

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Terri Choy
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813

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JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-121547-1

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
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Case Narrative

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

Job ID: 580-121547-1

Job ID: 580-121547-1

Laboratory: Eurofins Seattle

Narrative

CASE NARRATIVE

Client: AECOM

Project: Red Hill - AFFF Assessment Sampling

Report Number: 580-121547-1

REVISION 1: DECEMBER 30, 2022

Report revised to add the fully relinquished COC to the report.

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.

Following DoD QSM guidelines, manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: Q-S-002. The reason(s) for manual integration have been documented on the affected chromatogram(s), which is/are provided in the raw data package. The raw data also includes the original chromatogram(s) prior to any manual integration being performed. Manual integrations are detailed in the manual integration summary forms following this narrative.

It should be noted that samples with elevated Limits of Quantitation (LOQs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the LOQs 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 12/27/2022 12:30 PM. 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 5.6° 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 AF-RHMW17D-WGN01LF-2212W3 (580-121547-1), AF-RHMW17-WGN01LF-2212W3 (580-121547-2), AF-RHMW06-WGN01LF-2212W3 (580-121547-3) and AF-RHMW04-WGN01LF-2212W3 (580-121547-4) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. 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: 580-121547-1

Project/Site: Red Hill - AFFF Assessment Sampling

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
M	Manual integrated compound.
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: 580-121547-1

Client Sample ID: AF-RHMW17D-WGN01LF-2212W3

Lab Sample ID: 580-121547-1

Date Collected: 12/22/22 17:40

Matrix: Water

Date Received: 12/27/22 10:44

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M	5.0	1.1	mg/L			12/28/22 17:53	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Client Sample Results

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

Job ID: 580-121547-1

Client Sample ID: AF-RHMW17-WGN01LF-2212W3

Lab Sample ID: 580-121547-2

Date Collected: 12/22/22 16:10

Matrix: Water

Date Received: 12/27/22 10:44

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U M	5.0	1.1	mg/L			12/28/22 18:15	1

1

2

3

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10

Client Sample Results

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

Job ID: 580-121547-1

Client Sample ID: AF-RHMW06-WGN01LF-2212W3

Lab Sample ID: 580-121547-3

Date Collected: 12/22/22 11:40

Matrix: Water

Date Received: 12/27/22 10:44

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			12/28/22 18:38	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

Client Sample Results

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

Job ID: 580-121547-1

Client Sample ID: AF-RHMW04-WGN01LF-2212W3

Lab Sample ID: 580-121547-4

Date Collected: 12/22/22 14:05

Matrix: Water

Date Received: 12/27/22 10:44

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

Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			12/28/22 19:00	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

QC Sample Results

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

Job ID: 580-121547-1

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

Lab Sample ID: MB 680-757067/16
Matrix: Water
Analysis Batch: 757067

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	3.0	U	5.0	1.1	mg/L			12/28/22 17:08	1

Lab Sample ID: LCS 680-757067/12
Matrix: Water
Analysis Batch: 757067

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	20.0	20.5		mg/L		102	50 - 150

Lab Sample ID: LCSD 680-757067/13
Matrix: Water
Analysis Batch: 757067

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	20.0	20.8		mg/L		104	50 - 150	2	50

Lab Sample ID: 580-121547-4 MS
Matrix: Water
Analysis Batch: 757067

Client Sample ID: AF-RHMW04-WGN01LF-2212W3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-(2-Butoxyethoxy)ethanol	3.0	U	20.0	16.9		mg/L		84	50 - 150

Lab Sample ID: 580-121547-4 MSD
Matrix: Water
Analysis Batch: 757067

Client Sample ID: AF-RHMW04-WGN01LF-2212W3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-(2-Butoxyethoxy)ethanol	3.0	U	20.0	20.3		mg/L		101	50 - 150	18	50

Lab Chronicle

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

Job ID: 580-121547-1

Client Sample ID: AF-RHMW17D-WGN01LF-2212W3

Lab Sample ID: 580-121547-1

Date Collected: 12/22/22 17:40

Matrix: Water

Date Received: 12/27/22 10:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	757067	GEM	EET SAV	12/28/22 17:53

Client Sample ID: AF-RHMW17-WGN01LF-2212W3

Lab Sample ID: 580-121547-2

Date Collected: 12/22/22 16:10

Matrix: Water

Date Received: 12/27/22 10:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	757067	GEM	EET SAV	12/28/22 18:15

Client Sample ID: AF-RHMW06-WGN01LF-2212W3

Lab Sample ID: 580-121547-3

Date Collected: 12/22/22 11:40

Matrix: Water

Date Received: 12/27/22 10:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	757067	GEM	EET SAV	12/28/22 18:38

Client Sample ID: AF-RHMW04-WGN01LF-2212W3

Lab Sample ID: 580-121547-4

Date Collected: 12/22/22 14:05

Matrix: Water

Date Received: 12/27/22 10:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	757067	GEM	EET SAV	12/28/22 19:00

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: 580-121547-1

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		Water	2-(2-Butoxyethoxy)ethanol



Sample Summary

Client: AECOM

Job ID: 580-121547-1

Project/Site: Red Hill - AFFF Assessment Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-121547-1	AF-RHMW17D-WGN01LF-2212W3	Water	12/22/22 17:40	12/27/22 10:44
580-121547-2	AF-RHMW17-WGN01LF-2212W3	Water	12/22/22 16:10	12/27/22 10:44
580-121547-3	AF-RHMW06-WGN01LF-2212W3	Water	12/22/22 11:40	12/27/22 10:44
580-121547-4	AF-RHMW04-WGN01LF-2212W3	Water	12/22/22 14:05	12/27/22 10:44

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Due Date Requested: See Subcontract		Analysis Requested	
TAT Requested (days): Rush - ASAP			
Compliance Project: 1 Yes 1 No			
PO #			
WO #			
Project # 60697810			
SSDW #			
Sample Date	Sample Time	Sample Type (C-comp, G-grab)	Matrix (Trace, Swab, Osmotic, Striae, Anal)
12/22/22	1740	G	W
Preservation Code: N N X		Field Filtered Sample (Yes or No) X	
Perform MS/MSO (Yes or No) X		8015C DAI GL D5/ 2-(2-butoxyethoxy)-ethanol	
Total Number of containers		3	
Special Instructions/Note:		Preservation Codes: A: HCL, B: NaOH, C: Zn Acetate, D: Nitric Acid, E: NaHSO4, F: NaOH, G: Amchlor, H: Ascorbic Acid, I: ke, J: DI Water, K: EDTA, L: EDTA, M: Hexane, N: None, O: AsH2O2, P: Na2OAS, Q: Na2SO4, R: Na2S2O8, S: H2SO4, T: TSP Dodecahydrate, U: Acetone, V: MCAA, W: pH 4.5, Z: other (specify) Other:	

Poison B Unknown Radiological

Prelim data (Level 1 or 2) - see TAT above. DOD Stage: 4 report standard TAT. AECOM EQWIS EDD.

Date: _____ Time: _____ Method of Shipment: _____

Special Instructions/OC Requirements: DOD OSM project

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Date/Time	Received by	Date/Time	Company
12/22/22	1570	12/22/22	AECOM
Date/Time	Received by	Date/Time	Company

Cooler Temperature(s) °C and Other Remarks:

Analysis Requested

Due Date Requested: See subcontract
 TAT Requested (days): Rush - ASAP
 Compliance Project: 1 Yes 1 No
 PO #
 WO #
 Project # 60697810
 SSO#

Field Filled Sample (Yes or No) Yes
 Perform MS/MSD (Yes or No) Yes

6015C DAI GL DS/2-(2-butoxyethoxy)-ethanol

Preservation Codes:
 A HCL M Hexane
 B NaOH N None
 C Zn Acetate O AsH2O2
 D Nitric Acid P H2SO4
 E NaHSO4 Q Na2SO3
 F MeOH R Na2S2O3
 G Amelcor S H2SO4
 H Acetic Acid T FSP Dodecylhydrate
 I Ice U Acetone
 J Di Water V MCAA
 K EDTA W pH 4.5
 L EDA Z dnal (Specify)
 Other:

Sample Date	Sample Time	Sample Type (Comp, Grab)	Matrix (Prep, Contaminant, Trace, Add)	Preservation Code	Field Filled Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note
12/22/22	140	G	W	N	N	N	X	3

Poison B Unknown Hydrological

Prelim data (Level 1 or 2) - see TAT above. DOD Stage 4 report standard TAT AECOM EOUIS EDD

Date: _____ Time: _____ Method of Shipment: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Received by: _____ Date/Time: 12/22/22 15:10
 Company: AECOM

Received by: _____ Date/Time: _____
 Company: _____

Cooler Temperature(s) °C and Other Remarks:

Due Date Requested: See subcontract
TAT Requested (days): Rush - ASAP
Compliance Project: Yes No
PO #:
WFO #:
Project #:
60697810
SSLOW#

Field Filtered Sample (Yes or No)
Perform MS/MSD (Yes or No)
8015C DAI GL D5/ 2 (2 butoxyethoxy)-ethanol
M.D. 12/22/22

Field Filtered Sample (Yes or No)
Perform MS/MSD (Yes or No)
8015C DAI GL D5/ 2 (2 butoxyethoxy)-ethanol

Total Number of containers: 3

Special Instructions/Note:

Preservation Coders:
A - HCl
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Acetic Acid
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - Ashland
P - Na2SO4
Q - Na2S2O3
R - Na2S2O8
S - H2SO4
T - TSP Dodecylsulfate
U - Acetone
V - MCAA
W - pH 4.5
Z - other (specify)

Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Soil, A=Air, L=Liquid, O=Other)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C DAI GL D5/ 2 (2 butoxyethoxy)-ethanol	Total Number of containers
12/22/22	1140	G	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		3
Jan. 12/22/22							

Poison B Unknown Radiological

Preim data (Level 1or2)=see TAT above. DOD Stage 4 report standard TAT_AECOM EQHS FDD

Date: _____ Time: _____ Method of shipment: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months

Date/Time	Company	Received by	Date/Time	Company
12/22/22	AECOM	MIRANDA DEBERNARDI	12/22/22	AECOM
12/22/22	AECOM		12/22/22	AECOM
12/22/22	AECOM		12/22/22	AECOM

Cooler Temperature(s) °C and Other Remarks:

Due Date Requested:
See subcontract
TAT Requested (days): **Rush - ASAP**
Compliance Project: Yes No
PO #:
W/O #:
inlandiers@aecom.com
Project # 60597910
SSOV#

Analysis Requested

Field Filtered Sample (Yes or No)
Perform MS/MSD (Yes or No)
B015C DAI GL D5/2-(2-butoxyethoxy)-ethanol

MD 12/22/22

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Anchor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4.5
Z - other (Specify)
Other:

Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Sediment, Other)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
12/22/22	1405	G	W		N	N	X	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)								
Return To Client								
Disposal By Lab								
Archive For Months								

Poison B Unknown Radiological

Prelim data (Level 102) see TAT above DOD Stage
4 report standard TAT AECOM/EQUIS EDD

Date: _____ Time: _____ Method of Shipment: _____

Date/Time	12/22/22	1510	Company	AECOM	Received by:	MIRANDA DEJARMAS	Date/Time	12/22/22	1510	Company	AECOM
Date/Time	12/24/22	1700	Company		Received by:		Date/Time			Company	

Cooler Temperature(s) °C and Other Remarks:

Chain of Custody Record

Client Information		Sample: <u>Arnon Omer</u>		Lab PM: <u>Elaine Walker</u>		Carrier Tracking No(s):		COC No:	
Client Contact:		Phone: <u>314-585-7610</u>		E-Mail: <u>M.Elaine.Walker@EurofinsET.com</u>		FedEX:		04-221222-23F0104-EUSav	
Company: <u>AECOM</u>		PWSID:		State of Origin: <u>Hawaii</u>		Page:		Page 1 of 1	
Address:		Due Date Requested: <u>see subcontract</u>		Analysis Requested:		Job #:		Preservation Codes*	
1001 Bishop St. Suite 1600		TAT Requested (days): <u>Rush - ASAP</u>		8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol		M Hexane		A HCl	
City: <u>Honolulu</u>		Compliance Project: <u>Δ Yes Δ No</u>		Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/>		N None		B NaOH	
State Zip: <u>Hawaii 96813</u>		PO #: _____		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		O Ash/O2		C Zn Acetate	
Phone: <u>808-954-4512 / 808-356-5311</u>		WO #: _____		Matrix (Water, Solid, Oil)		P Na2CO3		D Nitric Acid	
Email: <u>Watson.Tanji@aecom.com / Brant.Landers@aecom.com</u>		Project #: <u>60697810</u>		Sample Type (C=comp, G=grab)		Q Na2SO3		E MeOH	
Project Name: <u>CTO N6274223F0104</u>		SSOW#: _____		Sample Time: <u>1740</u>		R Na2SO4		F MeOH	
Site: <u>RHSF</u>		Sample Date: <u>12/22/22</u>		Preservation Code: <u>G W</u>		S H2SO4		G Anchlor	
Sample Identification		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		T TSP Dodecalhydrate		H Ascorbic Acid	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		U Acetone		I Ice	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		V MCAA		J DI Water	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		W pH 4-5		K EDTA	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Z other (specify)		L EDA	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Other:		Other:	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Special Instructions/Note:		Special Instructions/Note:	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Total Number of containers		Total Number of containers	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		3		3	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Barcode		Barcode	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		580-121547 Chain of Custody		580-121547 Chain of Custody	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Special Instructions/QC Requirements: DOD GSM project.		Special Instructions/QC Requirements: DOD GSM project.	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Empty Kit Relinquished by:		Empty Kit Relinquished by:	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Date:		Date:	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Received by: <u>Arnon Omer</u>		Received by: <u>Arnon Omer</u>	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Date/Time: <u>12/22/22 1570</u>		Date/Time: <u>12/22/22 1570</u>	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Relinquished by: <u>Arnon Omer</u>		Relinquished by: <u>Arnon Omer</u>	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Date/Time: <u>12/22/22 1400</u>		Date/Time: <u>12/22/22 1230</u>	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Relinquished by: <u>Arnon Omer</u>		Relinquished by: <u>Arnon Omer</u>	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Date/Time: _____		Date/Time: _____	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Custody Seals Intact: <u>Δ Yes Δ No</u>		Custody Seals Intact: <u>Δ Yes Δ No</u>	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Time: <u>1740</u>		Cooler Temperature(s) °C and Other Remarks: <u>5.6/3.6</u>		Cooler Temperature(s) °C and Other Remarks: <u>5.6/3.6</u>	
Sample ID		AF-RHMW17D-WGN01LF-2212W3		Sample Date: <u>12/22/22</u>		Ver: 01/16/2019		Ver: 01/16/2019	



Chain of Custody Record

Client Information Client Contact: Elaine Walker Phone: 34-585-7610 E-Mail: M.Elaine.Walker@EurofinsET.com		Lab PM: Elaine Walker E-Mail: M.Elaine.Walker@EurofinsET.com		Carrier Tracking No(s): FedEx: _____ State of Origin: Hawaii		COC No: 03-221222-23F0104-EUSav Page: 1 of 1 Job #: _____	
Due Date Requested: See subcontract TAT Requested (days): Rush - ASAP Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No PO #: _____ WO #: _____ Project #: 60697810 SSOW#: _____		Analysis Requested Total Number of Containers: 3		Preservation Codes: M Hexane N None O AsH2O2 P Na2O4S Q Na2SO3 R Na2S2O3 S H2SO4 G Arsenic H Ascorbic Acid I Ice J DI Water K EDTA L EDA Z other (specify)		Special Instructions/Note: _____ _____	
Sample Identification AF-RHMM17-WGN01LF-2212W3 Site: RH5F		Sample Date: 12/21/22 Sample Time: 1400 Sample Type: G (Grab) Matrix: (W=water, S=solid, O=organic, A=air) Preservation Code: G		Field Filtered Sample (Yes or No): 8015C_DAL_GL_DS/2-(2-butylethoxy)-ethanol Perform MS/MSD (Yes or No): TAT 12/21/22		Special Instructions/Note: _____ _____	
Possible Hazard Identification <input 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 Deliverable Requested I II III IV Other (specify) _____		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/QC Requirements: DOD GSM project.		Method of Shipment: _____	
Relinquished by: <i>Elaine Walker</i> Date: 12/22/22 Time: 1510 Company: AECOM		Relinquished by: _____ Date: 12/22/22 Time: 1400 Company: _____		Relinquished by: _____ Date: _____ Time: _____ Company: _____		Relinquished by: _____ Date: _____ Time: _____ Company: _____	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No: _____		Cooler Temperature(s) °C and Other Remarks: 5.6/5.6		Ver 01/16/2019		_____	

Chain of Custody Record

Client Information		Lab PIV		Carrier Tracking No(s)		COC No:	
Client Contact:		Elaine Walker		FedEx		01-221222-23F0104-EUSav	
Company: AECOM		E-Mail: Elaine.Walker@EurofinsET.com		State of Origin: Hawaii		Page: Page 1 of 1	
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract		Analysis Requested		Job #:	
City: Honolulu		TAT Requested (days): Rush - ASAP		8015C_DAL_GL_DS/2-(2-butylethoxy)-ethanol		Total Number of containers: 3	
State: Zip: Hawaii 96813		Compliance Project: Δ Yes Δ No		Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> A		Preservation Codes:	
Phone: 808-954-4512 / 808-356-5311		PO #:		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> A		M - Hexane N - None O - AsNaO2 P - Nitric Acid Q - Na2O4S R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Ice V - Acetone W - DI Water X - EDTA Y - EDA Z - other (specify)	
Email: Watson.Tanji@aecom.com / Brant Landers (brant.landers@aecom.com)		WO #:		Matrix: W=water, S=solid, O=water/oil, G=grab			
Project Name: CTO N6274223F0104		Project #: 60697810		Sample Time: 12/22/22 1405			
Site: RHSF		SSOW#:		Sample Date: 12/22/22			
Sample Identification: AF-RHMW04-WGN01LF-2212W/3		Sample Type: (C=comp, G=grab) G		Sample Date: 12/22/22			
Possible Hazard Identification: <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		Sample Date: 12/22/22		Sample Date: 12/22/22			
Deliverable Requested: I, II, III, IV, Other (specify)		Preim data (Level 1 or 2)-see TAT above DoD Stage 4 report standard TAT - AECOM EQUIS FDD		Preim data (Level 1 or 2)-see TAT above DoD Stage 4 report standard TAT - AECOM EQUIS FDD			
Empty Kit Relinquished by: Tianzhen Nie		Date: 12/22/22		Date: 12/22/22			
Relinquished by: Miranda DeBarone		Date/Time: 12/22/22 1510		Date/Time: 12/22/22 1510			
Relinquished by:		Date/Time: 12/26/22 1400		Date/Time: 12/26/22 1230			
Custody Seal Intact: Δ Yes Δ No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: 56/5.6		Ver 01/16/2019	



Chain of Custody Record

Client Information		Sampler: <i>Tianzhen Nie</i>		Lab PM: Elaine Walker		Carrier Tracking No(s): FedEx		COC No: 02-221222-23F0104-EUSav	
Client Contact: 1001 Bishop St. Suite 1600		Phone: 808-382-8654		E-Mail: Elaine.Walker@EurofinsET.com		State of Origin: Hawaii		Page: 1 of 1	
Company: AECOM		PWSID:		E-Mail: Elaine.Walker@EurofinsET.com		Job #:		Job #:	
Address: 1001 Bishop St. Suite 1600		Due Date Requested: See subcontract		TAT Requested (days): Rush - ASAP		Analysis Requested:		Preservation Codes:	
City: Honolulu		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		FO #:		Analysis Requested:		M Hexane	
State, Zip: Hawaii 96813		Project #: 60697810		WC #:		Analysis Requested:		N None	
Phone: 808-954-4512 / 808-356-5311		SSOW#:		Project Name: CTO N6274223F0104		Analysis Requested:		O AsNaO2	
Email: Watson.Tanji@eurofins.com / Grant.Landers@eurofins.com		Sample Identification		Sample Date: 12/22/22		Analysis Requested:		P Na2O4S	
AF-RHM06-WGN01F-2212W3		Sample Type (C=Comp, G=grab): G		Sample Time: 1140		Analysis Requested:		Q Na2SO3	
Matrix (Water, Solid, Other):		Preservation Code: W		Date: 12/22/22		Analysis Requested:		R Na2SO3	
Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Urticant <input type="checkbox"/> Radiological		Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> No		Date: 12/22/22		Analysis Requested:		S H2SO4	
Deliverable Requested: I, II, III, IV, Other (specify)		Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/> No		Date: 12/22/22		Analysis Requested:		T TSP Dodecahydrate	
Empty Kit Relinquished by: <i>Tianzhen Nie</i>		8015C, DAL, GL, DS/2-(2-butoxyethoxy)-ethanol		Date: 12/22/22		Analysis Requested:		U Acetone	
Relinquished by: <i>Miranda DeArms</i>		Total Number of Containers: 3		Date: 12/22/22		Analysis Requested:		V MCAA	
Relinquished by: <i>Miranda DeArms</i>		Special Instructions/Note:		Date: 12/22/22		Analysis Requested:		W pH 4-5	
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No: 5.6/5.6		Date: 12/22/22		Analysis Requested:		X EDTA	
Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Date: 12/22/22		Analysis Requested:		Y other (specify)	
Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Date: 12/22/22		Analysis Requested:		Z other (specify)	

