
(S) Toluene-d8	SW8260B		75.1 - 127			<b>94.5</b>	%	01/14/22	19:25	JZ	462836
(S) 4-Bromofluorobenzene	SW8260B		64.1 - 120			<b>95.3</b>	%	01/14/22	19:25	JZ	462836



Talaith Isaacs 01/24/2022

**SAMPLE RESULTS**

Report prepared for:

Yvonne Parry  
Tetra Tech Inc (HI)

Date/Time Received: 01/14/22, 10:55 am

Date Reported: 01/21/22

<b>Client Sample ID:</b>	ERH2420/ RHMW09	<b>Lab Sample ID:</b>	2201105-001C
<b>Project Name/Location:</b>	HDOH Red Hill	<b>Sample Matrix:</b>	Water
<b>Project Number:</b>	103S518817512		
<b>Date/Time Sampled:</b>	01/12/22 / 10:15		
<b>SDG:</b>			

<b>Prep Method:</b> 5030GRO	<b>Prep Batch Date/Time:</b> 1/14/22 11:45:00AM
<b>Prep Batch ID:</b> 1138435	<b>Prep Analyst:</b> JZHAO

Parameters:	Analysis Method	DF	MDL	PQL	Results	Q	Units	Analyzed	Time	By	Analytical Batch
TPH(Gasoline)	8260TPH	1	29	50 U	ND		ug/L	01/14/22	19:25	JZ	462836
(S) 4-Bromofluorobenzene	8260TPH		41.5 - 125		71.3		%	01/14/22	19:25	JZ	462836