

Test Report



May 1, 2014

Client: Tasman Geosciences / Anadarko

Project: Howard 15-27a

Lab ID: 1293

Date Samples Received: 5/1/2014

Number of Samples: 2

Sample Condition: Samples arrived intact and in appropriate sample containers

Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Dieken".

Christopher Dieken
Quality Assurance Manager

A handwritten signature in black ink, appearing to read "Todd Rhea".

Todd Rhea
Laboratory Manager

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Chain of Custody

eANALYTICS
LABORATORY

Chain of Custody Form

[illegible]

eANALYTICS
LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1293

Project: Howard 15-27a

Analysis: Volatile Organics
TPHMethod: EPA8260
EPA8260/8015

Sample Name	Benzene mg/kg	Toluene mg/kg	Ethyl- benzene mg/kg	Total Xylenes mg/kg	TPH GRO	TPH DRO	TPH ORO	Date Sampled	Date Analyzed	Lab ID	
					C6-C10	C10-C28	C28-C36				
					mg/kg	mg/kg	mg/kg				
W01 @ 3	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/01/14	05/01/14	1293	2

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eANALYTICS
LABORATORY

Client: Tasman Geosciences / Anadarko Lab ID: 1293

Project: Howard 15-27a

Analysis: Volatile Organics Method: EPA8260

Sample Name	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Date Sampled	Date Analyzed	Lab ID	
	ug/L	ug/L	ug/L	ug/L				
GW01	311	21.3	5.8	20.7	05/01/14	05/01/14	1293	1

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eANALYTICS
LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1293

Project: Howard 15-27a

Method: EPA8260

Sample Name	Dibromo- fluoromethane % Recovery	1,2 Dichloro- ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo- fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
W01 @ 3	87	99	87	104	05/01/14	05/01/14	1293 2

eANALYTICS
LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1293

Project: Howard 15-27a

Method: EPA8260

Sample Name	Dibromo- fluoromethane % Recovery	1,2 Dichloro- ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo- fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
GW01	92	108	94	108	05/01/14	05/01/14	1293 1

eANALYTICS

LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1293

Project: Howard 15-27a

Analysis: Volatile Organics
TPHMethod: EPA8260
EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH GRO C6-C10	TPH DRO C10-C28	TPH ORO C28-C36	Date Analyzed	Lab ID		
	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec				
Laboratory Control Sample	89	100	96	92	103	92	92	05/01/14	LCS	1293	1
(70-130%)											
Method Blank	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/01/14	MB	1293	1
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				

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eANALYTICS
LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1293

Project: Howard 15-27a

Analysis: Volatile Organics

Method: EPA8260

Sample Name	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Date Analyzed	Lab ID	
	% Rec	% Rec	% Rec	% Rec			
Laboratory Control Sample	92	98	94	104	05/01/14	LCS	1293 1
(70-130%)							
Method Blank	< 1.0	< 1.0	< 1.0	< 1.0	05/01/14	MB	1293 1
	ug/L	ug/L	ug/L	ug/L			

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Test Report



May 8, 2014

Client: Tasman Geosciences / Anadarko

Project: Howard 15-27

Lab ID: 1336

Date Samples Received: 5/7/2014

Number of Samples: 5

Sample Condition: Samples arrived intact and in appropriate sample containers

Sample Temperature: Within acceptable range of 2-6° C, or as specified in EPA Method

The quality control procedures associated with the requested analyses were satisfactorily passed before the samples were run.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Dieken".

Christopher Dieken
Quality Assurance Manager

A handwritten signature in black ink, appearing to read "Todd Rhea".

Todd Rhea
Laboratory Manager

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

Chain of Custody

eANALYTICS
LABORATORY

Chain of Custody Form

[illegible]

WO# 1336

eANALYTICS: Environmental testing made Easy

Page 1 of 1

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The results contained within this report relate only to the items analyzed

eANALYTICS

LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1336

Project: Howard 15-27

Analysis: Volatile Organics
TPHMethod: EPA8260
EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH GRO C6-C10	TPH DRO C10-C28	TPH ORO C28-C36	Date Sampled	Date Analyzed	Lab ID	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
W02 @ 5	< 0.01	0.052	< 0.01	0.062	< 50	< 50	< 50	05/07/14	05/07/14	1336	1
N01 @ 5	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/07/14	05/07/14	1336	2
S01 @ 5	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/07/14	05/07/14	1336	3
B01 @ 7	< 0.01	< 0.01	< 0.01	0.014	< 50	< 50	< 50	05/07/14	05/07/14	1336	4
E01 @ 5	< 0.01	< 0.01	0.202	0.402	52.2	< 50	< 50	05/07/14	05/07/14	1336	5

eAnalytics Laboratory

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eANALYTICS
L A B O R A T O R Y

Client: Tasman Geosciences / Anadarko

Lab ID: 1336

Project: Howard 15-27

Method: EPA8260

Sample Name	Dibromo- fluoromethane % Recovery	1,2 Dichloro- ethane-D4 % Recovery	Toluene-D8 % Recovery	Bromo- fluorobenzene % Recovery	Date Sampled	Date Analyzed	Lab ID
W02 @ 5	111	99	96	96	05/07/14	05/07/14	1336 1
N01 @ 5	96	93	110	88	05/07/14	05/07/14	1336 2
S01 @ 5	104	93	107	94	05/07/14	05/07/14	1336 3
B01 @ 7	108	95	111	93	05/07/14	05/07/14	1336 4
E01 @ 5	91	103	86	95	05/07/14	05/07/14	1336 5

eAnalytics Laboratory

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eANALYTICS

LABORATORY

Client: Tasman Geosciences / Anadarko

Lab ID: 1336

Project: Howard 15-27

Analysis: Volatile Organics
TPHMethod: EPA8260
EPA8260/8015

Sample Name	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPH GRO C6-C10	TPH DRO C10-C28	TPH ORO C28-C36	Date Analyzed	Lab ID		
	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec	% Rec				
Laboratory Control Sample	99	89	94	100	93	102	95	05/07/14	LCS	1336	1
(70-130%)											
Method Blank	< 0.01	< 0.01	< 0.01	< 0.01	< 50	< 50	< 50	05/07/14	MB	1336	1
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				

eAnalytics Laboratory

1767 Rocky Mountain Avenue Loveland CO 80538

November 26, 2014

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver

CO 80211

Project Name - Howard 15-27a

Project Number - [none]

Attached are your analytical results for Howard 15-27a received by Origins Laboratory, Inc. November 20, 2014. This project is associated with Origins project number X411223-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com



Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Christine Wasko

Project Number: [none]

Project: Howard 15-27a

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01-112014	X411223-01	Water	November 20, 2014 14:40	11/20/2014 17:20
BH02-112014	X411223-02	Water	November 20, 2014 14:35	11/20/2014 17:20
BH03-112014	X411223-03	Water	November 20, 2014 14:30	11/20/2014 17:20

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

www.originslaboratory.com

X411223

page (of)

ORIGINS
LABORATORY, INC

Client: Tasman Geo
Address: _____
Telephone Number: 972 230 2807
Email Address: CWasko@tasman-geo.com

Project Manager: Christine Wasko
Project Name: Howard 15-27a
Project Number: _____
Samples Collected By: Brack Nelson

1725 Elk Place | Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #		
BH01 - 11/20/14	11/20/14	1440	3	X				X				1
BH02 - 11/20/14	11/20/14	1435	3	X				X				2
BH03 - 11/20/14	11/20/14	1430	3	X				X				3
												4
												5
												6
												7
												8
												9
												10

Relinquished By: [Signature] Date: 11/20/14 Time: 1700

Relinquished By: [Signature] Date: 11/20/14 Time: 1700

Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard ☒ 0.6

Date Results Needed

Temp Received-

Origins Laboratory, Inc.

Jefe Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X411223

Client: Tasman

Client Project ID: Howard 15-27a

Checklist Completed by: Jen Pellegrini

Shipped Via: Pick Up
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 11-21-14

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☐ Soil/Solid ☒ Water ☐ Other: _____

Cooler Number/Temperature: 1 10.6 °C 1 °C 1 °C (Describe) °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		X		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	X	X		BHO3-112014 (C)
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/pH <2 for samples preserved with HNO ₃ , HCl, H ₂ SO ₄ / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	X			HCL
Additional Comments (if any):				

⁽¹⁾If NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

11/21/14
Date/Time Reviewed

Origins Laboratory, Inc.

Jen Pellegrini

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

BH01-112014

11/20/2014 2:40:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
X411223-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4K21008	11/21/2014	11/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	109 %	87.3-113			"	"	"
Surrogate: Toluene-d8	99.2 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	97.1 %	88.6-111			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

BH02-112014

11/20/2014 2:35:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
X411223-02 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4K21008	11/21/2014	11/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	107 %	87.3-113			"	"	"
Surrogate: Toluene-d8	99.3 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	97.2 %	88.6-111			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

BH03-112014

11/20/2014 2:30:00PM

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
X411223-03 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	4K21008	11/21/2014	11/25/2014
Toluene	ND	1.0	"	"	"	"	"
Ethylbenzene	ND	1.0	"	"	"	"	"
Xylenes, total	ND	1.0	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	108 %	87.3-113			"	"	"
Surrogate: Toluene-d8	98.5 %	90.9-108			"	"	"
Surrogate: 4-Bromofluorobenzene	95.9 %	88.6-111			"	"	"

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4K21008 - EPA 5030B (Water)

Blank (4K21008-BLK1)

Prepared: 11/21/2014 Analyzed: 11/24/2014

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.2	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		99.9	90.9-108			
Surrogate: 4-Bromofluorobenzene	56		"	62.5		90.2	88.6-111			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4K21008 - EPA 5030B (Water)

LCS (4K21008-BS1)

Prepared: 11/21/2014 Analyzed: 11/24/2014

Benzene	47.3	1.0	ug/L	50.0		94.6	75-126			
Toluene	50.1	1.0	"	50.0		100	78.7-126			
Ethylbenzene	53.2	1.0	"	50.0		106	81-130			
m,p-Xylene	101	2.0	"	100		101	77.2-133			
o-Xylene	49.5	1.0	"	50.0		99.0	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.4	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		99.2	90.9-108			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.6	88.6-111			

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4K21008 - EPA 5030B (Water)

Matrix Spike (4K21008-MS1)		Source: X411218-09			Prepared: 11/21/2014 Analyzed: 11/24/2014					
Benzene	50.5	1.0	ug/L	50.0	ND	101	74-130			
Toluene	52.4	1.0	"	50.0	ND	105	73-131			
Ethylbenzene	56.5	1.0	"	50.0	ND	113	76-132			
m,p-Xylene	108	2.0	"	100	ND	108	69-139			
o-Xylene	52.9	1.0	"	50.0	ND	106	74-131			
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.7	87.3-113			
Surrogate: Toluene-d8	62		"	62.5		98.6	90.9-108			
Surrogate: 4-Bromofluorobenzene	58		"	62.5		93.0	88.6-111			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4K21008 - EPA 5030B (Water)

Matrix Spike (4K21008-MS2)		Source: X411210-05			Prepared: 11/21/2014 Analyzed: 11/24/2014					
Benzene	49.3	1.0	ug/L	50.0	0.4	97.8	74-130			
Toluene	50.7	1.0	"	50.0	0.1	101	73-131			
Ethylbenzene	54.4	1.0	"	50.0	ND	109	76-132			
m,p-Xylene	105	2.0	"	100	1.4	103	69-139			
o-Xylene	51.2	1.0	"	50.0	ND	102	74-131			
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		91.3	87.3-113			
Surrogate: Toluene-d8	61		"	62.5		98.1	90.9-108			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.4	88.6-111			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 4K21008 - EPA 5030B (Water)

Matrix Spike Dup (4K21008-MSD1)		Source: X411218-09			Prepared: 11/21/2014 Analyzed: 11/24/2014					
Benzene	49.3	1.0	ug/L	50.0	ND	98.7	74-130	2.24	20	
Toluene	50.7	1.0	"	50.0	ND	101	73-131	3.16	20	
Ethylbenzene	54.4	1.0	"	50.0	ND	109	76-132	3.68	20	
m,p-Xylene	105	2.0	"	100	ND	105	69-139	3.41	20	
o-Xylene	51.2	1.0	"	50.0	ND	102	74-131	3.34	20	
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		91.3	87.3-113			
Surrogate: Toluene-d8	61		"	62.5		98.1	90.9-108			
Surrogate: 4-Bromofluorobenzene	57		"	62.5		90.4	88.6-111			

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: Howard 15-27a

Volatile Organic Compounds by GC/MS SW846 8260C - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 4K21008 - EPA 5030B (Water)

Matrix Spike Dup (4K21008-MSD2)		Source: X411210-05			Prepared: 11/21/2014 Analyzed: 11/24/2014					
Benzene	49.8	1.0	ug/L	50.0	0.4	98.7	74-130	0.928	20	
Toluene	51.9	1.0	"	50.0	0.1	104	73-131	2.22	20	
Ethylbenzene	55.5	1.0	"	50.0	ND	111	76-132	1.89	20	
m,p-Xylene	107	2.0	"	100	1.4	106	69-139	2.60	20	
o-Xylene	52.2	1.0	"	50.0	ND	104	74-131	1.95	20	
Surrogate: 1,2-Dichloroethane-d4	58		"	62.5		92.1	87.3-113			
Surrogate: Toluene-d8	63		"	62.5		101	90.9-108			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		94.6	88.6-111			

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Tasman Geosciences

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Christine Wasko

Project Number: [none]

Project: Howard 15-27a

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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