



ANALYTICAL REPORT

PREPARED FOR

Attn: Terri Choy
AECOM
1001 Bishop Street
Honolulu, Hawaii 96813
Generated 2/14/2023 4:43:13 PM

JOB DESCRIPTION

Red Hill - AFFF Assessment Sampling

JOB NUMBER

580-123231-1

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
M.Elaine.Walker@et.eurofinsus.com
(253)248-4972



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Case Narrative

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

Job ID: 580-123231-1

Job ID: 580-123231-1

Laboratory: Eurofins Seattle

Narrative

CASE NARRATIVE

Client: AECOM

Project: Red Hill - AFFF Assessment Sampling

Report Number: 580-123231-1

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 2/8/2023 11:00 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 5.4° 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

Samples AF-RHMW225401-WGN01B-2301W5 (580-123231-1), AF-RHMW06-WGN01LF-2301W5 (580-123231-2), AF-RHMW16-WGN01LF-2301W5 (580-123231-3) and AF-RHMW04-WGN01LF-2301W5 (580-123231-4) were analyzed for glycols in accordance with EPA SW-846 Method 8015B - DAI. The samples were analyzed on 02/10/2023 and 02/11/2023.

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

Definitions/Glossary

Client: AECOM

Job ID: 580-123231-1

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

Job ID: 580-123231-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW225401-WGN01B-2301W5

Lab Sample ID: 580-123231-1

Date Collected: 02/02/23 12:10

Matrix: Water

Date Received: 02/08/23 11:00

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			02/10/23 23:37	1

- 1
- 2
- 3
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- 10
- 11

Client Sample Results

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

Job ID: 580-123231-1

Client Sample ID: AF-RHMW06-WGN01LF-2301W5

Lab Sample ID: 580-123231-2

Date Collected: 02/02/23 11:15

Matrix: Water

Date Received: 02/08/23 11:00

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			02/11/23 00:01	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Client Sample Results

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

Job ID: 580-123231-1

Client Sample ID: AF-RHMW16-WGN01LF-2301W5

Lab Sample ID: 580-123231-3

Date Collected: 02/02/23 10:20

Matrix: Water

Date Received: 02/08/23 11:00

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			02/11/23 00:24	1

- 1
- 2
- 3
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Client Sample Results

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

Job ID: 580-123231-1

Client Sample ID: AF-RHMW04-WGN01LF-2301W5

Lab Sample ID: 580-123231-4

Date Collected: 02/02/23 09:15

Matrix: Water

Date Received: 02/08/23 11:00

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			02/11/23 01:34	1

- 1
- 2
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QC Sample Results

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

Job ID: 580-123231-1

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

Lab Sample ID: MB 680-762871/10
Matrix: Water
Analysis Batch: 762871

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 M	5.0	1.1	mg/L			02/10/23 16:14	1

Lab Sample ID: LCS 680-762871/6
Matrix: Water
Analysis Batch: 762871

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	19.8		mg/L		99	50 - 150

Lab Sample ID: LCSD 680-762871/7
Matrix: Water
Analysis Batch: 762871

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	18.4		mg/L		92	50 - 150	7	50

Lab Sample ID: 580-123231-3 MS
Matrix: Water
Analysis Batch: 762871

Client Sample ID: AF-RHMW16-WGN01LF-2301W5
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 M	20.0	20.6		mg/L		103	50 - 150

Lab Sample ID: 580-123231-3 MSD
Matrix: Water
Analysis Batch: 762871

Client Sample ID: AF-RHMW16-WGN01LF-2301W5
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 M	20.0	18.3		mg/L		92	50 - 150	12	50

Lab Chronicle

Client: AECOM

Job ID: 580-123231-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: AF-RHMW225401-WGN01B-2301W5

Lab Sample ID: 580-123231-1

Date Collected: 02/02/23 12:10

Matrix: Water

Date Received: 02/08/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	762871	JCK	EET SAV	02/10/23 23:37

Client Sample ID: AF-RHMW06-WGN01LF-2301W5

Lab Sample ID: 580-123231-2

Date Collected: 02/02/23 11:15

Matrix: Water

Date Received: 02/08/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	762871	JCK	EET SAV	02/11/23 00:01

Client Sample ID: AF-RHMW16-WGN01LF-2301W5

Lab Sample ID: 580-123231-3

Date Collected: 02/02/23 10:20

Matrix: Water

Date Received: 02/08/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	762871	JCK	EET SAV	02/11/23 00:24

Client Sample ID: AF-RHMW04-WGN01LF-2301W5

Lab Sample ID: 580-123231-4

Date Collected: 02/02/23 09:15

Matrix: Water

Date Received: 02/08/23 11:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015C GLY		1	762871	JCK	EET SAV	02/11/23 01:34

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: 580-123231-1

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: 580-123231-1

Project/Site: Red Hill - AFFF Assessment Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-123231-1	AF-RHMW225401-WGN01B-2301W5	Water	02/02/23 12:10	02/08/23 11:00
580-123231-2	AF-RHMW06-WGN01LF-2301W5	Water	02/02/23 11:15	02/08/23 11:00
580-123231-3	AF-RHMW16-WGN01LF-2301W5	Water	02/02/23 10:20	02/08/23 11:00
580-123231-4	AF-RHMW04-WGN01LF-2301W5	Water	02/02/23 09:15	02/08/23 11:00

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Chain of Custody Record

Client Information		Lab Piv:		Carrier Tracking No(s):		COC No:				
Company: AECOM		Elaine Walker		FedEx		2301W5AFE07				
Address: 1001 Bishop St. Suite 1600		E-Mail: M.Elaine.Walker@EurofinsET.com		State of Origin: Hawaii		Page: Page 1 of 1				
City: Honolulu		PWSID:		Job #:		Job #:				
State, Zip: Hawaii 96813		Due Date Requested: see subcontract		Analysis Requested		Preservation Codes:				
Phone: 808-954-4512 / 770-331-0794		TAT Requested (days): Rush - ASAP		8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)				
Project Name: Watson Tanji (watson.tanji@aecom.com)		Compliance Project: Δ Yes Δ No		Perform MS/MSD (Yes or No)		Other:				
Project #: 60697810		PO #:		Field Filled Sample (Yes or No)		Total Number of Containers				
Site: RHSF		WO #:		Preservation Code:		Special Instructions/Note:				
Sample Identification AF7DMV225401-WGN01B-2301W5 RH	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=on-site, G=grab)	Field Filled Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	Analysis Requested	Carrier Tracking No(s):	COC No:
	2/12/23	12:10	G	W	N	N	X	Analysis Requested	FedEx	2301W5AFE07
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										
Deliverable Requested: I, II, III, IV, Other (specify) _____ Empty Kit Relinquished by: _____ Date: _____ Relinquished by: Matt Yin Math Yin Date: 2/12/23 14:15 Company: AECOM Relinquished by: GABRIEL ALLEN Date: 2/18/23 10:45 Company: AECOM Relinquished by: _____ Date: _____ Company: _____ Custody Seals Intact: Δ Yes Δ No Custody Seal No. _____ Cooler Temperature (°C and Other Remarks): _____ 5.4/5.4										



Chain of Custody Record

Client Information	Company: AECOM Address: 1001 Bishop St. Suite 1600 City: Honolulu State, Zip: HI 96813 Phone: 808-954-4512 / 770-331-0794 Email: Watson.Tanji@aecom.com / Mark.Kromis@aecom.com Project Name: CTO N6274223F0104 Site: RHSF	Lab PIV: Elaine Walker E-Mail: M.Elaine.Walker@EurofinsET.com Carrier Tracking No(s): FedEx State of Origin: Hawaii	COC No: 2301W5AFE09 Page: Page 1 of 1 Job #:
Due Date Requested: See subcontract TAT Requested (days): Rush - ASAP Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: WO #: Project #: 60697810 SSOW#:			
Analysis Requested			
Sample Identification AF-RHMW06-WGN01LE-2301W5	Sample Date: 2/2/23 Sample Time: 1115 Sample Type: G Matrix: Preservation Code: W	Field Filtered Sample (Yes or No): N Form M/MSD (Yes or No): N 8016c_DAL_GL_DS1-2-(2-butoxyethoxy)-ethanol: X Total Number of Containers: 3	Special Instructions/Note:
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:			
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"/> Urticarn <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by: Relinquished by: James Mason Relinquished by: James Mason Relinquished by:			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Prelim data (Level 1 or 2) - see TAT above. DoD Stage 4 report standard TAT. AECOM EQUIS EDD.			
Date/Time: 2/2/23 1325 Date/Time: 2/6/23 1045 Date/Time:			
Received by: James Mason Received by: James Mason Received by:			
Company: AECOM Company: AECOM Company:			
Cooler Temperature(s) and Other Remarks: 5.4/5.4			



Chain of Custody Record

Client Information Client Contact: M. Elaine Walker Phone: 224 508 9732 PWSID:		Lab P.M.: Elaine Walker E-Mail: M.Elaine.Walker@EurofinsET.com Carrier Tracking No(s): 2301W5AFE06 State of Origin: Hawaii Page: 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 SSO#: RHSV		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> A Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> N 8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	
Address: 1001 Bishop St. Suite 1600 City: Honolulu State, Zip: Hawaii 96813 Phone: 808-954-4512 / 770-331-0794 Email: waiatson_tanji@aeocom.com / Mark Kromis (mark.kromis@aeocom.com) Project Name: CTO N6274223F0104 Site: RHSV		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: 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)	
Sample Identification AF-RHMW16-WGN01LF-2301W5		Total Number of Containers 3	
Sample Date 2.2.23		Sample Type (C=comp, G=grab) G	
Sample Time 1020 1020		Matrix (W=water, S=solid, O=wastewater, B=Bioassess, A=air) W	
Sample Date 2/2/23		Sample Time 1020	
Sample Date 2/2/23		Sample Time 1020	



Chain of Custody Record

Client Information		Sampler: MARK TURNER		Lab P#: Elaine Walker		Carrier Tracking No(s): FedEX		COC No: 2301W5AFE08	
Client Contact:		Phone: (781) 366-4777		E-Mail: M.Elaine.Walker@EurofinsET.com		State of Origin: Hawaii		Page: Page 1 of 1	
Company: AECOM		PWSID:		Analysis Requested		Total Number of containers		Job #: 3	
Address: 1001 Bishop St. Suite 1600		Due Date Requested: see subcontract		TAT Requested (days): Rush - ASAP		Perform MS/MSD (Yes or No)		Preservation Codes:	
City: Honolulu		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		PO #:		Field Filtered Sample (Yes or No)		M - Hexane N - None O - AshNaO2 P - NaZnOHS Q - NaZSO3 R - H2SO4 S - Amchlor T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - EDA Z - other (specify)	
State, Zip: Hawaii 96813		WO #:		Project #: 60697810		8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol		Other:	
Phone: 808-954-4512 / 770-331-0794		Email: Watson.Tanji(watson.tanji@aecom.com) / Mark.Kromis(mark.kromis@aecom.com)		Site: CTO N6274223F0104		Sample Date		Special Instructions/Note:	
Project Name: RH5F		Sample Type (C=Comp, G=grab)		Sample Time		Sample Date		AF-RHMMW04-WGN01LF-2301W5	
Matrix (W=water, S=solid, G=grab)		Preservation Code:		G		2/2/2023		N N X	
AF-RHMMW04-WGN01LF-2301W5		G		W		2/2/2023		N N X	
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 checked="" type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Date		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Date: 2/2/2023		Time:		Prelim data (Level 1 or 2) - see TAT above. DoD Stage 4 report standard TAT - AECOM EQUIS EDD.	
Relinquished by: MARK TURNER		Date/Time: 2/2/2023 / 1325		Company: AECOM		Received by: James Mason		Date/Time: 2/2/2023 1325	
Relinquished by: James Mason		Date/Time: 2/16/23 1045		Company: AECOM		Received by: James Mason		Date/Time: 2/16/23 1100	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) C and Other Remarks: 5.7/5.4		Method of Shipment:		Ver: 01/16/2019	



Chain of Custody Record

Client Information Company: AECOM Address: 1001 Bishop St. Suite 1600 City: Honolulu State Zip: Hawaii 96813 Phone: 808-954-4512 / 770-331-0794 Email: Watson.Tanji@aecom.com / Mark.Kromis@aecom.com Project Name: CTO N6274223F0104 Site: RHSF		Lab PM: Elaine Walker E-Mail: M.Elaine.Walker@EurofinsET.com Carrier Tracking No(s): FedEX State of Origin: Hawaii Job #:	
Due Date Requested: see subcontract TAT Requested (days): Rush - ASAP Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: WFO #: Project #: 60697810 SSO#:		COC No: 2301W5AFE07 Page: Page 1 of 1 Job #:	
Sample Identification AF-RDMW225401-WGNO1B-2301W5 Matrix: (Liquid, Solid, Other) Sample Type: (C=Comp, G=grab) Sample Date: 2/12/23 Sample Time: 12:10 Preservation Code: G W		Analysis Requested Total Number of Containers: 3 Perform MS/MSD (Yes or No): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No 8015c_DAL_GL_DS/2-(2-butylethoxy)-ethanol: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
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"/> Radiological Deliverable Requested I II III IV Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than _____ Months) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements: DOD QSM project.	
Relinquished by: Matt Yin Watson Relinquished by: GABRIEL ALLEN Relinquished by:		Date: 2/12/23 1415 Date/Time: 2/16/23 1045 Date/Time:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No:		Cooler Temperature(s): 5.4/5.4 Ver: 01/16/2019	



Chain of Custody Record

Client Information Client Contact: <u>Regan Swinert</u> Phone: <u>888-993-6607</u>		Lab PM: <u>Elaine Walker</u> E-Mail: <u>M.Elaine.Walker@EurofinsET.com</u>		Carrier Tracking No(s): FedEx: _____ State of Origin: <u>Hawaii</u>		COC No: <u>2301W5AFE09</u> Page: _____ Page 1 of 1 Job #: _____	
Company: <u>AECOM</u> Address: <u>1001 Bishop St. Suite 1600</u> City: <u>Honolulu</u> State: <u>Zo</u> Hawaii: <u>96813</u> Phone: <u>808-954-4512 / 770-331-0794</u> Email: <u>Watson.Tanji@aecom.com / Mark.Kromis@aecom.com</u> Project Name: <u>CTO N6274223F0104</u> Site: <u>RHSF</u>		PWSID Due Date Requested: _____ see subcontract TAT Requested (days): _____ Compliance Project: <u>Rush - ASAP</u> PO #: _____ WO #: _____ Project #: <u>60697810</u> SSOW#: _____		Analysis Requested Total Number of Containers: <u>3</u> Preservation Codes: A - HCL M - Hexane B - NaOH N - None O - AshNaO2 C - Zn Acetate P - Na2O4S D - Nitric Acid Q - Na2SO3 E - NaHSO4 R - MeOH F - MeOH S - H2SO4 G - Amchlor H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA L - EDA W - pH 4-5 Z - other (specify) _____ Other: _____		Special Instructions/Note: _____ _____ _____	
Sample Identification AF-RHMW06-WGN01LF-2301W5 Sample Date: <u>2/2/23</u> Sample Time: <u>1115</u> Sample Type: <u>G</u> Matrix: <u>Water</u> Preservation Code: _____ Field Filtered Sample (Yes or No): <u>N</u> Perform MS/MSD (Yes or No): <u>N</u> 8015C_DAL_GL_DS/2-(2-butylethoxy)-ethanol		Form MS/MSD (Yes or No): <u>N</u> Field Filtered Sample (Yes or No): <u>N</u> 8015C_DAL_GL_DS/2-(2-butylethoxy)-ethanol		Total Number of Containers: <u>3</u> Preservation Codes: A - HCL M - Hexane B - NaOH N - None O - AshNaO2 C - Zn Acetate P - Na2O4S D - Nitric Acid Q - Na2SO3 E - NaHSO4 R - MeOH F - MeOH S - H2SO4 G - Amchlor H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA L - EDA W - pH 4-5 Z - other (specify) _____ Other: _____		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"/> Urticant <input type="checkbox"/> Radiological Deliverable Requested I II III IV Other (specify) _____		Date: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____		Date: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____		Date: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____	
Relinquished by: <u>Regan Swinert</u> Relinquished by: <u>James Mason</u> Relinquished by: _____		Date/Time: <u>2/2/23 1325</u> Date/Time: <u>2/6/23 1045</u> Date/Time: _____ Date/Time: _____		Date/Time: <u>2/2/23 1325</u> Date/Time: <u>2/8/23 1100</u> Date/Time: _____ Date/Time: _____		Date/Time: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____	
Custody Seals Intact: <u>Yes</u> Custody Seal No: _____		Custody Seal No: _____		Custody Seal No: _____		Custody Seal No: _____	



Chain of Custody Record

Client Information		Company: AECOM		Lab Piv: Elaine Walker		Carrier Tracking No(s): 2301W5AFE06		COC No: 2301W5AFE06	
Client Contact:		Phone: 224 503 9732		E-Mail: M.Elaine.Walker@EurofinsET.com		State of Origin: Hawaii		Page: Page 1 of 1	
Address: 1001 Bishop St. Suite 1600		City: Honolulu		State: HI		Zip: 96813		Job #:	
Phone: 808-954-4512 / 770-331-0794		PO #:		WOC #:		Compliance Project: Δ Yes Δ No		Analysis Requested	
Email: Watson.Tanji@aeocom.com / Mark.Kronis@aeocom.com		Project #:		SSOW#:		Due Date Requested: see subcontract		TAT Requested (days):	
CTO N627423F0104		Sample Date: 2-2-23		Sample Time: 1020		Sample Type (C=Comp, G=grab): G		Matrix (W=Water, S=solid, O=soils, B=Blood, A=Air):	
Site: RH5F		Sample Date: 2-2-23		Sample Time: 1020		Sample Type (C=Comp, G=grab): G		Matrix (W=Water, S=solid, O=soils, B=Blood, A=Air):	
AF-RHMMV16-WGN01LF-2301W5		Sample Date: 2-2-23		Sample Time: 1020		Sample Type (C=Comp, G=grab): G		Matrix (W=Water, S=solid, O=soils, B=Blood, A=Air): 	
AF-RHMMV16-WGN01LF-2301W5		Sample Date: 2-2-23		Sample Time: 1020		Sample Type (C=Comp, G=grab): G		Matrix (W=Water, S=solid, O=soils, B=Blood, A=Air): 	
AF-RHMMV16-WGN01LF-2301W5		Sample Date: 2-2-23		Sample Time: 1020		Sample Type (C=Comp, G=grab): G		Matrix (W=Water, S=solid, O=soils, B=Blood, A=Air): 	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=solid, O=soils, B=Blood, A=Air)	Field Filled Sample (Yes or No)	Perform MS/MSD (Yes or No)	8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	Analysis Requested	Carrier Tracking No(s)	State of Origin	COC No.
AF-RHMMV16-WGN01LF-2301W5	2-2-23	1020	G	W	N	N	X	8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	2301W5AFE06	Hawaii	2301W5AFE06
AF-RHMMV16-WGN01LF-2301W5	2-2-23	1020	G	W	N	N	X	8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	2301W5AFE06	Hawaii	2301W5AFE06
AF-RHMMV16-WGN01LF-2301W5	2-2-23	1020	G	W	N	N	X	8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	2301W5AFE06	Hawaii	2301W5AFE06
AF-RHMMV16-WGN01LF-2301W5	2-2-23	1020	G	W	N	N	X	8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	2301W5AFE06	Hawaii	2301W5AFE06
AF-RHMMV16-WGN01LF-2301W5	2-2-23	1020	G	W	N	N	X	8015C_DAL_GL_DS/2-(2-butoxyethoxy)-ethanol	2301W5AFE06	Hawaii	2301W5AFE06

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)													
Empty Kit Relinquished by:		Date:		Time:		Special Instructions/QC Requirements: DOD QSM project							
Relinquished by: <i>MW 65</i>		Date/Time: 2-2-23		1420		Company: AECOM		Received by: <i>[Signature]</i>		Date/Time: 2-2-23		1420	
Relinquished by: <i>[Signature]</i>		Date/Time: 2-2-23		1045		Company: AECOM		Received by: <i>[Signature]</i>		Date/Time: 2-2-23		1100	
Relinquished by:		Date/Time:		1045		Company:		Received by:		Date/Time:		1100	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.		Cooler Temperature(s) °C and Other Remarks: 5.4/5.4		Ver: 01/16/2019							



Chain of Custody Record

Client Information			Lab P.M. Elaine Walker		Carrier Tracking No(s) FedEX		COC No: 2301W5AFEA08	
Client Contact: Company: AECOM			Phone: (781) 366-4777		State of Origin: Hawaii		Page: Page 1 of 1	
Address: 1001 Bishop St. Suite 1600 Honolulu Hawaii 96813			City: Rush - ASAP		Analysis Requested		Job #:	
State Zip: Hawaii 96813			Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Performs MS/MSD (Yes or No)		Preservation Codes	
Phone: 808-854-4512 / 770-331-0794			PO #:		Field Filtered Sample (Yes or No)		M - Hexane N - None O - AsNaO2 P - Na2SO4 Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA L - EDTA Z - other (specify)	
Email: Watson Tanji (watson.tanji@aecom.com) / Mark Kromis (mark.kromis@aecom.com)			W/O #:		8015C_DAL_GL_D5/2-(2-butoxyethoxy)-ethanol		Total Number of Containers	
Project Name: CTO N6274223F0104			Project #: 60697810		A		3	
Site: RHSF			SSON#:		N		Special Instructions/Note:	
Sample Identification			Sample Date		Sample Type (C=Comp, G=grab)		Matrix (Newater, Seawater, Other (Specify, etc))	
AF-RHMMW04-WGN01LF-2301W5			2/2/2023 0915		G		W	
Possible Hazard Identification			Sample Time		Preservation Code:		Special Instructions/Note:	
<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 checked="" type="checkbox"/> Radiological Deliverable Requested I II III IV Other (specify)			TAT		G		Special Instructions/Note:	
Empty Kit Relinquished by			Date		Date		Special Instructions/Note:	
Relinquished by NDAH TURNER			2/2/2023		2/2/2023		Special Instructions/Note:	
Relinquished by James Mason			1045		1325		Special Instructions/Note:	
Relinquished by			Date/Time:		Date/Time:		Special Instructions/Note:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			Custody Seal No.		Date/Time:		Special Instructions/Note:	
5-7/5-4					2/2/2023 1325		Special Instructions/Note:	
Ver 01/16/2019					2/2/2023 1100		Special Instructions/Note:	



Login Sample Receipt Checklist

Client: AECOM

Job Number: 580-123231-1

Login Number: 123231

List Number: 2

Creator: Johnson, Corey M

List Source: Eurofins Savannah

List Creation: 02/09/23 12:16 PM

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.	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 <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	