



# ANALYTICAL REPORT

## PREPARED FOR

Attn: Terri Choy  
AECOM  
1001 Bishop Street  
Honolulu, Hawaii 96813  
Generated 1/4/2023 3:22:36 PM

## JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

## JOB NUMBER

580-121397-1

## Job Notes

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

## Authorization



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Authorized for release by  
Marie Walker, Senior Project Manager  
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(253)248-4972



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# Case Narrative

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Job ID: 580-121397-1**

**Laboratory: Eurofins Seattle**

## Narrative

### CASE NARRATIVE

Client: AECOM

Project: Red Hill - AFFF Assessment Sampling

Report Number: 580-121397-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

### RECEIPT

Four samples were received on 12/17/2022 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

### GLYCOLS - 2-(2-BUTOXYETHOXY)ETHANOL

Samples ADIT6-DU05-SON01MI-22DEC (580-121397-1), ADIT6-DU06-SON01MI-22DEC (580-121397-2), ADIT6-DU07-SON01MI-22DEC (580-121397-3) and ADIT6-DU08-SON01MI-22DEC (580-121397-4) were analyzed for glycols in accordance with EPA SW-846 Method 8015C DAI. The samples were leached on 12/28/2022 and analyzed on 12/29/2022.

The continuing calibration verification (CCV) associated with batch 680-757248 recovered outside acceptance criteria, low biased, for 2-(2-Butoxyethoxy)ethanol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for the analyte, the data has been reported.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 680-757073 and analytical batch 680-757248 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Samples ADIT6-DU05-SON01MI-22DEC (580-121397-1)[10X] and ADIT6-DU07-SON01MI-22DEC (580-121397-3)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

### PERCENT SOLIDS

Samples ADIT6-DU05-SON01MI-22DEC (580-121397-1), ADIT6-DU06-SON01MI-22DEC (580-121397-2), ADIT6-DU07-SON01MI-22DEC (580-121397-3) and ADIT6-DU08-SON01MI-22DEC (580-121397-4) were analyzed for percent solids in accordance with ASTM D2216. The samples were analyzed on 12/28/2022.

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

# Definitions/Glossary

Client: AECOM

Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

## Qualifiers

### GC Semi VOA

Qualifier	Qualifier Description
J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.
Q	One or more quality control criteria failed.
U	Undetected at the Limit of Detection.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Client Sample Results

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU05-SON01MI-22DEC**

**Lab Sample ID: 580-121397-1**

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/17/22 09:00

## General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	18.2		0.01	0.01	%			12/28/22 13:21	1
Percent Solids (EPA Moisture)	81.8		0.01	0.01	%			12/28/22 13:21	1

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# Client Sample Results

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU05-SON01MI-22DEC**

**Lab Sample ID: 580-121397-1**

**Date Collected: 12/15/22 15:10**

**Matrix: Solid**

**Date Received: 12/17/22 09:00**

**Percent Solids: 81.8**

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID) - Soluble**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	27	U J1 Q M	90	11	mg/Kg	☼		12/29/22 14:50	10

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# Client Sample Results

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU06-SON01MI-22DEC**

**Lab Sample ID: 580-121397-2**

Date Collected: 12/15/22 14:40

Matrix: Solid

Date Received: 12/17/22 09:00

## General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	21.0		0.01	0.01	%			12/28/22 13:21	1
Percent Solids (EPA Moisture)	79.0		0.01	0.01	%			12/28/22 13:21	1

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# Client Sample Results

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU06-SON01MI-22DEC**

**Lab Sample ID: 580-121397-2**

**Date Collected: 12/15/22 14:40**

**Matrix: Solid**

**Date Received: 12/17/22 09:00**

**Percent Solids: 79.0**

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID) - Soluble**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	1.9	U Q M	6.3	0.78	mg/Kg	☼		12/29/22 15:58	1

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# Client Sample Results

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU07-SON01MI-22DEC**

**Lab Sample ID: 580-121397-3**

Date Collected: 12/15/22 14:55

Matrix: Solid

Date Received: 12/17/22 09:00

## General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	26.7		0.01	0.01	%			12/28/22 13:21	1
Percent Solids (EPA Moisture)	73.3		0.01	0.01	%			12/28/22 13:21	1

# Client Sample Results

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU07-SON01MI-22DEC**

**Lab Sample ID: 580-121397-3**

**Date Collected: 12/15/22 14:55**

**Matrix: Solid**

**Date Received: 12/17/22 09:00**

**Percent Solids: 73.3**

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID) - Soluble**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	29	U Q	98	12	mg/Kg	☼		12/29/22 16:21	10

- 1
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# Client Sample Results

Client: AECOM

Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

**Client Sample ID: ADIT6-DU08-SON01MI-22DEC**

**Lab Sample ID: 580-121397-4**

Date Collected: 12/15/22 11:32

Matrix: Solid

Date Received: 12/17/22 09:00

## General Chemistry

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	18.5		0.01	0.01	%			12/28/22 13:21	1
Percent Solids (EPA Moisture)	81.5		0.01	0.01	%			12/28/22 13:21	1

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# Client Sample Results

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU08-SON01MI-22DEC**

**Lab Sample ID: 580-121397-4**

Date Collected: 12/15/22 11:32

Matrix: Solid

Date Received: 12/17/22 09:00

Percent Solids: 81.5

**Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID) - Soluble**

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	2.6	U Q	8.8	1.1	mg/Kg	☼		12/29/22 16:43	1

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# QC Sample Results

Client: AECOM  
 Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

## Method: 8015C GLY - Glycols - Direct Injection (GC/FID)

**Lab Sample ID: MB 680-757073/1-A**  
**Matrix: Solid**  
**Analysis Batch: 757248**

**Client Sample ID: Method Blank**  
**Prep Type: Soluble**

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	1.4	U	4.7	0.58	mg/Kg			12/29/22 14:28	1

**Lab Sample ID: LCS 680-757073/2-A**  
**Matrix: Solid**  
**Analysis Batch: 757248**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Soluble**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	39.5	39.1		mg/Kg		99	50 - 150

**Lab Sample ID: LCSD 680-757073/3-A**  
**Matrix: Solid**  
**Analysis Batch: 757248**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Soluble**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	37.9	45.0		mg/Kg		119	50 - 150	14	50

**Lab Sample ID: 580-121397-1 MS**  
**Matrix: Solid**  
**Analysis Batch: 757248**

**Client Sample ID: ADIT6-DU05-SON01MI-22DEC**  
**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	27	U J1 Q M	22.9	26	U J1 M	mg/Kg	☼	0	50 - 150

**Lab Sample ID: 580-121397-1 MSD**  
**Matrix: Solid**  
**Analysis Batch: 757248**

**Client Sample ID: ADIT6-DU05-SON01MI-22DEC**  
**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	27	U J1 Q M	22.9	2.6	U M J1	mg/Kg	☼	0	50 - 150	NC	50

**Lab Sample ID: 580-121397-1 DU**  
**Matrix: Solid**  
**Analysis Batch: 757248**

**Client Sample ID: ADIT6-DU05-SON01MI-22DEC**  
**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	27	U J1 Q M	22.9	27	U M Q	mg/Kg	☼			NC	50

**Lab Sample ID: 580-121397-1 TRL**  
**Matrix: Solid**  
**Analysis Batch: 757248**

**Client Sample ID: ADIT6-DU05-SON01MI-22DEC**  
**Prep Type: Soluble**

Analyte	Sample Result	Sample Qualifier	Spike Added	TRL Result	TRL Qualifier	Unit	D	%Rec	%Rec Limits	RSD	RSD Limit
2-(2-Butoxyethoxy)ethanol	27	U J1 Q M	22.9	27	U Q	mg/Kg	☼			NC	50

# Lab Chronicle

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU05-SON01MI-22DEC**

**Lab Sample ID: 580-121397-1**

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/17/22 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	757069	KF	EET SAV	12/28/22 13:21

**Client Sample ID: ADIT6-DU05-SON01MI-22DEC**

**Lab Sample ID: 580-121397-1**

Date Collected: 12/15/22 15:10

Matrix: Solid

Date Received: 12/17/22 09:00

Percent Solids: 81.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			757073	GEM	EET SAV	12/28/22 11:59
Soluble	Analysis	8015C GLY		10	757248	JCK	EET SAV	12/29/22 14:50

**Client Sample ID: ADIT6-DU06-SON01MI-22DEC**

**Lab Sample ID: 580-121397-2**

Date Collected: 12/15/22 14:40

Matrix: Solid

Date Received: 12/17/22 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	757069	KF	EET SAV	12/28/22 13:21

**Client Sample ID: ADIT6-DU06-SON01MI-22DEC**

**Lab Sample ID: 580-121397-2**

Date Collected: 12/15/22 14:40

Matrix: Solid

Date Received: 12/17/22 09:00

Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			757073	GEM	EET SAV	12/28/22 11:59
Soluble	Analysis	8015C GLY		1	757248	JCK	EET SAV	12/29/22 15:58

**Client Sample ID: ADIT6-DU07-SON01MI-22DEC**

**Lab Sample ID: 580-121397-3**

Date Collected: 12/15/22 14:55

Matrix: Solid

Date Received: 12/17/22 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	757069	KF	EET SAV	12/28/22 13:21

**Client Sample ID: ADIT6-DU07-SON01MI-22DEC**

**Lab Sample ID: 580-121397-3**

Date Collected: 12/15/22 14:55

Matrix: Solid

Date Received: 12/17/22 09:00

Percent Solids: 73.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Soluble	Leach	DI Leach			757073	GEM	EET SAV	12/28/22 11:59
Soluble	Analysis	8015C GLY		10	757248	JCK	EET SAV	12/29/22 16:21

**Client Sample ID: ADIT6-DU08-SON01MI-22DEC**

**Lab Sample ID: 580-121397-4**

Date Collected: 12/15/22 11:32

Matrix: Solid

Date Received: 12/17/22 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	757069	KF	EET SAV	12/28/22 13:21

Eurofins Seattle

# Lab Chronicle

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Client Sample ID: ADIT6-DU08-SON01MI-22DEC**

**Lab Sample ID: 580-121397-4**

**Date Collected: 12/15/22 11:32**

**Matrix: Solid**

**Date Received: 12/17/22 09:00**

**Percent Solids: 81.5**

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Analyst</u>	<u>Lab</u>	<u>Prepared or Analyzed</u>
Soluble	Leach	DI Leach			757073	GEM	EET SAV	12/28/22 11:59
Soluble	Analysis	8015C GLY		1	757248	JCK	EET SAV	12/29/22 16:43

**Laboratory References:**

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858





# Accreditation/Certification Summary

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

## Laboratory: Eurofins Savannah

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2463	09-22-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8015C GLY		Solid	2-(2-Butoxyethoxy)ethanol
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

# Sample Summary

Client: AECOM  
Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-121397-1	ADIT6-DU05-SON01MI-22DEC	Solid	12/15/22 15:10	12/17/22 09:00
580-121397-2	ADIT6-DU06-SON01MI-22DEC	Solid	12/15/22 14:40	12/17/22 09:00
580-121397-3	ADIT6-DU07-SON01MI-22DEC	Solid	12/15/22 14:55	12/17/22 09:00
580-121397-4	ADIT6-DU08-SON01MI-22DEC	Solid	12/15/22 11:32	12/17/22 09:00

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**Eurofins FGS, Seattle**

5755 8th Street East  
Tacoma, WA 98424

**Chain of Custody Record**

eurofins | Environment Testing  
America

<b>Client Information</b>		Sampler: <u>Mitch Beebe</u>		Lab PM: Elaine Walker		Carrier Tracking No(s): FedEx		COC No: 01-221215-23F0104-EUSea																																					
Client Contact:		Phone: <u>509 554 0877</u>		E-Mail: M.Elaine.Walker@EurofinsET.com		State of Origin: Hawaii		Page: Page 1 of 1																																					
Company: AECOM		PWSID:		<b>Analysis Requested</b>						Job #:																																			
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract		<table border="1"> <tr> <td rowspan="5">Field Filtered Sample (Yes or No)</td> <td rowspan="5">Perform MS/MSD (Yes or No)</td> <td rowspan="5">8018C, DA1, GL, D5, 2-(2-butoxyethoxy)-ethanol</td> <td colspan="6">MD 12/15/22</td> <td rowspan="5">Total Number of Containers</td> </tr> <tr><td colspan="6"> </td></tr> <tr><td colspan="6"> </td></tr> <tr><td colspan="6"> </td></tr> <tr><td colspan="6"> </td></tr> </table>						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8018C, DA1, GL, D5, 2-(2-butoxyethoxy)-ethanol	MD 12/15/22						Total Number of Containers																									Preservation Codes:	
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8018C, DA1, GL, D5, 2-(2-butoxyethoxy)-ethanol	MD 12/15/22										Total Number of Containers																																
City: Honolulu		TAT Requested (days): <b>Rush - ASAP</b>		A - HCL		M - Hexane		B - NaOH		N - None																																			
State, Zip: Hawaii 96813		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		C - Zn Acetate		O - AsNaO2		D - Nitric Acid		P - Na2O4S																																			
Phone: 808-954-4512 / 808-356-5311		PO #:		E - NaHSO4		Q - Na2SO3		F - MeOH		R - Na2S2O3																																			
Email: Watson Tanji (watson.tanji@aecom.com) / Brant Landers (brant.landiers@aecom.com)		WO #:		G - Amchlor		S - H2SO4		H - Ascorbic Acid		T - TSP Dodecahydrate																																			
Project Name: CTO N6274223F0104		Project #: 60697810		I - Ice		U - Acetone		J - DI Water		V - MCAA																																			
Site: RHSF		SSOW#:		K - EDTA		W - pH 4-5		L - EDA		Z - other (specify)																																			
<b>Sample Identification</b>		Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, As=Air)		Other:																																			
ADIT6-DU05-SON01MI-22DEC		12/15/22		1510		G		S		N N X																																			
ADIT6-DU06-SON01MI-22DEC		12/15/22		1440		G		S		N N X																																			
ADIT6-DU07-SON01MI-22DEC		12/15/22		1455		G		S		N N X																																			
ADIT6-DU08-SON01MI-22DEC		12/15/22		1132		G		S		N N X																																			
Special Instructions/Note:																																													
										1 Store ALL samples until notified by client to dispose																																			
										1																																			
										1																																			
										1																																			
Therm ID: <u>A3</u> Cor: <u>1.8</u> ° Unc: <u>1.7</u> °		Cooler Dsc: <u>LB</u>		FedEx: <u>P.O</u>		Packing: <u> </u>		UPS: <u> </u>																																					
Cust. Seal: <u>Yes</u> / <u>No</u>		Blue Ice, <u>Wet</u> , Dry, None		Lab Cour: <u> </u>		Other: <u> </u>																																							
<b>Possible Hazard Identification</b>		<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>																																									
Deliverable Requested: I, II, III, IV, Other (specify)		Prelim data (Level 1or2)=see TAT above, DoD Stage 4 report standard TAT, AECOM EQHS EDD		<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements: DOD QSM project.																																							
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:																																							
Relinquished by: <u>Mitch Beebe</u>		Date/Time: <u>12/15/22 1600</u>		Company: <u>AECOM</u>		Received by: <u>Miranda DeFarms</u>		Date/Time: <u>12/15/22 1600</u>		Company: <u>AECOM</u>																																			
Relinquished by: <u>Miranda DeFarms</u>		Date/Time: <u>12/16/22 1300</u>		Company: <u>AECOM</u>		Received by: <u> </u>		Date/Time: <u>12/17/22 0900</u>		Company: <u> </u>																																			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: <u> </u>		Cooler: <u> </u>																																									



**Eurofins FGS, Seattle**

5755 8th Street East  
Tacoma, WA 98424

**Chain of Custody Record**



<b>Client Information</b>		Sampler: <u>Mitch Beebe</u>		Lab PM: Elaine Walker		Carrier Tracking No(s): FedEx		COC No: 01-221215-23F0104-EUSea						
Client Contact:		Phone: <u>509 554 0877</u>		E-Mail: M.Elaine.Walker@EurofinsET.com		State of Origin: Hawaii		Page: Page 1 of 1						
Company: AECOM		PWSID:		<b>Analysis Requested</b>					Job #:					
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> 8018C, DAL, GL, DS, 2-(2-butoxyethoxy)-ethanol					Total Number of containers: Preservation Codes: A - HCL                      M - Hexane B - NaOH                    N - None C - Zn Acetate              O - AsNaO2 D - Nitric Acid              P - Na2O4S E - NaHSO4                  Q - Na2SO3 F - MeOH                     R - Na2S2O3 G - Amchlor                 S - H2SO4 H - Ascorbic Acid          T - TSP Dodecahydrate I - Ice                         U - Acetone J - DI Water                 V - MCAA K - EDTA                     W - pH 4-5 L - EDA                        Z - other (specify)					
City: Honolulu		TAT Requested (days): <b>Rush - ASAP</b>												
State, Zip: Hawaii 96813		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No												
Phone: 808-954-4512 / 808-356-5311		PO #:												
Email: Watson Tanji (watson.tanji@aecom.com) / Brant Landers (brant.landiers@aecom.com)		WO #:												
Project Name: CTO N6274223F0104		Project #: 60697810		MD 12/15/22					Other:					
Site: RHSF		SSOW#:												
<b>Sample Identification</b>		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, As=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8018C	DAL	GL	DS	2-(2-butoxyethoxy)-ethanol	Total Number of containers	Special Instructions/Note:
ADIT6-DU05-SON01MI-22DEC		12/15/22	1510	G	S	N	N	X					1	Store ALL samples until notified by client to dispose
ADIT6-DU06-SON01MI-22DEC		12/15/22	1440	G	S	N	N	X					1	
ADIT6-DU07-SON01MI-22DEC		12/15/22	1455	G	S	N	N	X					1	
ADIT6-DU08-SON01MI-22DEC		12/15/22	1132	G	S	N	N	X					1	





# Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-121397-1

**Login Number: 121397**

**List Number: 1**

**Creator: Presley, Kim A**

**List Source: Eurofins Seattle**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-121397-1

**Login Number: 121397**

**List Number: 2**

**Creator: Sims, Robert D**

**List Source: Eurofins Savannah**

**List Creation: 12/23/22 11:46 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	