

ANALYTICAL TABLES

TABLE 1
HSR-FERME FARMS-63N67W/14NENE
SOIL SAMPLE RESULTS SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Sample ID	Date Sampled	Depth (feet bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TVPH - GRO (mg/kg)	TEPH - DRO (mg/kg)	TEPH - ORO (mg/kg)	EC (mmhos/cm)	pH (units)
COGCC standards for soil (mg/kg) ⁽¹⁾			0.17	85	100	175	500			4	6 - 9
S01@5'	9/23/2015	5	<0.050	9.47	4.12	74.8	491	470	<200	0.0312	7.67
E01@5'	9/23/2015	5	<0.050	0.108	<0.050	0.250	<5.00	<50	<200	0.0344	7.56
N02@5'	9/25/2015	5	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	0.0114	8.51
W02@5'	9/25/2015	5	<0.002	<0.002	<0.002	0.005	<0.200	<50	<200	0.0436	8.18
S02@5'	9/28/2015	5	<0.002	<0.002	<0.002	<0.002	<0.200	<50	<200	0.0167	8.25

Notes:

- Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.
- COGCC = Colorado Oil and Gas Conservation Commission
(<) = Analytical result is less than the indicated laboratory reporting limit.
TVPH - GRO = Total volatile petroleum hydrocarbons - gasoline range organics
TEPH - DRO = Total extractable petroleum hydrocarbons - diesel range organics
TEPH - ORO = Total extractable petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram.
bgs = Below ground surface.
EC = Electrical Conductivity
mmhos/cm = Millimhos per centimeter
BOLD= Analytical result is in exceedance of COGCC Table 910-1 soil standards.

TABLE 2
HSR-FERME FARMS-63N67W/14NENE
GROUNDWATER SAMPLE RESULTS SUMMARY TABLE
KERR-McGEE OIL AND GAS ONSHORE LP

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft bgs)
COGCC Table 910-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	
GW01	9/23/2015	55.2	627	29.7	1,400	~6
GW02	9/28/2015	36.8	462	57.8	1,040	~6

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 910-1, effective February 1, 2014.

COGCC = Colorado Oil and Gas Conservation Commission

µg/L = Micrograms per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

ft bgs = Feet below ground surface

BOLD= Analytical result is in exceedance of COGCC groundwater standards.

LABORATORY ANALYTICAL REPORTS

September 24, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Ferme Farms 1-14

Project Number - [none]

Attached are your analytical results for KMG - Ferme Farms 1-14 received by Origins Laboratory, Inc. September 23, 2015. This project is associated with Origins project number X509308-01.

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: KMG - Ferme Farms 1-14

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01 @ 5'	X509308-01	Soil	September 23, 2015 10:26	09/23/2015 16:30
E01 @ 5'	X509308-02	Soil	September 23, 2015 10:28	09/23/2015 16:30
GW01	X509308-03	Water	September 23, 2015 10:40	09/23/2015 16:30

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509308

Client: Tasman

Client Project ID: Ferme Farms 1-14

Checklist Completed by: Jeff Smith

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

Date/time completed: 9/23/15

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 3.1 °C 1 / _____ °C 1 / _____ °C 1 / _____ °C (Describe)

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			PH
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		
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+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 in the additional comments (above) and the case narrative.

Jeff Smith
 Reviewed by (Project Manager)

9/23/15
 Date/Time Reviewed

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

S01 @ 5'
9/23/2015 10:26:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X509308-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	470	50	mg/kg	1	5123008	09/23/2015	09/23/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: *o*-Terphenyl 74.8 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	491	5.00	mg/kg	25	5123007	09/23/2015	09/24/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	9.47	0.050	"	"	"	"	"	
Ethylbenzene	4.12	0.050	"	"	"	"	"	
Xylenes, total	74.8	0.498	"	250	"	"	09/24/2015	

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " 09/24/2015
 Surrogate: Toluene-d8 110 % 70-130 " " "
 Surrogate: 4-Bromofluorobenzene 116 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.67		pH Units	1	5123014	09/23/2015	09/23/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0312		mmhos/cm	"	5123015	"	"	
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Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

E01 @ 5'
9/23/2015 10:28:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X509308-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5123008	09/23/2015	09/23/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 69.5 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	5123007	09/23/2015	09/24/2015	
Benzene	ND	0.050	"	"	"	"	"	
Toluene	0.108	0.050	"	"	"	"	"	
Ethylbenzene	ND	0.050	"	"	"	"	"	
Xylenes, total	0.250	0.050	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 98.5 % 70-130 " " "
Surrogate: Toluene-d8 95.8 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	7.56		pH Units	1	5123014	09/23/2015	09/23/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0344		mmhos/cm	"	5123015	"	"	
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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

GW01
9/23/2015 10:40:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X509308-03 (Water)

BTEX by EPA 8260C

Benzene	55.2	1.0	ug/L	1	5123010	09/23/2015	09/23/2015	
Toluene	627	10.0	"	10	"	"	09/23/2015	
Ethylbenzene	29.7	1.0	"	1	"	"	09/23/2015	
Xylenes, total	1400	10.0	"	10	"	"	09/23/2015	
Surrogate: 1,2-Dichloroethane-d4	103 %	84-121			"	"	09/23/2015	
Surrogate: Toluene-d8	107 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.2 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5123007 - EPA 5030 (soil)

Blank (5123007-BLK1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	64.5		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	59.8		"	62.5		95.6	70-130			
Surrogate: 4-Bromofluorobenzene	60.7		"	62.5		97.1	70-130			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5123007 - EPA 5030 (soil)

LCS (5123007-BS1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Benzene	0.098	0.002	mg/kg	0.100		97.8	77.1-124			
Toluene	0.097	0.002	"	0.100		96.7	74.5-128			
Ethylbenzene	0.108	0.002	"	0.100		108	66.4-127			
m,p-Xylene	0.210	0.004	"	0.200		105	76.6-124			
o-Xylene	0.108	0.002	"	0.100		108	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	64.5		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	60.2		"	62.5		96.4	70-130			
Surrogate: 4-Bromofluorobenzene	63.6		"	62.5		102	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5123007 - EPA 5030 (soil)

Matrix Spike (5123007-MS1)	Source: X509303-01			Prepared: 09/23/2015 Analyzed: 09/23/2015						
Benzene	0.109	0.002	mg/kg	0.100	ND	109	71.8-126			
Toluene	0.108	0.002	"	0.100	ND	108	65.1-130			
Ethylbenzene	0.113	0.002	"	0.100	ND	113	62.2-130			
m,p-Xylene	0.230	0.004	"	0.200	ND	115	46.5-137			
o-Xylene	0.115	0.002	"	0.100	ND	115	54.2-134			
Surrogate: 1,2-Dichloroethane-d4	66.6		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	61.2		"	62.5		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	64.6		"	62.5		103	70-130			

Origins Laboratory, Inc.



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 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5123007 - EPA 5030 (soil)

Matrix Spike Dup (5123007-MSD1)	Source: X509303-01			Prepared: 09/23/2015 Analyzed: 09/23/2015						
Benzene	0.106	0.002	mg/kg	0.100	ND	106	71.8-126	2.67	11.3	
Toluene	0.103	0.002	"	0.100	ND	103	65.1-130	4.28	15.4	
Ethylbenzene	0.106	0.002	"	0.100	ND	106	62.2-130	6.83	19.6	
m,p-Xylene	0.215	0.004	"	0.200	ND	107	46.5-137	6.77	19.2	
o-Xylene	0.109	0.002	"	0.100	ND	109	54.2-134	5.13	17.9	
Surrogate: 1,2-Dichloroethane-d4	68.2		ug/kg	62.5		109	70-130			
Surrogate: Toluene-d8	60.4		"	62.5		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	65.3		"	62.5		105	70-130			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5123010 - EPA 5030B (Water)

Blank (5123010-BLK1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.2	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5123010 - EPA 5030B (Water)

LCS (5123010-BS1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Benzene	103	1.0	ug/L	100		103	75-126			
Toluene	103	1.0	"	100		103	78.7-126			
Ethylbenzene	103	1.0	"	100		103	80-130			
m,p-Xylene	209	2.0	"	200		104	77.2-133			
o-Xylene	105	1.0	"	100		105	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.7	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5123010 - EPA 5030B (Water)

Matrix Spike (5123010-MS1)	Source: X509255-01			Prepared: 09/23/2015 Analyzed: 09/23/2015						
Benzene	53.6	1.0	ug/L	50.0	ND	107	74-130			
Toluene	52.4	1.0	"	50.0	ND	105	73-131			
Ethylbenzene	54.5	1.0	"	50.0	ND	109	76-132			
m,p-Xylene	109	2.0	"	100	ND	109	69-139			
o-Xylene	53.2	1.0	"	50.0	ND	106	74-131			
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5		101	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.6	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5123010 - EPA 5030B (Water)

Matrix Spike Dup (5123010-MSD1)	Source: X509255-01			Prepared: 09/23/2015 Analyzed: 09/23/2015						
Benzene	52.2	1.0	ug/L	50.0	ND	104	74-130	2.53	20	
Toluene	51.6	1.0	"	50.0	ND	103	73-131	1.56	20	
Ethylbenzene	53.2	1.0	"	50.0	ND	106	76-132	2.51	20	
m,p-Xylene	106	2.0	"	100	ND	106	69-139	2.31	20	
o-Xylene	53.5	1.0	"	50.0	ND	107	74-131	0.506	20	
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	63		"	62.5		100	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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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Extractable Petroleum Hydrocarbons by 8015C - 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 5I23008 - EPA 3580

Blank (5I23008-BLK1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	48		"	50.0		96.7	59-131			

LCS (5I23008-BS1)

Prepared: 09/23/2015 Analyzed: 09/23/2015

Diesel (C10-C28)	900	50	mg/kg	1000		90.1	64-121			
Residual Range Organics (C28-C36)	990	200	"	1000		99.0	58-124			
Surrogate: o-Terphenyl	52		"	50.0		103	59-131			

Matrix Spike (5I23008-MS1)

Source: X509303-01

Prepared: 09/23/2015 Analyzed: 09/23/2015

Diesel (C10-C28)	1000	50	mg/kg	1000	130	88.9	53-125			
Residual Range Organics (C28-C36)	790	200	"	1000	70	72.0	47-133			
Surrogate: o-Terphenyl	46		"	50.0		91.2	59-131			

Matrix Spike Dup (5I23008-MSD1)

Source: X509303-01

Prepared: 09/23/2015 Analyzed: 09/23/2015

Diesel (C10-C28)	1000	50	mg/kg	1000	130	91.7	53-125	2.72	20	
Residual Range Organics (C28-C36)	950	200	"	1000	70	87.7	47-133	18.0	20	
Surrogate: o-Terphenyl	49		"	50.0		97.3	59-131			

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: KMG - Ferme Farms 1-14

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I23014 - NO PREP										
Duplicate (5I23014-DUP1)		Source: X509308-01			Prepared: 09/23/2015 Analyzed: 09/23/2015					
pH	7.59		pH Units		7.67			1.05	25	
Batch 5I23015 - NO PREP										
Blank (5I23015-BLK1)		Prepared: 09/23/2015 Analyzed: 09/23/2015								
Specific Conductance (EC)	0.00390		mmhos/cm							
Duplicate (5I23015-DUP1)		Source: X509308-01			Prepared: 09/23/2015 Analyzed: 09/23/2015					
Specific Conductance (EC)	0.0352		mmhos/cm		0.0312			12.0	25	

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: KMG - Ferme Farms 1-14

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.

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.

Jen Pellegrini For Noelle Doyle Mathis, President

September 27, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Ferme Farms 1-14

Project Number - [none]

Attached are your analytical results for KMG - Ferme Farms 1-14 received by Origins Laboratory, Inc. September 25, 2015. This project is associated with Origins project number X509343-01.

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: KMG - Ferme Farms 1-14

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N02 @ 5'	X509343-01	Soil	September 25, 2015 13:42	09/25/2015 17:30
W02 @ 5'	X509343-02	Soil	September 25, 2015 13:40	09/25/2015 17:30

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.

Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

www.originslaboratory.com
 page 1 of 1
 X509343
ORIGINS
 LABORATORY, INC

Client: **Tasman Geosciences**
 Address: _____
 Telephone Number: **(352)262-9910**
 Email Address: **twasko@tasman-geo.com**

Project Manager: **Christine Wasko**
 Project Name: **Ferme Farms 1-14**
 Project Number: _____
 Samples Collected By: **Kate Fosmark**

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative			Matrix			Analysis	Sample Instructions	Turnaround Time
				HCl	HNO ₃	Other	Groundwater	Soil	As Sampled			
N0205'	9/25/15	1342	2X				X			GISTEX 8260 TPH-DEVELOP 8015 PH, EC, SAR (IF EC > 4.0)	24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>	
W0205'	9/25/15	1310	2X				X					
Relinquished By: <i>[Signature]</i>	Date: 9/25/15	Time: 1710										
Relinquished By: <i>[Signature]</i>	Date: 9/25/15	Time: 1730										

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: KMG - Ferme Farms 1-14

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: X509343 Client: Tasman
 Client Project ID: Ferme Farms 1-14
 Checklist Completed by: Jeff Smith Shipped Via: Pick Up
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Date/time completed: 9/25/13 Airbill #: NA
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 4.0 °C 1 °C 1 °C 1 °C (Describe)
 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)		✓		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	X			PH
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
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	
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)			✓	
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.

Jeff Smith Reviewed by (Project Manager) 9/25/13 Date/Time Reviewed

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: KMG - Ferme Farms 1-14

N02 @ 5'
 9/25/2015 1:42:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X509343-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5125012	09/25/2015	09/25/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 84.2 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5125013	09/25/2015	09/26/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "
Surrogate: Toluene-d8 96.9 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 102 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.51		pH Units	1	5125014	09/25/2015	09/25/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0114		mmhos/cm	"	5125015	09/25/2015	09/25/2015	
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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: KMG - Ferme Farms 1-14

W02 @ 5'
 9/25/2015 1:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
 X509343-02 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5125012	09/25/2015	09/25/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 78.6 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5125013	09/25/2015	09/26/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	0.005	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "
Surrogate: Toluene-d8 97.4 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.18		pH Units	1	5125014	09/25/2015	09/25/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0436		mmhos/cm	"	5125015	09/25/2015	09/25/2015	
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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: KMG - Ferme Farms 1-14

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 5125013 - EPA 5030 (soil)

Blank (5125013-BLK1)

Prepared: 09/25/2015 Analyzed: 09/25/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>66.2</i>		<i>ug/kg</i>	<i>62.5</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>58.6</i>		<i>"</i>	<i>62.5</i>		<i>93.7</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>63.7</i>		<i>"</i>	<i>62.5</i>		<i>102</i>	<i>70-130</i>			

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.

Noelle Doyle Mathis, President

Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5125013 - EPA 5030 (soil)

LCS (5125013-BS1)

Prepared: 09/25/2015 Analyzed: 09/25/2015

Benzene	0.097	0.002	mg/kg	0.100		96.6	77.1-124			
Toluene	0.097	0.002	"	0.100		96.6	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.208	0.004	"	0.200		104	76.6-124			
o-Xylene	0.106	0.002	"	0.100		106	76.6-124			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>65.5</i>		<i>ug/kg</i>	<i>62.5</i>		<i>105</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>59.0</i>		<i>"</i>	<i>62.5</i>		<i>94.4</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>62.7</i>		<i>"</i>	<i>62.5</i>		<i>100</i>	<i>70-130</i>			

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: KMG - Ferme Farms 1-14

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 5125013 - EPA 5030 (soil)

Matrix Spike (5125013-MS1)	Source: X509328-01			Prepared: 09/25/2015 Analyzed: 09/25/2015						
Benzene	0.100	0.002	mg/kg	0.100	ND	100	71.8-126			
Toluene	0.100	0.002	"	0.100	ND	99.7	65.1-130			
Ethylbenzene	0.109	0.002	"	0.100	ND	109	62.2-130			
m,p-Xylene	0.214	0.004	"	0.200	ND	107	46.5-137			
o-Xylene	0.108	0.002	"	0.100	ND	108	54.2-134			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>66.1</i>		<i>ug/kg</i>	<i>62.5</i>		<i>106</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>60.2</i>		<i>"</i>	<i>62.5</i>		<i>96.3</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>63.4</i>		<i>"</i>	<i>62.5</i>		<i>101</i>	<i>70-130</i>			

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: KMG - Ferme Farms 1-14

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 5125013 - EPA 5030 (soil)

Matrix Spike Dup (5125013-MSD1)	Source: X509328-01			Prepared: 09/25/2015 Analyzed: 09/25/2015						
Benzene	0.100	0.002	mg/kg	0.100	ND	99.8	71.8-126	0.679	11.3	
Toluene	0.098	0.002	"	0.100	ND	98.4	65.1-130	1.27	15.4	
Ethylbenzene	0.110	0.002	"	0.100	ND	110	62.2-130	0.110	19.6	
m,p-Xylene	0.216	0.004	"	0.200	ND	108	46.5-137	0.817	19.2	
o-Xylene	0.108	0.002	"	0.100	ND	108	54.2-134	0.704	17.9	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>66.6</i>		<i>ug/kg</i>	<i>62.5</i>		<i>107</i>	<i>70-130</i>			
<i>Surrogate: Toluene-d8</i>	<i>58.2</i>		<i>"</i>	<i>62.5</i>		<i>93.1</i>	<i>70-130</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>62.9</i>		<i>"</i>	<i>62.5</i>		<i>101</i>	<i>70-130</i>			

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: KMG - Ferme Farms 1-14

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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Extractable Petroleum Hydrocarbons by 8015C - 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 5125012 - EPA 3580

Blank (5125012-BLK1)

Prepared: 09/25/2015 Analyzed: 09/25/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
<i>Surrogate: o-Terphenyl</i>	38		"	50.0		75.9	59-131			

LCS (5125012-BS1)

Prepared: 09/25/2015 Analyzed: 09/25/2015

Diesel (C10-C28)	830	50	mg/kg	1000		83.3	64-121			
Residual Range Organics (C28-C36)	950	200	"	1000		94.8	58-124			
<i>Surrogate: o-Terphenyl</i>	47		"	50.0		93.2	59-131			

Matrix Spike (5125012-MS1)

Source: X509328-01

Prepared: 09/25/2015 Analyzed: 09/25/2015

Diesel (C10-C28)	870	50	mg/kg	1000	ND	87.2	53-125			
Residual Range Organics (C28-C36)	950	200	"	1000	16	93.1	47-133			
<i>Surrogate: o-Terphenyl</i>	44		"	50.0		88.9	59-131			

Matrix Spike Dup (5125012-MSD1)

Source: X509328-01

Prepared: 09/25/2015 Analyzed: 09/25/2015

Diesel (C10-C28)	860	50	mg/kg	1000	ND	85.6	53-125	1.91	20	
Residual Range Organics (C28-C36)	920	200	"	1000	16	90.8	47-133	2.54	20	
<i>Surrogate: o-Terphenyl</i>	44		"	50.0		88.7	59-131			

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: KMG - Ferme Farms 1-14

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5I25014 - NO PREP										
Duplicate (5I25014-DUP1)		Source: X509328-01			Prepared: 09/25/2015 Analyzed: 09/25/2015					
pH	6.26		pH Units		6.12			2.26	25	
Batch 5I25015 - NO PREP										
Blank (5I25015-BLK1)		Prepared: 09/25/2015 Analyzed: 09/25/2015								
Specific Conductance (EC)	0.00370		mmhos/cm							
Duplicate (5I25015-DUP1)		Source: X509328-01			Prepared: 09/25/2015 Analyzed: 09/25/2015					
Specific Conductance (EC)	0.0548		mmhos/cm		0.0595			8.22	25	

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: KMG - Ferme Farms 1-14

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.

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.

Noelle Doyle Mathis, President

September 29, 2015

Tasman Geosciences

Christine Wasko

6899 Pecos Street, Unit C

Denver CO 80211

Project Name - KMG - Ferme Farms 1-14

Project Number - [none]

Attached are your analytical results for KMG - Ferme Farms 1-14 received by Origins Laboratory, Inc. September 28, 2015. This project is associated with Origins project number X509365-01.

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: KMG - Ferme Farms 1-14

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S02 @ 5'	X509365-01	Soil	September 28, 2015 13:10	09/28/2015 16:15
GW02	X509365-02	Water	September 28, 2015 13:20	09/28/2015 16:15

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: KMG - Ferme Farms 1-14

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: XS09365 Client: Tasman
 Client Project ID: Ferme Farms 1-14
 Checklist Completed by: JFF Smith Shipped Via: Pick Up
 Date/time completed: 9/28/15 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: NA
 Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____
 Cooler Number/Temperature: 1 / 38 °C 1 °C 1 °C 1 °C (Describe)
 Thermometer ID: 703

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			PH
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		4/2/15 CB
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.

JFF Smith 9/28/15
 Reviewed by (Project Manager) Date/Time Reviewed

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

S02 @ 5'
9/28/2015 1:10:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X509365-01 (Soil)

DRO/RRO by EPA8015C

Diesel (C10-C28)	ND	50	mg/kg	1	5128008	09/28/2015	09/28/2015	
Residual Range Organics (C28-C36)	ND	200	"	"	"	"	"	

Surrogate: o-Terphenyl 89.4 % 59-131 " " "

GBTEX by EPA 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	5128007	09/28/2015	09/28/2015	
Benzene	ND	0.002	"	"	"	"	"	
Toluene	ND	0.002	"	"	"	"	"	
Ethylbenzene	ND	0.002	"	"	"	"	"	
Xylenes, total	ND	0.002	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4 99.1 % 70-130 " " "
Surrogate: Toluene-d8 97.5 % 70-130 " " "
Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

pH in Soil by EPA 9045D

pH	8.25		pH Units	1	5128014	09/28/2015	09/28/2015	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0167		mmhos/cm	"	5128015	09/28/2015	"	
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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

GW02
9/28/2015 1:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
X509365-02 (Water)

BTEX by EPA 8260C

Benzene	36.8	1.0	ug/L	1	5128011	09/28/2015	09/28/2015	
Toluene	462	10.0	"	10	"	"	09/28/2015	
Ethylbenzene	57.8	1.0	"	1	"	"	09/28/2015	
Xylenes, total	1040	10.0	"	10	"	"	09/28/2015	
Surrogate: 1,2-Dichloroethane-d4	97.2 %	84-121			"	"	09/28/2015	
Surrogate: Toluene-d8	107 %	85-115			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	84-114			"	"	"	

Origins Laboratory, Inc.



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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5128007 - EPA 5030 (soil)

Blank (5128007-BLK1)

Prepared: 09/28/2015 Analyzed: 09/28/2015

Gasoline Range Hydrocarbons	ND	0.200	mg/kg							
Benzene	ND	0.002	"							
Toluene	ND	0.002	"							
Ethylbenzene	ND	0.002	"							
Xylenes, total	ND	0.002	"							
Surrogate: 1,2-Dichloroethane-d4	86.9		ug/kg	62.5		139	70-130			
Surrogate: Toluene-d8	58.4		"	62.5		93.4	70-130			
Surrogate: 4-Bromofluorobenzene	57.8		"	62.5		92.5	70-130			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5128007 - EPA 5030 (soil)

LCS (5128007-BS1)

Prepared: 09/28/2015 Analyzed: 09/28/2015

Benzene	0.092	0.002	mg/kg	0.100		91.7	77.1-124			
Toluene	0.094	0.002	"	0.100		93.5	74.5-128			
Ethylbenzene	0.104	0.002	"	0.100		104	66.4-127			
m,p-Xylene	0.205	0.004	"	0.200		102	76.6-124			
o-Xylene	0.102	0.002	"	0.100		102	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	58.6		ug/kg	62.5		93.7	70-130			
Surrogate: Toluene-d8	58.7		"	62.5		93.9	70-130			
Surrogate: 4-Bromofluorobenzene	60.9		"	62.5		97.4	70-130			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5128007 - EPA 5030 (soil)

Matrix Spike (5128007-MS1)	Source: X509337-01			Prepared: 09/28/2015 Analyzed: 09/28/2015						
Benzene	2.60	0.050	mg/kg	2.50	ND	104	71.8-126			
Toluene	2.93	0.050	"	2.50	0.384	102	65.1-130			
Ethylbenzene	10.3	0.050	"	2.50	8.55	69.2	62.2-130			
m,p-Xylene	22.2	0.100	"	5.00	40.5	NR	46.5-137			QM-02
o-Xylene	15.9	0.050	"	2.50	24.2	NR	54.2-134			QM-02
Surrogate: 1,2-Dichloroethane-d4	61.1		ug/kg	62.5		97.7	70-130			
Surrogate: Toluene-d8	60.8		"	62.5		97.3	70-130			
Surrogate: 4-Bromofluorobenzene	77.2		"	62.5		123	70-130			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5128007 - EPA 5030 (soil)

Matrix Spike Dup (5128007-MSD1)	Source: X509337-01			Prepared: 09/28/2015 Analyzed: 09/28/2015						
Benzene	2.30	0.050	mg/kg	2.50	ND	91.9	71.8-126	12.4	11.3	QR-02
Toluene	2.57	0.050	"	2.50	0.384	87.3	65.1-130	13.3	15.4	
Ethylbenzene	9.54	0.050	"	2.50	8.55	39.7	62.2-130	7.44	19.6	QM-02
m,p-Xylene	20.0	0.100	"	5.00	40.5	NR	46.5-137	10.3	19.2	QM-02
o-Xylene	14.7	0.050	"	2.50	24.2	NR	54.2-134	7.86	17.9	QM-02
Surrogate: 1,2-Dichloroethane-d4	60.8		ug/kg	62.5		97.2	70-130			
Surrogate: Toluene-d8	59.4		"	62.5		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	76.4		"	62.5		122	70-130			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5128011 - EPA 5030B (Water)

Blank (5128011-BLK1)

Prepared: 09/28/2015 Analyzed: 09/28/2015

Benzene	ND	1.0	ug/L							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes, total	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5	97.5		84-121			
Surrogate: Toluene-d8	61		"	62.5	98.2		85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5	104		84-114			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5128011 - EPA 5030B (Water)

LCS (5128011-BS1)

Prepared: 09/28/2015 Analyzed: 09/28/2015

Benzene	48.5	1.0	ug/L	50.0		97.1	75-126			
Toluene	46.7	1.0	"	50.0		93.4	78.7-126			
Ethylbenzene	46.4	1.0	"	50.0		92.8	80-130			
m,p-Xylene	93.4	2.0	"	100		93.4	77.2-133			
o-Xylene	47.8	1.0	"	50.0		95.7	77.9-126			
Surrogate: 1,2-Dichloroethane-d4	57		"	62.5		90.5	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.4	85-115			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	84-114			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5128011 - EPA 5030B (Water)

Matrix Spike (5128011-MS1)	Source: X509333-01			Prepared: 09/28/2015 Analyzed: 09/28/2015						
Benzene	53.3	1.0	ug/L	50.0	ND	107	74-130			
Toluene	50.7	1.0	"	50.0	ND	101	73-131			
Ethylbenzene	49.6	1.0	"	50.0	ND	99.1	76-132			
m,p-Xylene	101	2.0	"	100	ND	101	69-139			
o-Xylene	55.1	1.0	"	50.0	ND	110	74-131			
Surrogate: 1,2-Dichloroethane-d4	56		"	62.5		90.0	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.4	85-115			
Surrogate: 4-Bromofluorobenzene	66		"	62.5		105	84-114			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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 5128011 - EPA 5030B (Water)

Matrix Spike Dup (5128011-MSD1)	Source: X509333-01			Prepared: 09/28/2015 Analyzed: 09/28/2015						
Benzene	58.2	1.0	ug/L	50.0	ND	116	74-130	8.78	20	
Toluene	55.2	1.0	"	50.0	ND	110	73-131	8.63	20	
Ethylbenzene	54.7	1.0	"	50.0	ND	109	76-132	9.93	20	
m,p-Xylene	111	2.0	"	100	ND	111	69-139	9.24	20	
o-Xylene	59.3	1.0	"	50.0	ND	119	74-131	7.40	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.3	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.5	85-115			
Surrogate: 4-Bromofluorobenzene	67		"	62.5		108	84-114			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

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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Extractable Petroleum Hydrocarbons by 8015C - 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 5128008 - EPA 3580

Blank (5128008-BLK1)

Prepared: 09/28/2015 Analyzed: 09/28/2015

Diesel (C10-C28)	ND	50	mg/kg							
Residual Range Organics (C28-C36)	ND	200	"							
Surrogate: o-Terphenyl	49		"	50.0		98.3	59-131			

LCS (5128008-BS1)

Prepared: 09/28/2015 Analyzed: 09/28/2015

Diesel (C10-C28)	940	50	mg/kg	1000		93.5	64-121			
Residual Range Organics (C28-C36)	920	200	"	1000		92.3	58-124			
Surrogate: o-Terphenyl	48		"	50.0		95.4	59-131			

LCS Dup (5128008-BSD1)

Prepared: 09/28/2015 Analyzed: 09/28/2015

Diesel (C10-C28)	850	50	mg/kg	1000		84.6	64-121	9.99	20	
Residual Range Organics (C28-C36)	930	200	"	1000		92.9	58-124	0.743	20	
Surrogate: o-Terphenyl	44		"	50.0		88.7	59-131			

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Tasman Geosciences
 6899 Pecos Street, Unit C
 Denver CO 80211

Christine Wasko
 Project Number: [none]
 Project: KMG - Ferme Farms 1-14

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5128014 - NO PREP										
Duplicate (5128014-DUP1)		Source: X509365-01			Prepared: 09/28/2015 Analyzed: 09/28/2015					
pH	8.28		pH Units		8.25			0.363	25	
Batch 5128015 - NO PREP										
Blank (5128015-BLK1)		Prepared: 09/28/2015 Analyzed: 09/28/2015								
Specific Conductance (EC)	0.00320		mmhos/cm							
Duplicate (5128015-DUP1)		Source: X509365-01			Prepared: 09/28/2015 Analyzed: 09/28/2015					
Specific Conductance (EC)	0.0171		mmhos/cm		0.0167			2.37	25	

Origins Laboratory, Inc.



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Tasman Geosciences
6899 Pecos Street, Unit C
Denver CO 80211

Christine Wasko
Project Number: [none]
Project: KMG - Ferme Farms 1-14

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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