



May 30, 2017

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB**

**Project Number - [none]**

Attached are your analytical results for KMG-Fehr 16N-32HZ/Land Fed 13N-32HZ TB received by Origins Laboratory, Inc. May 26, 2017. This project is associated with Origins project number Y705339-01.

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



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

Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@0-3"-Inlet	Y705339-01	Soil	May 26, 2017 15:00	05/26/2017 16:47
SS02@0-6"-Outlet	Y705339-02	Soil	May 26, 2017 15:30	05/26/2017 16:47

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

Origins  
Summit Scientific  
7705339

244 Corporate Circle Suite 100 Golden, Colorado 80401  
303-277-0310 • 303-374-5033 Fax

Page 1 of 1

Client: APC  
Address:  
City/State/Zip:  
Phone:  
Sample Name: E-2 S-961

Project Manager: Robert Cornez  
E-Mail: rcornez@tasman-ge.com  
Project Name: Fehr 16N-32HZ/Land Fed 13N-32HZ Tank Bldg  
Project Number:

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix	Analyze For:	Special Instructions	Notes:
				HCl	HNO <sub>3</sub>	None	Other (Specify)				
55018 0.3" 2.44	5/24/17	1510	4					Air - Canister Serial #	<input checked="" type="checkbox"/> 4260 G.C. 1.0% <input checked="" type="checkbox"/> 6015 D.T.O. 0.2% <input checked="" type="checkbox"/> 9110 M.H. 1% <input checked="" type="checkbox"/> pH EC, SAR		
55028 0.3" 2.44	5/24/17	1530	4								
Relinquished by: G. F. J. Date/Time: 5/26/17 Received by: [Signature] Date/Time: 5/26/17 Turn Around Time (Check): <input checked="" type="checkbox"/> Same Day <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 72 Hours Standard											
Relinquished by: [Signature] Date/Time: 5/26/17 Received by: [Signature] Date/Time: 5/26/17 Sample Integrity: Temperature Upon Receipt: <input type="checkbox"/> Intact <input type="checkbox"/> Yes <input type="checkbox"/> No											

Origins Laboratory, Inc.

Jefe Pellegrini

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Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: Y 705339

Client: Tasman

Client Project ID: 16N-32 HZ/Land Fed 13N-32HZ TB

Checklist Completed by: DM

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

Date/time completed: 5-26-17 1703

Airbill #: NO

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

Cooler Number/Temperature: 1 / 4.0 °C      /      °C      /      °C (Describe)

Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>pH, SAR</u>
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> 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) DM

Date/Time Reviewed 5-26-17

Origins Laboratory, Inc.

*Jefe Pellegrini*

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SS01@0-3"-Inlet**  
**5/26/2017 3:00:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705339-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B7E2605	05/26/2017	05/26/2017	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 62.2 % 59-131 " " "

**GRO/TVPH by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
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**pH in Soil by EPA 9045D**

pH	8.11		pH Units	1	B7E2607	05/26/2017	05/26/2017	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	1.21		mmhos/cm	"	B7E2608	05/26/2017	05/26/2017	
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**VOC by EPA 8260C**

1,1,1,2-Tetrachloroethane	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
1,1,1-Trichloroethane	ND	0.00200	"	"	"	"	"	U
1,1,2,2-Tetrachloroethane	ND	0.00200	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	0.00200	"	"	"	"	"	U
1,1-Dichloroethane	ND	0.00200	"	"	"	"	"	U

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Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

SS01@0-3"-Inlet  
5/26/2017 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y705339-01 (Soil)

## VOC by EPA 8260C

1,1-Dichloroethene	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
1,1-Dichloropropene	ND	0.00200	"	"	"	"	"	U
1,2,3-Trichlorobenzene	ND	0.00500	"	"	"	"	"	U
1,2,3-Trichloropropane	ND	0.00500	"	"	"	"	"	U
1,2,4-Trichlorobenzene	ND	0.00500	"	"	"	"	"	U
1,2,4-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
1,2-Dibromo-3-chloropropane	ND	0.00500	"	"	"	"	"	U
1,2-Dibromoethane (EDB)	ND	0.00200	"	"	"	"	"	U
1,2-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U
1,2-Dichloroethane	ND	0.00200	"	"	"	"	"	U
1,2-Dichloropropane	ND	0.00200	"	"	"	"	"	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
1,3-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U
1,3-Dichloropropane	ND	0.00200	"	"	"	"	"	U
1,4-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U
2,2-Dichloropropane	ND	0.00200	"	"	"	"	"	U
2-Butanone	ND	0.0100	"	"	"	"	"	U
2-Chlorotoluene	ND	0.00200	"	"	"	"	"	U
2-Hexanone	ND	0.0100	"	"	"	"	"	U

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Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

SS01@0-3"-Inlet  
5/26/2017 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y705339-01 (Soil)

## VOC by EPA 8260C

4-Chlorotoluene	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
4-Isopropyltoluene	ND	0.00200	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	0.0100	"	"	"	"	"	U
Acetone	ND	0.0200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Bromobenzene	ND	0.00200	"	"	"	"	"	U
Bromochloromethane	ND	0.00200	"	"	"	"	"	U
Bromodichloromethane	ND	0.00200	"	"	"	"	"	U
Bromoform	ND	0.00200	"	"	"	"	"	U
Bromomethane	ND	0.00200	"	"	"	"	"	U
Carbon disulfide	ND	0.00500	"	"	"	"	"	U
Carbon tetrachloride	ND	0.00200	"	"	"	"	"	U
Chlorobenzene	ND	0.00200	"	"	"	"	"	U
Chloroethane	ND	0.00500	"	"	"	"	"	U
Chloroform	ND	0.00200	"	"	"	"	"	U
Chloromethane	ND	0.00200	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	0.00200	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	0.00200	"	"	"	"	"	U
Dibromochloromethane	ND	0.00200	"	"	"	"	"	U

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13N-32HZ TB

SS01@0-3"-Inlet  
5/26/2017 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y705339-01 (Soil)

## VOC by EPA 8260C

Dibromomethane	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Hexachlorobutadiene	ND	0.00500	"	"	"	"	"	U
Iodomethane	ND	0.0150	"	"	"	"	"	U
Isopropylbenzene	ND	0.00200	"	"	"	"	"	U
m,p-Xylene	ND	0.00400	"	"	"	"	"	U
Methyl tert-Butyl Ether	ND	0.00200	"	"	"	"	"	U
Methylene Chloride	ND	0.0200	"	"	"	"	"	U
Naphthalene	ND	0.0100	"	"	"	"	"	U
n-Butylbenzene	ND	0.00200	"	"	"	"	"	U
n-Propylbenzene	ND	0.00200	"	"	"	"	"	U
o-Xylene	ND	0.00200	"	"	"	"	"	U
sec-Butylbenzene	ND	0.00200	"	"	"	"	"	U
Styrene	ND	0.00200	"	"	"	"	"	U
tert-Butylbenzene	ND	0.00200	"	"	"	"	"	U
Tetrachloroethene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	0.00200	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	0.00200	"	"	"	"	"	U

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13N-32HZ TB

SS01@0-3"-Inlet  
5/26/2017 3:00:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y705339-01 (Soil)

## VOC by EPA 8260C

Trichloroethene	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
Trichlorofluoromethane	ND	0.00300	"	"	"	"	"	U
Vinyl chloride	ND	0.00200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	123 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.7 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.2 %	70-130			"	"	"	

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Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SS02@0-6"-Outlet**  
**5/26/2017 3:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705339-02 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B7E2605	05/26/2017	05/26/2017	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl 75.3 % 59-131 " " "

**GRO/TVPH by EPA 8260C**

Gasoline Range Hydrocarbons	ND	0.100	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
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**pH in Soil by EPA 9045D**

pH	7.98		pH Units	1	B7E2607	05/26/2017	05/26/2017	
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.472		mmhos/cm	"	B7E2608	05/26/2017	05/26/2017	
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**VOC by EPA 8260C**

1,1,1,2-Tetrachloroethane	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
1,1,1-Trichloroethane	ND	0.00200	"	"	"	"	"	U
1,1,2,2-Tetrachloroethane	ND	0.00200	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	0.00200	"	"	"	"	"	U
1,1-Dichloroethane	ND	0.00200	"	"	"	"	"	U

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**SS02@0-6"-Outlet**  
**5/26/2017 3:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705339-02 (Soil)**

**VOC by EPA 8260C**

1,1-Dichloroethene	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
1,1-Dichloropropene	ND	0.00200	"	"	"	"	"	U
1,2,3-Trichlorobenzene	ND	0.00500	"	"	"	"	"	U
1,2,3-Trichloropropane	ND	0.00500	"	"	"	"	"	U
1,2,4-Trichlorobenzene	ND	0.00500	"	"	"	"	"	U
1,2,4-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
1,2-Dibromo-3-chloropropane	ND	0.00500	"	"	"	"	"	U
1,2-Dibromoethane (EDB)	ND	0.00200	"	"	"	"	"	U
1,2-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U
1,2-Dichloroethane	ND	0.00200	"	"	"	"	"	U
1,2-Dichloropropane	ND	0.00200	"	"	"	"	"	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
1,3-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U
1,3-Dichloropropane	ND	0.00200	"	"	"	"	"	U
1,4-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U
2,2-Dichloropropane	ND	0.00200	"	"	"	"	"	U
2-Butanone	ND	0.0100	"	"	"	"	"	U
2-Chlorotoluene	ND	0.00200	"	"	"	"	"	U
2-Hexanone	ND	0.0100	"	"	"	"	"	U

Origins Laboratory, Inc.



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Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SS02@0-6"-Outlet**  
**5/26/2017 3:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705339-02 (Soil)**

**VOC by EPA 8260C**

4-Chlorotoluene	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
4-Isopropyltoluene	ND	0.00200	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	0.0100	"	"	"	"	"	U
Acetone	ND	0.0200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Bromobenzene	ND	0.00200	"	"	"	"	"	U
Bromochloromethane	ND	0.00200	"	"	"	"	"	U
Bromodichloromethane	ND	0.00200	"	"	"	"	"	U
Bromoform	ND	0.00200	"	"	"	"	"	U
Bromomethane	ND	0.00200	"	"	"	"	"	U
Carbon disulfide	ND	0.00500	"	"	"	"	"	U
Carbon tetrachloride	ND	0.00200	"	"	"	"	"	U
Chlorobenzene	ND	0.00200	"	"	"	"	"	U
Chloroethane	ND	0.00500	"	"	"	"	"	U
Chloroform	ND	0.00200	"	"	"	"	"	U
Chloromethane	ND	0.00200	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	0.00200	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	0.00200	"	"	"	"	"	U
Dibromochloromethane	ND	0.00200	"	"	"	"	"	U

Origins Laboratory, Inc.



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Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SS02@0-6"-Outlet**  
**5/26/2017 3:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705339-02 (Soil)**

**VOC by EPA 8260C**

Dibromomethane	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Hexachlorobutadiene	ND	0.00500	"	"	"	"	"	U
Iodomethane	ND	0.0150	"	"	"	"	"	U
Isopropylbenzene	ND	0.00200	"	"	"	"	"	U
m,p-Xylene	ND	0.00400	"	"	"	"	"	U
Methyl tert-Butyl Ether	ND	0.00200	"	"	"	"	"	U
Methylene Chloride	ND	0.0200	"	"	"	"	"	U
Naphthalene	ND	0.0100	"	"	"	"	"	U
n-Butylbenzene	ND	0.00200	"	"	"	"	"	U
n-Propylbenzene	ND	0.00200	"	"	"	"	"	U
o-Xylene	ND	0.00200	"	"	"	"	"	U
sec-Butylbenzene	ND	0.00200	"	"	"	"	"	U
Styrene	ND	0.00200	"	"	"	"	"	U
tert-Butylbenzene	ND	0.00200	"	"	"	"	"	U
Tetrachloroethene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	0.00200	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	0.00200	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SS02@0-6"-Outlet**  
**5/26/2017 3:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705339-02 (Soil)**

**VOC by EPA 8260C**

Trichloroethene	ND	0.00200	mg/kg	1	B7E2604	05/26/2017	05/26/2017	U
Trichlorofluoromethane	ND	0.00300	"	"	"	"	"	U
Vinyl chloride	ND	0.00200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	127 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.3 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"	

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E2604 - EPA 5030 (soil)</b>										
<b>Blank (B7E2604-BLK2)</b>					Prepared: 05/26/2017 Analyzed: 05/26/2017					
1,1,1,2-Tetrachloroethane	ND	0.00200	mg/kg							U
1,1,1-Trichloroethane	ND	0.00200	"							U
1,1,2,2-Tetrachloroethane	ND	0.00200	"							U
1,1,2-Trichloroethane	ND	0.00200	"							U
1,1-Dichloroethane	ND	0.00200	"							U
1,1-Dichloroethene	ND	0.00200	"							U
1,1-Dichloropropene	ND	0.00200	"							U
1,2,3-Trichlorobenzene	ND	0.00500	"							U
1,2,3-Trichloropropane	ND	0.00500	"							U
1,2,4-Trichlorobenzene	ND	0.00500	"							U
1,2,4-Trimethylbenzene	ND	0.00200	"							U
1,2-Dibromo-3-chloropropane	ND	0.00500	"							U
1,2-Dibromoethane (EDB)	ND	0.00200	"							U
1,2-Dichlorobenzene	ND	0.00200	"							U
1,2-Dichloroethane	ND	0.00200	"							U
1,2-Dichloropropane	ND	0.00200	"							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
1,3-Dichlorobenzene	ND	0.00200	"							U
1,3-Dichloropropane	ND	0.00200	"							U
1,4-Dichlorobenzene	ND	0.00200	"							U
2,2-Dichloropropane	ND	0.00200	"							U
2-Butanone	ND	0.0100	"							U
2-Chlorotoluene	ND	0.00200	"							U
2-Hexanone	ND	0.0100	"							U
4-Chlorotoluene	ND	0.00200	"							U
4-Isopropyltoluene	ND	0.00200	"							U

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2604 - EPA 5030 (soil)**

**Blank (B7E2604-BLK2)**

Prepared: 05/26/2017 Analyzed: 05/26/2017

4-Methyl-2-pentanone	ND	0.0100	mg/kg							U
Acetone	ND	0.0200	"							U
Benzene	ND	0.00200	"							U
Bromobenzene	ND	0.00200	"							U
Bromochloromethane	ND	0.00200	"							U
Bromodichloromethane	ND	0.00200	"							U
Bromoform	ND	0.00200	"							U
Bromomethane	ND	0.00200	"							U
Carbon disulfide	ND	0.00500	"							U
Carbon tetrachloride	ND	0.00200	"							U
Chlorobenzene	ND	0.00200	"							U
Chloroethane	ND	0.00500	"							U
Chloroform	ND	0.00200	"							U
Chloromethane	ND	0.00200	"							U
cis-1,2-Dichloroethene	ND	0.00200	"							U
cis-1,3-Dichloropropene	ND	0.00200	"							U
Dibromochloromethane	ND	0.00200	"							U
Dibromomethane	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Hexachlorobutadiene	ND	0.00500	"							U
Iodomethane	ND	0.0150	"							U
Isopropylbenzene	ND	0.00200	"							U
m,p-Xylene	ND	0.00400	"							U
Methyl tert-Butyl Ether	ND	0.00200	"							U
Methylene Chloride	ND	0.0200	"							U
Naphthalene	ND	0.0100	"							U

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2604 - EPA 5030 (soil)**

**Blank (B7E2604-BLK2)**

Prepared: 05/26/2017 Analyzed: 05/26/2017

n-Butylbenzene	ND	0.00200	mg/kg							U
n-Propylbenzene	ND	0.00200	"							U
o-Xylene	ND	0.00200	"							U
sec-Butylbenzene	ND	0.00200	"							U
Styrene	ND	0.00200	"							U
tert-Butylbenzene	ND	0.00200	"							U
Tetrachloroethene	ND	0.00200	"							U
Toluene	ND	0.00200	"							U
trans-1,2-Dichloroethene	ND	0.00200	"							U
trans-1,3-Dichloropropene	ND	0.00200	"							U
Trichloroethene	ND	0.00200	"							U
Trichlorofluoromethane	ND	0.00300	"							U
Vinyl chloride	ND	0.00200	"							U
Surrogate: 1,2-Dichloroethane-d4	69		ug/L	62.5		110	70-130			
Surrogate: Toluene-d8	64		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.4	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2604 - EPA 5030 (soil)**

**LCS (B7E2604-BS2)**

Prepared: 05/26/2017 Analyzed: 05/26/2017

1,1,1,2-Tetrachloroethane	0.113	0.00200	mg/kg	0.100		113	70-130			
1,1,1-Trichloroethane	0.101	0.00200	"	0.100		101	70-130			
1,1,2,2-Tetrachloroethane	0.106	0.00200	"	0.100		106	70-130			
1,1,2-Trichloroethane	0.0965	0.00200	"	0.100		96.5	70-130			
1,1-Dichloroethane	0.100	0.00200	"	0.100		100	70-130			
1,1-Dichloroethene	0.116	0.00200	"	0.100		116	70-130			
1,1-Dichloropropene	0.0986	0.00200	"	0.100		98.6	70-130			
1,2,3-Trichlorobenzene	0.108	0.00500	"	0.100		108	70-130			
1,2,3-Trichloropropane	0.111	0.00500	"	0.100		111	70-130			
1,2,4-Trichlorobenzene	0.110	0.00500	"	0.100		110	70-130			
1,2,4-Trimethylbenzene	0.117	0.00200	"	0.100		117	70-130			
1,2-Dibromo-3-chloropropane	0.0961	0.00500	"	0.100		96.1	70-130			
1,2-Dibromoethane (EDB)	0.100	0.00200	"	0.100		100	70-130			
1,2-Dichlorobenzene	0.113	0.00200	"	0.100		113	70-130			
1,2-Dichloroethane	0.108	0.00200	"	0.100		108	70-130			
1,2-Dichloropropane	0.0958	0.00200	"	0.100		95.8	70-130			
1,3,5-Trimethylbenzene	0.120	0.00200	"	0.100		120	70-130			
1,3-Dichlorobenzene	0.111	0.00200	"	0.100		111	70-130			
1,3-Dichloropropane	0.0975	0.00200	"	0.100		97.5	70-130			
1,4-Dichlorobenzene	0.114	0.00200	"	0.100		114	70-130			
2,2-Dichloropropane	0.102	0.00200	"	0.100		102	70-130			
2-Butanone	0.486	0.0100	"	0.500		97.3	70-130			
2-Chlorotoluene	0.120	0.00200	"	0.100		120	70-130			
2-Hexanone	0.491	0.0100	"	0.500		98.2	70-130			
4-Chlorotoluene	0.105	0.00200	"	0.100		105	70-130			
4-Isopropyltoluene	0.113	0.00200	"	0.100		113	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2604 - EPA 5030 (soil)**

**LCS (B7E2604-BS2)**

Prepared: 05/26/2017 Analyzed: 05/26/2017

4-Methyl-2-pentanone	0.453	0.0100	mg/kg	0.500		90.7	70-130			
Acetone	0.538	0.0200	"	0.500		108	70-130			
Benzene	0.0953	0.00200	"	0.100		95.3	70-130			
Bromobenzene	0.107	0.00200	"	0.100		107	70-130			
Bromochloromethane	0.103	0.00200	"	0.100		103	70-130			
Bromodichloromethane	0.111	0.00200	"	0.100		111	70-130			
Bromoform	0.107	0.00200	"	0.100		107	70-130			
Bromomethane	0.114	0.00200	"	0.100		114	70-130			
Carbon disulfide	0.110	0.00500	"	0.100		110	70-130			
Carbon tetrachloride	0.103	0.00200	"	0.100		103	70-130			
Chlorobenzene	0.0988	0.00200	"	0.100		98.8	70-130			
Chloroethane	0.117	0.00500	"	0.100		117	70-130			
Chloroform	0.107	0.00200	"	0.100		107	70-130			
Chloromethane	0.102	0.00200	"	0.100		102	70-130			
cis-1,2-Dichloroethene	0.105	0.00200	"	0.100		105	70-130			
cis-1,3-Dichloropropene	0.109	0.00200	"	0.100		109	70-130			
Dibromochloromethane	0.119	0.00200	"	0.100		119	70-130			
Dibromomethane	0.0982	0.00200	"	0.100		98.2	70-130			
Ethylbenzene	0.108	0.00200	"	0.100		108	70-130			
Hexachlorobutadiene	0.120	0.00500	"	0.100		120	70-130			
Iodomethane	0.100	0.0150	"	0.100		100	70-130			
Isopropylbenzene	0.107	0.00200	"	0.100		107	70-130			
m,p-Xylene	0.236	0.00400	"	0.200		118	70-130			
Methyl tert-Butyl Ether	0.0909	0.00200	"	0.100		90.9	70-130			
Methylene Chloride	0.107	0.0200	"	0.100		107	70-130			
Naphthalene	0.103	0.0100	"	0.100		103	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2604 - EPA 5030 (soil)**

**LCS (B7E2604-BS2)**

Prepared: 05/26/2017 Analyzed: 05/26/2017

n-Butylbenzene	0.119	0.00200	mg/kg	0.100		119	70-130			
n-Propylbenzene	0.121	0.00200	"	0.100		121	70-130			
o-Xylene	0.108	0.00200	"	0.100		108	70-130			
sec-Butylbenzene	0.117	0.00200	"	0.100		117	70-130			
Styrene	0.115	0.00200	"	0.100		115	70-130			
tert-Butylbenzene	0.114	0.00200	"	0.100		114	70-130			
Tetrachloroethene	0.101	0.00200	"	0.100		101	70-130			
Toluene	0.0995	0.00200	"	0.100		99.5	70-130			
trans-1,2-Dichloroethene	0.107	0.00200	"	0.100		107	70-130			
trans-1,3-Dichloropropene	0.110	0.00200	"	0.100		110	70-130			
Trichloroethene	0.0954	0.00200	"	0.100		95.4	70-130			
Trichlorofluoromethane	0.112	0.00300	"	0.100		112	70-130			
Vinyl chloride	0.101	0.00200	"	0.100		101	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/L	62.5		104	70-130			
Surrogate: Toluene-d8	65		"	62.5		104	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2604 - EPA 5030 (soil)**

Matrix Spike (B7E2604-MS2)		Source: Y705312-02			Prepared: 05/26/2017 Analyzed: 05/26/2017					
1,1,1,2-Tetrachloroethane	0.120	0.00200	mg/kg	0.100	ND	120	70-130			
1,1,1-Trichloroethane	0.103	0.00200	"	0.100	ND	103	70-130			
1,1,2,2-Tetrachloroethane	0.121	0.00200	"	0.100	ND	121	70-130			
1,1,2-Trichloroethane	0.104	0.00200	"	0.100	ND	104	70-130			
1,1-Dichloroethane	0.101	0.00200	"	0.100	ND	101	70-130			
1,1-Dichloroethene	0.117	0.00200	"	0.100	ND	117	70-130			
1,1-Dichloropropene	0.102	0.00200	"	0.100	ND	102	70-130			
1,2,3-Trichlorobenzene	0.117	0.00500	"	0.100	0.00400	113	70-130			
1,2,3-Trichloropropane	0.124	0.00500	"	0.100	ND	124	70-130			
1,2,4-Trichlorobenzene	0.120	0.00500	"	0.100	0.00210	118	70-130			
1,2,4-Trimethylbenzene	0.125	0.00200	"	0.100	ND	125	70-130			
1,2-Dibromo-3-chloropropane	0.108	0.00500	"	0.100	ND	108	70-130			
1,2-Dibromoethane (EDB)	0.106	0.00200	"	0.100	ND	106	70-130			
1,2-Dichlorobenzene	0.124	0.00200	"	0.100	ND	124	70-130			
1,2-Dichloroethane	0.111	0.00200	"	0.100	ND	111	70-130			
1,2-Dichloropropane	0.0985	0.00200	"	0.100	ND	98.5	70-130			
1,3,5-Trimethylbenzene	0.127	0.00200	"	0.100	ND	127	70-130			
1,3-Dichlorobenzene	0.121	0.00200	"	0.100	ND	121	70-130			
1,3-Dichloropropane	0.104	0.00200	"	0.100	ND	104	70-130			
1,4-Dichlorobenzene	0.124	0.00200	"	0.100	ND	124	70-130			
2,2-Dichloropropane	0.105	0.00200	"	0.100	ND	105	70-130			
2-Butanone	0.528	0.0100	"	0.500	ND	106	70-130			
2-Chlorotoluene	0.129	0.00200	"	0.100	ND	129	70-130			
2-Hexanone	0.554	0.0100	"	0.500	ND	111	70-130			
4-Chlorotoluene	0.112	0.00200	"	0.100	0.000880	111	70-130			
4-Isopropyltoluene	0.119	0.00200	"	0.100	ND	119	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2604 - EPA 5030 (soil)**

Matrix Spike (B7E2604-MS2)		Source: Y705312-02			Prepared: 05/26/2017 Analyzed: 05/26/2017					
4-Methyl-2-pentanone	0.507	0.0100	mg/kg	0.500	0.00580	100	70-130			
Acetone	0.564	0.0200	"	0.500	ND	113	70-130			
Benzene	0.0970	0.00200	"	0.100	ND	97.0	70-130			
Bromobenzene	0.113	0.00200	"	0.100	ND	113	70-130			
Bromochloromethane	0.108	0.00200	"	0.100	ND	108	70-130			
Bromodichloromethane	0.115	0.00200	"	0.100	ND	115	70-130			
Bromoform	0.115	0.00200	"	0.100	ND	115	70-130			
Bromomethane	0.119	0.00200	"	0.100	ND	119	70-130			
Carbon disulfide	0.110	0.00500	"	0.100	ND	110	70-130			
Carbon tetrachloride	0.106	0.00200	"	0.100	ND	106	70-130			
Chlorobenzene	0.105	0.00200	"	0.100	ND	105	70-130			
Chloroethane	0.120	0.00500	"	0.100	ND	120	70-130			
Chloroform	0.109	0.00200	"	0.100	ND	109	70-130			
Chloromethane	0.108	0.00200	"	0.100	ND	108	70-130			
cis-1,2-Dichloroethene	0.106	0.00200	"	0.100	ND	106	70-130			
cis-1,3-Dichloropropene	0.111	0.00200	"	0.100	ND	111	70-130			
Dibromochloromethane	0.129	0.00200	"	0.100	ND	129	70-130			
Dibromomethane	0.105	0.00200	"	0.100	ND	105	70-130			
Ethylbenzene	0.111	0.00200	"	0.100	0.000440	111	70-130			
Hexachlorobutadiene	0.123	0.00500	"	0.100	ND	123	70-130			
Iodomethane	0.101	0.0150	"	0.100	ND	101	70-130			
Isopropylbenzene	0.113	0.00200	"	0.100	ND	113	70-130			
m,p-Xylene	0.248	0.00400	"	0.200	ND	124	70-130			
Methyl tert-Butyl Ether	0.100	0.00200	"	0.100	ND	100	70-130			
Methylene Chloride	0.103	0.0200	"	0.100	ND	103	70-130			
Naphthalene	0.114	0.0100	"	0.100	0.00154	112	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2604 - EPA 5030 (soil)**

Matrix Spike (B7E2604-MS2)		Source: Y705312-02			Prepared: 05/26/2017 Analyzed: 05/26/2017					
n-Butylbenzene	0.126	0.00200	mg/kg	0.100	0.000900	125	70-130			
n-Propylbenzene	0.126	0.00200	"	0.100	ND	126	70-130			
o-Xylene	0.114	0.00200	"	0.100	ND	114	70-130			
sec-Butylbenzene	0.124	0.00200	"	0.100	ND	124	70-130			
Styrene	0.113	0.00200	"	0.100	ND	113	70-130			
tert-Butylbenzene	0.122	0.00200	"	0.100	ND	122	70-130			
Tetrachloroethene	0.103	0.00200	"	0.100	ND	103	70-130			
Toluene	0.100	0.00200	"	0.100	ND	100	70-130			
trans-1,2-Dichloroethene	0.109	0.00200	"	0.100	ND	109	70-130			
trans-1,3-Dichloropropene	0.116	0.00200	"	0.100	ND	116	70-130			
Trichloroethene	0.0983	0.00200	"	0.100	ND	98.3	70-130			
Trichlorofluoromethane	0.120	0.00300	"	0.100	ND	120	70-130			
Vinyl chloride	0.105	0.00200	"	0.100	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	64		ug/L	62.5		103	70-130			
Surrogate: Toluene-d8	65		"	62.5		103	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E2604 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B7E2604-MSD2)</b>		<b>Source: Y705312-02</b>			Prepared: 05/26/2017 Analyzed: 05/26/2017					
1,1,1,2-Tetrachloroethane	0.112	0.00200	mg/kg	0.100	ND	112	70-130	7.33	20	
1,1,1-Trichloroethane	0.0967	0.00200	"	0.100	ND	96.7	70-130	6.80	20	
1,1,2,2-Tetrachloroethane	0.111	0.00200	"	0.100	ND	111	70-130	7.88	20	
1,1,2-Trichloroethane	0.101	0.00200	"	0.100	ND	101	70-130	3.27	20	
1,1-Dichloroethane	0.0949	0.00200	"	0.100	ND	94.9	70-130	6.45	20	
1,1-Dichloroethene	0.107	0.00200	"	0.100	ND	107	70-130	8.76	20	
1,1-Dichloropropene	0.0948	0.00200	"	0.100	ND	94.8	70-130	6.90	20	
1,2,3-Trichlorobenzene	0.109	0.00500	"	0.100	0.00400	105	70-130	6.61	20	
1,2,3-Trichloropropane	0.116	0.00500	"	0.100	ND	116	70-130	7.02	20	
1,2,4-Trichlorobenzene	0.105	0.00500	"	0.100	0.00210	103	70-130	13.1	20	
1,2,4-Trimethylbenzene	0.112	0.00200	"	0.100	ND	112	70-130	11.0	20	
1,2-Dibromo-3-chloropropane	0.105	0.00500	"	0.100	ND	105	70-130	2.71	20	
1,2-Dibromoethane (EDB)	0.103	0.00200	"	0.100	ND	103	70-130	2.43	20	
1,2-Dichlorobenzene	0.110	0.00200	"	0.100	ND	110	70-130	12.3	20	
1,2-Dichloroethane	0.106	0.00200	"	0.100	ND	106	70-130	4.62	20	
1,2-Dichloropropane	0.0935	0.00200	"	0.100	ND	93.5	70-130	5.19	20	
1,3,5-Trimethylbenzene	0.114	0.00200	"	0.100	ND	114	70-130	10.4	20	
1,3-Dichlorobenzene	0.108	0.00200	"	0.100	ND	108	70-130	10.6	20	
1,3-Dichloropropane	0.100	0.00200	"	0.100	ND	100	70-130	3.56	20	
1,4-Dichlorobenzene	0.112	0.00200	"	0.100	ND	112	70-130	10.8	20	
2,2-Dichloropropane	0.0990	0.00200	"	0.100	ND	99.0	70-130	5.46	20	
2-Butanone	0.515	0.0100	"	0.500	ND	103	70-130	2.60	20	
2-Chlorotoluene	0.116	0.00200	"	0.100	ND	116	70-130	10.9	20	
2-Hexanone	0.541	0.0100	"	0.500	ND	108	70-130	2.48	20	
4-Chlorotoluene	0.102	0.00200	"	0.100	0.000880	101	70-130	9.34	20	
4-Isopropyltoluene	0.107	0.00200	"	0.100	ND	107	70-130	11.2	20	

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E2604 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B7E2604-MSD2)</b>		<b>Source: Y705312-02</b>			Prepared: 05/26/2017 Analyzed: 05/26/2017					
4-Methyl-2-pentanone	0.489	0.0100	mg/kg	0.500	0.00580	96.7	70-130	3.45	20	
Acetone	0.546	0.0200	"	0.500	ND	109	70-130	3.33	20	
Benzene	0.0908	0.00200	"	0.100	ND	90.8	70-130	6.54	20	
Bromobenzene	0.105	0.00200	"	0.100	ND	105	70-130	7.67	20	
Bromochloromethane	0.101	0.00200	"	0.100	ND	101	70-130	5.91	20	
Bromodichloromethane	0.108	0.00200	"	0.100	ND	108	70-130	5.80	20	
Bromoform	0.110	0.00200	"	0.100	ND	110	70-130	4.98	20	
Bromomethane	0.106	0.00200	"	0.100	ND	106	70-130	11.0	20	
Carbon disulfide	0.105	0.00500	"	0.100	ND	105	70-130	3.81	20	
Carbon tetrachloride	0.108	0.00200	"	0.100	ND	108	70-130	1.89	20	
Chlorobenzene	0.0958	0.00200	"	0.100	ND	95.8	70-130	9.16	20	
Chloroethane	0.109	0.00500	"	0.100	ND	109	70-130	9.79	20	
Chloroform	0.102	0.00200	"	0.100	ND	102	70-130	6.85	20	
Chloromethane	0.0981	0.00200	"	0.100	ND	98.1	70-130	9.26	20	
cis-1,2-Dichloroethene	0.0994	0.00200	"	0.100	ND	99.4	70-130	6.65	20	
cis-1,3-Dichloropropene	0.107	0.00200	"	0.100	ND	107	70-130	3.45	20	
Dibromochloromethane	0.121	0.00200	"	0.100	ND	121	70-130	6.82	20	
Dibromomethane	0.101	0.00200	"	0.100	ND	101	70-130	4.53	20	
Ethylbenzene	0.104	0.00200	"	0.100	0.000440	103	70-130	6.98	20	
Hexachlorobutadiene	0.104	0.00500	"	0.100	ND	104	70-130	16.2	20	
Iodomethane	0.0940	0.0150	"	0.100	ND	94.0	70-130	7.06	20	
Isopropylbenzene	0.103	0.00200	"	0.100	ND	103	70-130	8.83	20	
m,p-Xylene	0.228	0.00400	"	0.200	ND	114	70-130	8.55	20	
Methyl tert-Butyl Ether	0.0977	0.00200	"	0.100	ND	97.7	70-130	2.25	20	
Methylene Chloride	0.0961	0.0200	"	0.100	ND	96.1	70-130	7.24	20	
Naphthalene	0.109	0.0100	"	0.100	0.00154	107	70-130	4.43	20	

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E2604 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B7E2604-MSD2)</b>	<b>Source: Y705312-02</b>				Prepared: 05/26/2017 Analyzed: 05/26/2017					
n-Butylbenzene	0.111	0.00200	mg/kg	0.100	0.000900	110	70-130	12.9	20	
n-Propylbenzene	0.114	0.00200	"	0.100	ND	114	70-130	10.6	20	
o-Xylene	0.105	0.00200	"	0.100	ND	105	70-130	8.10	20	
sec-Butylbenzene	0.110	0.00200	"	0.100	ND	110	70-130	11.6	20	
Styrene	0.106	0.00200	"	0.100	ND	106	70-130	5.96	20	
tert-Butylbenzene	0.108	0.00200	"	0.100	ND	108	70-130	11.9	20	
Tetrachloroethene	0.0948	0.00200	"	0.100	ND	94.8	70-130	7.94	20	
Toluene	0.0949	0.00200	"	0.100	ND	94.9	70-130	5.73	20	
trans-1,2-Dichloroethene	0.101	0.00200	"	0.100	ND	101	70-130	7.48	20	
trans-1,3-Dichloropropene	0.113	0.00200	"	0.100	ND	113	70-130	2.65	20	
Trichloroethene	0.0921	0.00200	"	0.100	ND	92.1	70-130	6.53	20	
Trichlorofluoromethane	0.105	0.00300	"	0.100	ND	105	70-130	13.5	20	
Vinyl chloride	0.0986	0.00200	"	0.100	ND	98.6	70-130	6.57	20	
Surrogate: 1,2-Dichloroethane-d4	68		ug/L	62.5		108	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E2605 - EPA 3550B**

**Blank (B7E2605-BLK1)**

Prepared: 05/26/2017 Analyzed: 05/29/2017

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	41		"	50.0		81.6	59-131			

**Blank (B7E2605-BLK2)**

Prepared: 05/26/2017 Analyzed: 05/26/2017

Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	39		"	50.0		78.6	59-131			

**LCS (B7E2605-BS1)**

Prepared: 05/26/2017 Analyzed: 05/26/2017

Diesel (C10-C28)	795	50.0	mg/kg	1000		79.5	64-121			
Residual Range Organics (C28-C40)	781	200	"	1000		78.1	58-124			
Surrogate: o-Terphenyl	34		"	50.0		68.9	59-131			

**LCS (B7E2605-BS2)**

Prepared: 05/26/2017 Analyzed: 05/26/2017

Diesel (C10-C28)	808	50.0	mg/kg	1000		80.8	64-121			
Residual Range Organics (C28-C40)	767	200	"	1000		76.7	58-124			
Surrogate: o-Terphenyl	36		"	50.0		72.3	59-131			

**Matrix Spike (B7E2605-MS1)**

Source: Y705312-01

Prepared: 05/26/2017 Analyzed: 05/26/2017

Diesel (C10-C28)	777	50.0	mg/kg	1000	ND	77.7	53-125			
Residual Range Organics (C28-C40)	760	200	"	1000	11.2	74.8	47-133			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## 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
<b>Batch B7E2605 - EPA 3550B</b>										
<b>Matrix Spike (B7E2605-MS1)</b>		<b>Source: Y705312-01</b>			Prepared: 05/26/2017 Analyzed: 05/26/2017					
Surrogate: o-Terphenyl	33		mg/kg	50.0		66.0	59-131			
<b>Matrix Spike (B7E2605-MS2)</b>		<b>Source: Y705312-02</b>			Prepared: 05/26/2017 Analyzed: 05/26/2017					
Diesel (C10-C28)	1040	50.0	mg/kg	1000	ND	104	53-125			
Residual Range Organics (C28-C40)	889	200	"	1000	11.8	87.7	47-133			
Surrogate: o-Terphenyl	44		"	50.0		88.6	59-131			
<b>Matrix Spike Dup (B7E2605-MSD1)</b>		<b>Source: Y705312-01</b>			Prepared: 05/26/2017 Analyzed: 05/26/2017					
Diesel (C10-C28)	807	50.0	mg/kg	1000	ND	80.7	53-125	3.86	20	
Residual Range Organics (C28-C40)	775	200	"	1000	11.2	76.4	47-133	2.04	20	
Surrogate: o-Terphenyl	36		"	50.0		71.5	59-131			
<b>Matrix Spike Dup (B7E2605-MSD2)</b>		<b>Source: Y705312-02</b>			Prepared: 05/26/2017 Analyzed: 05/26/2017					
Diesel (C10-C28)	796	50.0	mg/kg	1000	ND	79.6	53-125	26.3	20	QR-02
Residual Range Organics (C28-C40)	761	200	"	1000	11.8	75.0	47-133	15.7	20	
Surrogate: o-Terphenyl	36		"	50.0		71.6	59-131			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## Volatile Organic Compounds by EPA Method 8260B - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B7E2604 - EPA 5030 (soil)</b>										
<b>Blank (B7E2604-BLK2)</b>					Prepared: 05/26/2017 Analyzed: 05/26/2017					
Gasoline Range Hydrocarbons	ND	0.100	mg/kg							U
<b>LCS (B7E2604-BS2)</b>					Prepared: 05/26/2017 Analyzed: 05/26/2017					
Gasoline Range Hydrocarbons	3.21	0.100	mg/kg	4.00		80.2	70-130			
<b>LCS Dup (B7E2604-BSD2)</b>					Prepared: 05/26/2017 Analyzed: 05/26/2017					
Gasoline Range Hydrocarbons	3.41	0.100	mg/kg	4.00		85.2	70-130	6.09	20	

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## Classical Chemistry Parameters - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B7E2607 - NO PREP</b>										
<b>Duplicate (B7E2607-DUP1)</b>		<b>Source: Y705338-01</b>			Prepared: 05/26/2017 Analyzed: 05/26/2017					
pH	8.35		pH Units		8.38			0.359	25	
<b>Batch B7E2608 - NO PREP</b>										
<b>Blank (B7E2608-BLK1)</b>		Prepared: 05/26/2017 Analyzed: 05/26/2017								
Specific Conductance (EC)	0.00320		mmhos/cm							
<b>Duplicate (B7E2608-DUP1)</b>		<b>Source: Y705338-01</b>			Prepared: 05/26/2017 Analyzed: 05/26/2017					
Specific Conductance (EC)	0.417		mmhos/cm		0.415			0.481	25	

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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## Notes and Definitions

U Sample is Non-Detect.

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.

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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May 31, 2017

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB**

**Project Number - [none]**

Attached are your analytical results for KMG-Fehr 16N-32HZ/Land Fed 13N-32HZ TB received by Origins Laboratory, Inc. May 30, 2017. This project is associated with Origins project number Y705360-01.

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.  
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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SESE 10-1N-63W (Pond)	Y705360-01	Water	May 30, 2017 11:35	05/30/2017 16:00
SESE 10-1N-63W (Soil)	Y705360-02	Soil	May 30, 2017 11:35	05/30/2017 16:00
Trip Blank	Y705360-03	Water	May 30, 2017 11:05	05/30/2017 16:00

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

www.originslaboratory.com page 1 of 1

**ORIGINS** LABORATORY, INC

Client: Tasman / APC  
Address:  
Telephone Number: 303 810 2414  
Email Address: rcornez@tasman-geo.com

Project Manager: Bob Cornez  
Project Name: Fehr 16N-32HZ/Land Fed 13N-32HZ  
Project Number: rcornez@tasman-geo.com  
Samples Collected By:

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #		
SESE 10-N-63W (Pn)	5/24/17	11:35	7	3	3	1		X			TD5 Take Met 1-10 SAR EC FV VOC	1
SESE 10-N-63W (Sb1)	5/24/17	11:35	4	X					X			2
ICR Blank	5/31/17	11:05	1	X				X			Use Same Sample 3 for top blank	3
											From This project	4
												5
												6
												7
												8
												9
												10
Relinquished By:	Date: 5/31/17	Time: 11:00	Received By:	Date: 5/30/17	Time: 1400	Turnaround Time:	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>					
Relinquished By:	Date:	Time:	Received By:	Date:	Time:							

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

Date Results Needed: 7/1

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: Y705360

Client: Tasman

Client Project ID: KMG-Fehr 16N-32HZ/Land Fed 13N-32HZ

Checklist Completed by: DA

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

Date/time completed: 5-30-17 1804

Airbill #: NO

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

Cooler Number/Temperature: 1 / 7.4 °C 1 / \_\_\_\_\_ °C 1 / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 1003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		sampled same day
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			PH, E
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		<input checked="" type="checkbox"/>		
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH > 10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)		<input checked="" type="checkbox"/>		
Additional Comments (if any):				

<sup>(1)</sup> 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) DA

Date/Time Reviewed 5-30-17 1805

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## SESE 10-1N-63W (Pond)

5/30/2017 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y705360-01 (Water)

### VOC by EPA 8260C

1,1,1,2-Tetrachloroethane	ND	1.00	ug/L	1	B7E3003	05/30/2017	05/31/2017	U
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	U
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	U
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	U
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	U
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	U
1,2,3-Trichlorobenzene	ND	5.00	"	"	"	"	"	U
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	U
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	"	"	U
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	U
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	U
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	U
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	U
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	U
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	U
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	U
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	U
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## SESE 10-1N-63W (Pond)

5/30/2017 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y705360-01 (Water)

### VOC by EPA 8260C

1,4-Dichlorobenzene	ND	1.00	ug/L	1	B7E3003	05/30/2017	05/31/2017	U
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	U
2-Butanone	ND	5.00	"	"	"	"	"	U
2-Chlorotoluene	ND	1.00	"	"	"	"	"	U
2-Hexanone	ND	5.00	"	"	"	"	"	U
4-Chlorotoluene	ND	1.00	"	"	"	"	"	U
4-Isopropyltoluene	ND	1.00	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	5.00	"	"	"	"	"	U
Acetone	ND	8.00	"	"	"	"	"	U
Benzene	ND	1.00	"	"	"	"	"	U
Bromobenzene	ND	1.00	"	"	"	"	"	U
Bromochloromethane	ND	1.00	"	"	"	"	"	U
Bromodichloromethane	ND	1.00	"	"	"	"	"	U
Bromoform	ND	1.00	"	"	"	"	"	U
Bromomethane	ND	1.00	"	"	"	"	"	U
Carbon disulfide	ND	5.00	"	"	"	"	"	U
Carbon tetrachloride	ND	1.00	"	"	"	"	"	U
Chlorobenzene	ND	1.00	"	"	"	"	"	U
Chloroethane	ND	1.00	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## SESE 10-1N-63W (Pond)

5/30/2017 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y705360-01 (Water)

### VOC by EPA 8260C

Chloroform	ND	1.00	ug/L	1	B7E3003	05/30/2017	05/31/2017	U
Chloromethane	ND	1.00	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	U
Dibromochloromethane	ND	1.00	"	"	"	"	"	U
Dibromomethane	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Hexachlorobutadiene	ND	5.00	"	"	"	"	"	U
Iodomethane	ND	10.0	"	"	"	"	"	U
Isopropylbenzene	ND	1.00	"	"	"	"	"	U
m,p-Xylene	ND	2.00	"	"	"	"	"	U
Methylene Chloride	ND	5.00	"	"	"	"	"	U
Methyl tert-Butyl Ether	ND	1.00	"	"	"	"	"	U
Naphthalene	ND	4.00	"	"	"	"	"	U
n-Butylbenzene	ND	1.00	"	"	"	"	"	U
n-Propylbenzene	ND	1.00	"	"	"	"	"	U
o-Xylene	ND	1.00	"	"	"	"	"	U
sec-Butylbenzene	ND	1.00	"	"	"	"	"	U
Styrene	ND	1.00	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehrn 16N-32HZ/Land Fed  
13N-32HZ TB

## SESE 10-1N-63W (Pond)

5/30/2017 11:35:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y705360-01 (Water)

### VOC by EPA 8260C

tert-Butylbenzene	ND	1.00	ug/L	1	B7E3003	05/30/2017	05/31/2017	U
Tetrachloroethene	ND	1.00	"	"	"	"	"	U
Toluene	ND	1.00	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	U
Trichloroethene	ND	1.00	"	"	"	"	"	U
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	U
Vinyl chloride	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4

104 % 84-121

"

"

"

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

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SESE 10-1N-63W (Soil)**  
**5/30/2017 11:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705360-02 (Soil)**

**pH in Soil by EPA 9045D**

pH	8.96	pH Units	1	B7E3004	05/30/2017	05/30/2017
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.789	mmhos/cm	"	B7E3005	"	05/30/2017
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**VOC by EPA 8260C**

1,1,1,2-Tetrachloroethane	ND	0.00200	mg/kg	1	B7E3001	05/30/2017	05/30/2017	U
1,1,1-Trichloroethane	ND	0.00200	"	"	"	"	"	U
1,1,2,2-Tetrachloroethane	ND	0.00200	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	0.00200	"	"	"	"	"	U
1,1-Dichloroethane	ND	0.00200	"	"	"	"	"	U
1,1-Dichloroethene	ND	0.00200	"	"	"	"	"	U
1,1-Dichloropropene	ND	0.00200	"	"	"	"	"	U
1,2,3-Trichlorobenzene	ND	0.00500	"	"	"	"	"	U
1,2,3-Trichloropropane	ND	0.00500	"	"	"	"	"	U
1,2,4-Trichlorobenzene	ND	0.00500	"	"	"	"	"	U
1,2,4-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
1,2-Dibromo-3-chloropropane	ND	0.00500	"	"	"	"	"	U
1,2-Dibromoethane (EDB)	ND	0.00200	"	"	"	"	"	U
1,2-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SESE 10-1N-63W (Soil)**  
**5/30/2017 11:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705360-02 (Soil)**

**VOC by EPA 8260C**

1,2-Dichloroethane	ND	0.00200	mg/kg	1	B7E3001	05/30/2017	05/30/2017	U
1,2-Dichloropropane	ND	0.00200	"	"	"	"	"	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
1,3-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U
1,3-Dichloropropane	ND	0.00200	"	"	"	"	"	U
1,4-Dichlorobenzene	ND	0.00200	"	"	"	"	"	U
2,2-Dichloropropane	ND	0.00200	"	"	"	"	"	U
2-Butanone	ND	0.0100	"	"	"	"	"	U
2-Chlorotoluene	ND	0.00200	"	"	"	"	"	U
2-Hexanone	ND	0.0100	"	"	"	"	"	U
4-Chlorotoluene	ND	0.00200	"	"	"	"	"	U
4-Isopropyltoluene	ND	0.00200	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	0.0100	"	"	"	"	"	U
Acetone	<b>0.0227</b>	0.0200	"	"	"	"	"	
Benzene	ND	0.00200	"	"	"	"	"	U
Bromobenzene	ND	0.00200	"	"	"	"	"	U
Bromochloromethane	ND	0.00200	"	"	"	"	"	U
Bromodichloromethane	ND	0.00200	"	"	"	"	"	U
Bromoform	ND	0.00200	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SESE 10-1N-63W (Soil)**  
**5/30/2017 11:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705360-02 (Soil)**

**VOC by EPA 8260C**

Bromomethane	ND	0.00200	mg/kg	1	B7E3001	05/30/2017	05/30/2017	U
Carbon disulfide	ND	0.00500	"	"	"	"	"	U
Carbon tetrachloride	ND	0.00200	"	"	"	"	"	U
Chlorobenzene	ND	0.00200	"	"	"	"	"	U
Chloroethane	ND	0.00500	"	"	"	"	"	U
Chloroform	ND	0.00200	"	"	"	"	"	U
Chloromethane	ND	0.00200	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	0.00200	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	0.00200	"	"	"	"	"	U
Dibromochloromethane	ND	0.00200	"	"	"	"	"	U
Dibromomethane	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Hexachlorobutadiene	ND	0.00500	"	"	"	"	"	U
Iodomethane	ND	0.0150	"	"	"	"	"	U
Isopropylbenzene	ND	0.00200	"	"	"	"	"	U
m,p-Xylene	ND	0.00400	"	"	"	"	"	U
Methyl tert-Butyl Ether	ND	0.00200	"	"	"	"	"	U
Methylene Chloride	ND	0.0200	"	"	"	"	"	U
Naphthalene	ND	0.0100	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**SESE 10-1N-63W (Soil)**  
**5/30/2017 11:35:00AM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y705360-02 (Soil)**

**VOC by EPA 8260C**

n-Butylbenzene	ND	0.00200	mg/kg	1	B7E3001	05/30/2017	05/30/2017	U
n-Propylbenzene	ND	0.00200	"	"	"	"	"	U
o-Xylene	ND	0.00200	"	"	"	"	"	U
sec-Butylbenzene	ND	0.00200	"	"	"	"	"	U
Styrene	ND	0.00200	"	"	"	"	"	U
tert-Butylbenzene	ND	0.00200	"	"	"	"	"	U
Tetrachloroethene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	0.00200	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	0.00200	"	"	"	"	"	U
Trichloroethene	ND	0.00200	"	"	"	"	"	U
Trichlorofluoromethane	ND	0.00300	"	"	"	"	"	U
Vinyl chloride	ND	0.00200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	114 %	70-130	"	"	"
Surrogate: Toluene-d8	103 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	100 %	70-130	"	"	"

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## Trip Blank

5/30/2017 11:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y705360-03 (Water)

### VOC by EPA 8260C

1,1,1,2-Tetrachloroethane	ND	1.00	ug/L	1	B7E3003	05/30/2017	05/30/2017	U
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	U
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	U
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	U
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	U
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	U
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	U
1,2,3-Trichlorobenzene	ND	5.00	"	"	"	"	"	U
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	U
1,2,4-Trichlorobenzene	ND	5.00	"	"	"	"	"	U
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	U
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	U
1,2-Dibromoethane (EDB)	ND	1.00	"	"	"	"	"	U
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	U
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	U
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	U
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	U
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	U
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## Trip Blank

5/30/2017 11:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y705360-03 (Water)

### VOC by EPA 8260C

1,4-Dichlorobenzene	ND	1.00	ug/L	1	B7E3003	05/30/2017	05/30/2017	U
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	U
2-Butanone	ND	5.00	"	"	"	"	"	U
2-Chlorotoluene	ND	1.00	"	"	"	"	"	U
2-Hexanone	ND	5.00	"	"	"	"	"	U
4-Chlorotoluene	ND	1.00	"	"	"	"	"	U
4-Isopropyltoluene	ND	1.00	"	"	"	"	"	U
4-Methyl-2-pentanone	ND	5.00	"	"	"	"	"	U
Acetone	ND	8.00	"	"	"	"	"	U
Benzene	ND	1.00	"	"	"	"	"	U
Bromobenzene	ND	1.00	"	"	"	"	"	U
Bromochloromethane	ND	1.00	"	"	"	"	"	U
Bromodichloromethane	ND	1.00	"	"	"	"	"	U
Bromoform	ND	1.00	"	"	"	"	"	U
Bromomethane	ND	1.00	"	"	"	"	"	U
Carbon disulfide	ND	5.00	"	"	"	"	"	U
Carbon tetrachloride	ND	1.00	"	"	"	"	"	U
Chlorobenzene	ND	1.00	"	"	"	"	"	U
Chloroethane	ND	1.00	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## Trip Blank

5/30/2017 11:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y705360-03 (Water)

### VOC by EPA 8260C

Chloroform	ND	1.00	ug/L	1	B7E3003	05/30/2017	05/30/2017	U
Chloromethane	ND	1.00	"	"	"	"	"	U
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	U
cis-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	U
Dibromochloromethane	ND	1.00	"	"	"	"	"	U
Dibromomethane	ND	1.00	"	"	"	"	"	U
Ethylbenzene	ND	1.00	"	"	"	"	"	U
Hexachlorobutadiene	ND	5.00	"	"	"	"	"	U
Iodomethane	ND	10.0	"	"	"	"	"	U
Isopropylbenzene	ND	1.00	"	"	"	"	"	U
m,p-Xylene	ND	2.00	"	"	"	"	"	U
Methylene Chloride	ND	5.00	"	"	"	"	"	U
Methyl tert-Butyl Ether	ND	1.00	"	"	"	"	"	U
Naphthalene	ND	4.00	"	"	"	"	"	U
n-Butylbenzene	ND	1.00	"	"	"	"	"	U
n-Propylbenzene	ND	1.00	"	"	"	"	"	U
o-Xylene	ND	1.00	"	"	"	"	"	U
sec-Butylbenzene	ND	1.00	"	"	"	"	"	U
Styrene	ND	1.00	"	"	"	"	"	U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## Trip Blank

5/30/2017 11:05:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y705360-03 (Water)

### VOC by EPA 8260C

tert-Butylbenzene	ND	1.00	ug/L	1	B7E3003	05/30/2017	05/30/2017	U
Tetrachloroethene	ND	1.00	"	"	"	"	"	U
Toluene	ND	1.00	"	"	"	"	"	U
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	U
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	U
Trichloroethene	ND	1.00	"	"	"	"	"	U
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	U
Vinyl chloride	ND	1.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4  
Surrogate: Toluene-d8  
Surrogate: 4-Bromofluorobenzene

116 % 84-121  
104 % 85-115  
100 % 84-114

" " "  
" " "  
" " "

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**Blank (B7E3001-BLK1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

1,1,1,2-Tetrachloroethane	ND	0.00200	mg/kg							U
1,1,1-Trichloroethane	ND	0.00200	"							U
1,1,2,2-Tetrachloroethane	ND	0.00200	"							U
1,1,2-Trichloroethane	ND	0.00200	"							U
1,1-Dichloroethane	ND	0.00200	"							U
1,1-Dichloroethene	ND	0.00200	"							U
1,1-Dichloropropene	ND	0.00200	"							U
1,2,3-Trichlorobenzene	ND	0.00500	"							U
1,2,3-Trichloropropane	ND	0.00500	"							U
1,2,4-Trichlorobenzene	ND	0.00500	"							U
1,2,4-Trimethylbenzene	ND	0.00200	"							U
1,2-Dibromo-3-chloropropane	ND	0.00500	"							U
1,2-Dibromoethane (EDB)	ND	0.00200	"							U
1,2-Dichlorobenzene	ND	0.00200	"							U
1,2-Dichloroethane	ND	0.00200	"							U
1,2-Dichloropropane	ND	0.00200	"							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
1,3-Dichlorobenzene	ND	0.00200	"							U
1,3-Dichloropropane	ND	0.00200	"							U
1,4-Dichlorobenzene	ND	0.00200	"							U
2,2-Dichloropropane	ND	0.00200	"							U
2-Butanone	ND	0.0100	"							U
2-Chlorotoluene	ND	0.00200	"							U
2-Hexanone	ND	0.0100	"							U
4-Chlorotoluene	ND	0.00200	"							U
4-Isopropyltoluene	ND	0.00200	"							U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**Blank (B7E3001-BLK1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

4-Methyl-2-pentanone	ND	0.0100	mg/kg							U
Acetone	ND	0.0200	"							U
Benzene	ND	0.00200	"							U
Bromobenzene	ND	0.00200	"							U
Bromochloromethane	ND	0.00200	"							U
Bromodichloromethane	ND	0.00200	"							U
Bromoform	ND	0.00200	"							U
Bromomethane	ND	0.00200	"							U
Carbon disulfide	ND	0.00500	"							U
Carbon tetrachloride	ND	0.00200	"							U
Chlorobenzene	ND	0.00200	"							U
Chloroethane	ND	0.00500	"							U
Chloroform	ND	0.00200	"							U
Chloromethane	ND	0.00200	"							U
cis-1,2-Dichloroethene	ND	0.00200	"							U
cis-1,3-Dichloropropene	ND	0.00200	"							U
Dibromochloromethane	ND	0.00200	"							U
Dibromomethane	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Hexachlorobutadiene	ND	0.00500	"							U
Iodomethane	ND	0.0150	"							U
Isopropylbenzene	ND	0.00200	"							U
m,p-Xylene	ND	0.00400	"							U
Methyl tert-Butyl Ether	ND	0.00200	"							U
Methylene Chloride	ND	0.0200	"							U
Naphthalene	ND	0.0100	"							U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3001 - EPA 5030 (soil)</b>										
<b>Blank (B7E3001-BLK1)</b>					Prepared: 05/30/2017 Analyzed: 05/30/2017					
n-Butylbenzene	ND	0.00200	mg/kg							U
n-Propylbenzene	ND	0.00200	"							U
o-Xylene	ND	0.00200	"							U
sec-Butylbenzene	ND	0.00200	"							U
Styrene	ND	0.00200	"							U
tert-Butylbenzene	ND	0.00200	"							U
Tetrachloroethene	ND	0.00200	"							U
Toluene	ND	0.00200	"							U
trans-1,2-Dichloroethene	ND	0.00200	"							U
trans-1,3-Dichloropropene	ND	0.00200	"							U
Trichloroethene	ND	0.00200	"							U
Trichlorofluoromethane	ND	0.00300	"							U
Vinyl chloride	ND	0.00200	"							U
Surrogate: 1,2-Dichloroethane-d4	65		ug/L	62.5		104	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.1	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3001 - EPA 5030 (soil)</b>										
<b>Blank (B7E3001-BLK2)</b>					Prepared: 05/30/2017 Analyzed: 05/30/2017					
1,1,1,2-Tetrachloroethane	ND	0.00200	mg/kg							U
1,1,1-Trichloroethane	ND	0.00200	"							U
1,1,2,2-Tetrachloroethane	ND	0.00200	"							U
1,1,2-Trichloroethane	ND	0.00200	"							U
1,1-Dichloroethane	ND	0.00200	"							U
1,1-Dichloroethene	ND	0.00200	"							U
1,1-Dichloropropene	ND	0.00200	"							U
1,2,3-Trichlorobenzene	ND	0.00500	"							U
1,2,3-Trichloropropane	ND	0.00500	"							U
1,2,4-Trichlorobenzene	ND	0.00500	"							U
1,2,4-Trimethylbenzene	ND	0.00200	"							U
1,2-Dibromo-3-chloropropane	ND	0.00500	"							U
1,2-Dibromoethane (EDB)	ND	0.00200	"							U
1,2-Dichlorobenzene	ND	0.00200	"							U
1,2-Dichloroethane	ND	0.00200	"							U
1,2-Dichloropropane	ND	0.00200	"							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
1,3-Dichlorobenzene	ND	0.00200	"							U
1,3-Dichloropropane	ND	0.00200	"							U
1,4-Dichlorobenzene	ND	0.00200	"							U
2,2-Dichloropropane	ND	0.00200	"							U
2-Butanone	ND	0.0100	"							U
2-Chlorotoluene	ND	0.00200	"							U
2-Hexanone	ND	0.0100	"							U
4-Chlorotoluene	ND	0.00200	"							U
4-Isopropyltoluene	ND	0.00200	"							U

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**Blank (B7E3001-BLK2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

4-Methyl-2-pentanone	ND	0.0100	mg/kg							U
Acetone	ND	0.0200	"							U
Benzene	ND	0.00200	"							U
Bromobenzene	ND	0.00200	"							U
Bromochloromethane	ND	0.00200	"							U
Bromodichloromethane	ND	0.00200	"							U
Bromoform	ND	0.00200	"							U
Bromomethane	ND	0.00200	"							U
Carbon disulfide	ND	0.00500	"							U
Carbon tetrachloride	ND	0.00200	"							U
Chlorobenzene	ND	0.00200	"							U
Chloroethane	ND	0.00500	"							U
Chloroform	ND	0.00200	"							U
Chloromethane	ND	0.00200	"							U
cis-1,2-Dichloroethene	ND	0.00200	"							U
cis-1,3-Dichloropropene	ND	0.00200	"							U
Dibromochloromethane	ND	0.00200	"							U
Dibromomethane	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Hexachlorobutadiene	ND	0.00500	"							U
Iodomethane	ND	0.0150	"							U
Isopropylbenzene	ND	0.00200	"							U
m,p-Xylene	ND	0.00400	"							U
Methyl tert-Butyl Ether	ND	0.00200	"							U
Methylene Chloride	ND	0.0200	"							U
Naphthalene	ND	0.0100	"							U

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**Blank (B7E3001-BLK2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

n-Butylbenzene	ND	0.00200	mg/kg							U
n-Propylbenzene	ND	0.00200	"							U
o-Xylene	ND	0.00200	"							U
sec-Butylbenzene	ND	0.00200	"							U
Styrene	ND	0.00200	"							U
tert-Butylbenzene	ND	0.00200	"							U
Tetrachloroethene	ND	0.00200	"							U
Toluene	ND	0.00200	"							U
trans-1,2-Dichloroethene	ND	0.00200	"							U
trans-1,3-Dichloropropene	ND	0.00200	"							U
Trichloroethene	ND	0.00200	"							U
Trichlorofluoromethane	ND	0.00300	"							U
Vinyl chloride	ND	0.00200	"							U
Surrogate: 1,2-Dichloroethane-d4	65		ug/L	62.5		104	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.5	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**LCS (B7E3001-BS1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

1,1,1,2-Tetrachloroethane	0.101	0.00200	mg/kg	0.100		101	70-130			
1,1,1-Trichloroethane	0.0963	0.00200	"	0.100		96.3	70-130			
1,1,2,2-Tetrachloroethane	0.0964	0.00200	"	0.100		96.4	70-130			
1,1,2-Trichloroethane	0.0977	0.00200	"	0.100		97.7	70-130			
1,1-Dichloroethane	0.0962	0.00200	"	0.100		96.2	70-130			
1,1-Dichloroethene	0.0969	0.00200	"	0.100		96.9	70-130			
1,1-Dichloropropene	0.0965	0.00200	"	0.100		96.5	70-130			
1,2,3-Trichlorobenzene	0.0950	0.00500	"	0.100		95.0	70-130			
1,2,3-Trichloropropane	0.0925	0.00500	"	0.100		92.5	70-130			
1,2,4-Trichlorobenzene	0.0938	0.00500	"	0.100		93.8	70-130			
1,2,4-Trimethylbenzene	0.0972	0.00200	"	0.100		97.2	70-130			
1,2-Dibromo-3-chloropropane	0.105	0.00500	"	0.100		105	70-130			
1,2-Dibromoethane (EDB)	0.100	0.00200	"	0.100		100	70-130			
1,2-Dichlorobenzene	0.0966	0.00200	"	0.100		96.6	70-130			
1,2-Dichloroethane	0.0949	0.00200	"	0.100		94.9	70-130			
1,2-Dichloropropane	0.0960	0.00200	"	0.100		96.0	70-130			
1,3,5-Trimethylbenzene	0.0960	0.00200	"	0.100		96.0	70-130			
1,3-Dichlorobenzene	0.0956	0.00200	"	0.100		95.6	70-130			
1,3-Dichloropropane	0.0996	0.00200	"	0.100		99.6	70-130			
1,4-Dichlorobenzene	0.0994	0.00200	"	0.100		99.4	70-130			
2,2-Dichloropropane	0.0960	0.00200	"	0.100		96.0	70-130			
2-Butanone	0.480	0.0100	"	0.500		96.0	70-130			
2-Chlorotoluene	0.0871	0.00200	"	0.100		87.1	70-130			
2-Hexanone	0.502	0.0100	"	0.500		100	70-130			
4-Chlorotoluene	0.101	0.00200	"	0.100		101	70-130			
4-Isopropyltoluene	0.0951	0.00200	"	0.100		95.1	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**LCS (B7E3001-BS1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

4-Methyl-2-pentanone	0.490	0.0100	mg/kg	0.500		98.1	70-130			
Acetone	0.455	0.0200	"	0.500		91.0	70-130			
Benzene	0.0962	0.00200	"	0.100		96.2	70-130			
Bromobenzene	0.0975	0.00200	"	0.100		97.5	70-130			
Bromochloromethane	0.0993	0.00200	"	0.100		99.3	70-130			
Bromodichloromethane	0.0975	0.00200	"	0.100		97.5	70-130			
Bromoform	0.0988	0.00200	"	0.100		98.8	70-130			
Bromomethane	0.124	0.00200	"	0.100		124	70-130			
Carbon disulfide	0.0974	0.00500	"	0.100		97.4	70-130			
Carbon tetrachloride	0.0985	0.00200	"	0.100		98.5	70-130			
Chlorobenzene	0.0988	0.00200	"	0.100		98.8	70-130			
Chloroethane	0.117	0.00500	"	0.100		117	70-130			
Chloroform	0.104	0.00200	"	0.100		104	70-130			
Chloromethane	0.0997	0.00200	"	0.100		99.7	70-130			
cis-1,2-Dichloroethene	0.0979	0.00200	"	0.100		97.9	70-130			
cis-1,3-Dichloropropene	0.0988	0.00200	"	0.100		98.8	70-130			
Dibromochloromethane	0.104	0.00200	"	0.100		104	70-130			
Dibromomethane	0.0972	0.00200	"	0.100		97.2	70-130			
Ethylbenzene	0.0977	0.00200	"	0.100		97.7	70-130			
Hexachlorobutadiene	0.0976	0.00500	"	0.100		97.6	70-130			
Iodomethane	0.0993	0.0150	"	0.100		99.3	70-130			
Isopropylbenzene	0.0950	0.00200	"	0.100		95.0	70-130			
m,p-Xylene	0.190	0.00400	"	0.200		95.2	70-130			
Methyl tert-Butyl Ether	0.102	0.00200	"	0.100		102	70-130			
Methylene Chloride	0.105	0.0200	"	0.100		105	70-130			
Naphthalene	0.100	0.0100	"	0.100		100	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**LCS (B7E3001-BS1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

n-Butylbenzene	0.0948	0.00200	mg/kg	0.100		94.8	70-130			
n-Propylbenzene	0.0958	0.00200	"	0.100		95.8	70-130			
o-Xylene	0.0970	0.00200	"	0.100		97.0	70-130			
sec-Butylbenzene	0.0966	0.00200	"	0.100		96.6	70-130			
Styrene	0.0989	0.00200	"	0.100		98.9	70-130			
tert-Butylbenzene	0.0991	0.00200	"	0.100		99.1	70-130			
Tetrachloroethene	0.0954	0.00200	"	0.100		95.4	70-130			
Toluene	0.0959	0.00200	"	0.100		95.9	70-130			
trans-1,2-Dichloroethene	0.0971	0.00200	"	0.100		97.1	70-130			
trans-1,3-Dichloropropene	0.0985	0.00200	"	0.100		98.5	70-130			
Trichloroethene	0.0944	0.00200	"	0.100		94.4	70-130			
Trichlorofluoromethane	0.107	0.00300	"	0.100		107	70-130			
Vinyl chloride	0.103	0.00200	"	0.100		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		ug/L	62.5		96.3	70-130			
Surrogate: Toluene-d8	63		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**LCS (B7E3001-BS2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

1,1,1,2-Tetrachloroethane	0.0999	0.00200	mg/kg	0.100		99.9	70-130			
1,1,1-Trichloroethane	0.0987	0.00200	"	0.100		98.7	70-130			
1,1,2,2-Tetrachloroethane	0.0963	0.00200	"	0.100		96.3	70-130			
1,1,2-Trichloroethane	0.0986	0.00200	"	0.100		98.6	70-130			
1,1-Dichloroethane	0.0978	0.00200	"	0.100		97.8	70-130			
1,1-Dichloroethene	0.0980	0.00200	"	0.100		98.0	70-130			
1,1-Dichloropropene	0.0977	0.00200	"	0.100		97.7	70-130			
1,2,3-Trichlorobenzene	0.101	0.00500	"	0.100		101	70-130			
1,2,3-Trichloropropane	0.110	0.00500	"	0.100		110	70-130			
1,2,4-Trichlorobenzene	0.102	0.00500	"	0.100		102	70-130			
1,2,4-Trimethylbenzene	0.100	0.00200	"	0.100		100	70-130			
1,2-Dibromo-3-chloropropane	0.110	0.00500	"	0.100		110	70-130			
1,2-Dibromoethane (EDB)	0.0988	0.00200	"	0.100		98.8	70-130			
1,2-Dichlorobenzene	0.0976	0.00200	"	0.100		97.6	70-130			
1,2-Dichloroethane	0.0942	0.00200	"	0.100		94.2	70-130			
1,2-Dichloropropane	0.0982	0.00200	"	0.100		98.2	70-130			
1,3,5-Trimethylbenzene	0.0986	0.00200	"	0.100		98.6	70-130			
1,3-Dichlorobenzene	0.0984	0.00200	"	0.100		98.4	70-130			
1,3-Dichloropropane	0.101	0.00200	"	0.100		101	70-130			
1,4-Dichlorobenzene	0.102	0.00200	"	0.100		102	70-130			
2,2-Dichloropropane	0.0972	0.00200	"	0.100		97.2	70-130			
2-Butanone	0.490	0.0100	"	0.500		98.0	70-130			
2-Chlorotoluene	0.0945	0.00200	"	0.100		94.5	70-130			
2-Hexanone	0.509	0.0100	"	0.500		102	70-130			
4-Chlorotoluene	0.102	0.00200	"	0.100		102	70-130			
4-Isopropyltoluene	0.100	0.00200	"	0.100		100	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**LCS (B7E3001-BS2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

4-Methyl-2-pentanone	0.490	0.0100	mg/kg	0.500		98.1	70-130			
Acetone	0.448	0.0200	"	0.500		89.7	70-130			
Benzene	0.0987	0.00200	"	0.100		98.7	70-130			
Bromobenzene	0.0966	0.00200	"	0.100		96.6	70-130			
Bromochloromethane	0.0991	0.00200	"	0.100		99.1	70-130			
Bromodichloromethane	0.101	0.00200	"	0.100		101	70-130			
Bromoform	0.0981	0.00200	"	0.100		98.1	70-130			
Bromomethane	0.109	0.00200	"	0.100		109	70-130			
Carbon disulfide	0.0992	0.00500	"	0.100		99.2	70-130			
Carbon tetrachloride	0.101	0.00200	"	0.100		101	70-130			
Chlorobenzene	0.0997	0.00200	"	0.100		99.7	70-130			
Chloroethane	0.114	0.00500	"	0.100		114	70-130			
Chloroform	0.106	0.00200	"	0.100		106	70-130			
Chloromethane	0.101	0.00200	"	0.100		101	70-130			
cis-1,2-Dichloroethene	0.0984	0.00200	"	0.100		98.4	70-130			
cis-1,3-Dichloropropene	0.101	0.00200	"	0.100		101	70-130			
Dibromochloromethane	0.104	0.00200	"	0.100		104	70-130			
Dibromomethane	0.0998	0.00200	"	0.100		99.8	70-130			
Ethylbenzene	0.0974	0.00200	"	0.100		97.4	70-130			
Hexachlorobutadiene	0.103	0.00500	"	0.100		103	70-130			
Iodomethane	0.100	0.0150	"	0.100		100	70-130			
Isopropylbenzene	0.0975	0.00200	"	0.100		97.5	70-130			
m,p-Xylene	0.192	0.00400	"	0.200		96.1	70-130			
Methyl tert-Butyl Ether	0.102	0.00200	"	0.100		102	70-130			
Methylene Chloride	0.105	0.0200	"	0.100		105	70-130			
Naphthalene	0.106	0.0100	"	0.100		106	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

**LCS (B7E3001-BS2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

n-Butylbenzene	0.0993	0.00200	mg/kg	0.100		99.3	70-130			
n-Propylbenzene	0.0974	0.00200	"	0.100		97.4	70-130			
o-Xylene	0.0975	0.00200	"	0.100		97.5	70-130			
sec-Butylbenzene	0.0985	0.00200	"	0.100		98.5	70-130			
Styrene	0.0998	0.00200	"	0.100		99.8	70-130			
tert-Butylbenzene	0.100	0.00200	"	0.100		100	70-130			
Tetrachloroethene	0.0989	0.00200	"	0.100		98.9	70-130			
Toluene	0.0966	0.00200	"	0.100		96.6	70-130			
trans-1,2-Dichloroethene	0.0982	0.00200	"	0.100		98.2	70-130			
trans-1,3-Dichloropropene	0.101	0.00200	"	0.100		101	70-130			
Trichloroethene	0.0988	0.00200	"	0.100		98.8	70-130			
Trichlorofluoromethane	0.107	0.00300	"	0.100		107	70-130			
Vinyl chloride	0.102	0.00200	"	0.100		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		ug/L	62.5		96.5	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.3	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

Matrix Spike (B7E3001-MS1)		Source: Y705335-01			Prepared: 05/30/2017 Analyzed: 05/31/2017					
1,1,1,2-Tetrachloroethane	0.102	0.00200	mg/kg	0.100	ND	102	70-130			
1,1,1-Trichloroethane	0.0976	0.00200	"	0.100	ND	97.6	70-130			
1,1,2,2-Tetrachloroethane	0.102	0.00200	"	0.100	ND	102	70-130			
1,1,2-Trichloroethane	0.100	0.00200	"	0.100	ND	100	70-130			
1,1-Dichloroethane	0.0964	0.00200	"	0.100	ND	96.4	70-130			
1,1-Dichloroethene	0.0965	0.00200	"	0.100	ND	96.5	70-130			
1,1-Dichloropropene	0.0946	0.00200	"	0.100	ND	94.6	70-130			
1,2,3-Trichlorobenzene	0.0902	0.00500	"	0.100	ND	90.2	70-130			
1,2,3-Trichloropropane	0.0959	0.00500	"	0.100	ND	95.9	70-130			
1,2,4-Trichlorobenzene	0.0905	0.00500	"	0.100	ND	90.5	70-130			
1,2,4-Trimethylbenzene	0.0986	0.00200	"	0.100	ND	98.6	70-130			
1,2-Dibromo-3-chloropropane	0.110	0.00500	"	0.100	ND	110	70-130			
1,2-Dibromoethane (EDB)	0.100	0.00200	"	0.100	ND	100	70-130			
1,2-Dichlorobenzene	0.0982	0.00200	"	0.100	ND	98.2	70-130			
1,2-Dichloroethane	0.0941	0.00200	"	0.100	ND	94.1	70-130			
1,2-Dichloropropane	0.0971	0.00200	"	0.100	ND	97.1	70-130			
1,3,5-Trimethylbenzene	0.0961	0.00200	"	0.100	ND	96.1	70-130			
1,3-Dichlorobenzene	0.0971	0.00200	"	0.100	ND	97.1	70-130			
1,3-Dichloropropane	0.101	0.00200	"	0.100	ND	101	70-130			
1,4-Dichlorobenzene	0.102	0.00200	"	0.100	ND	102	70-130			
2,2-Dichloropropane	0.0957	0.00200	"	0.100	ND	95.7	70-130			
2-Butanone	0.497	0.0100	"	0.500	ND	99.3	70-130			
2-Chlorotoluene	0.0837	0.00200	"	0.100	ND	83.7	70-130			
2-Hexanone	0.533	0.0100	"	0.500	ND	107	70-130			
4-Chlorotoluene	0.0995	0.00200	"	0.100	ND	99.5	70-130			
4-Isopropyltoluene	0.0958	0.00200	"	0.100	ND	95.8	70-130			

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Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3001 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B7E3001-MS1)</b>		<b>Source: Y705335-01</b>			Prepared: 05/30/2017 Analyzed: 05/31/2017					
4-Methyl-2-pentanone	0.511	0.0100	mg/kg	0.500	0.00488	101	70-130			
Acetone	0.469	0.0200	"	0.500	ND	93.8	70-130			
Benzene	0.0961	0.00200	"	0.100	ND	96.1	70-130			
Bromobenzene	0.0993	0.00200	"	0.100	ND	99.3	70-130			
Bromochloromethane	0.0992	0.00200	"	0.100	ND	99.2	70-130			
Bromodichloromethane	0.100	0.00200	"	0.100	ND	100	70-130			
Bromoform	0.103	0.00200	"	0.100	ND	103	70-130			
Bromomethane	0.117	0.00200	"	0.100	ND	117	70-130			
Carbon disulfide	0.0971	0.00500	"	0.100	ND	97.1	70-130			
Carbon tetrachloride	0.0978	0.00200	"	0.100	ND	97.8	70-130			
Chlorobenzene	0.0978	0.00200	"	0.100	ND	97.8	70-130			
Chloroethane	0.107	0.00500	"	0.100	ND	107	70-130			
Chloroform	0.104	0.00200	"	0.100	ND	104	70-130			
Chloromethane	0.0921	0.00200	"	0.100	ND	92.1	70-130			
cis-1,2-Dichloroethene	0.0965	0.00200	"	0.100	ND	96.5	70-130			
cis-1,3-Dichloropropene	0.0978	0.00200	"	0.100	ND	97.8	70-130			
Dibromochloromethane	0.105	0.00200	"	0.100	ND	105	70-130			
Dibromomethane	0.0978	0.00200	"	0.100	ND	97.8	70-130			
Ethylbenzene	0.0958	0.00200	"	0.100	ND	95.8	70-130			
Hexachlorobutadiene	0.0776	0.00500	"	0.100	ND	77.6	70-130			
Iodomethane	0.0978	0.0150	"	0.100	ND	97.8	70-130			
Isopropylbenzene	0.0957	0.00200	"	0.100	ND	95.7	70-130			
m,p-Xylene	0.189	0.00400	"	0.200	ND	94.6	70-130			
Methyl tert-Butyl Ether	0.103	0.00200	"	0.100	ND	103	70-130			
Methylene Chloride	0.106	0.0200	"	0.100	ND	106	70-130			
Naphthalene	0.100	0.0100	"	0.100	ND	100	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

Matrix Spike (B7E3001-MS1)		Source: Y705335-01			Prepared: 05/30/2017 Analyzed: 05/31/2017					
n-Butylbenzene	0.0920	0.00200	mg/kg	0.100	ND	92.0	70-130			
n-Propylbenzene	0.0944	0.00200	"	0.100	ND	94.4	70-130			
o-Xylene	0.0967	0.00200	"	0.100	ND	96.7	70-130			
sec-Butylbenzene	0.0940	0.00200	"	0.100	ND	94.0	70-130			
Styrene	0.100	0.00200	"	0.100	ND	100	70-130			
tert-Butylbenzene	0.0989	0.00200	"	0.100	ND	98.9	70-130			
Tetrachloroethene	0.0927	0.00200	"	0.100	ND	92.7	70-130			
Toluene	0.0943	0.00200	"	0.100	ND	94.3	70-130			
trans-1,2-Dichloroethene	0.0979	0.00200	"	0.100	ND	97.9	70-130			
trans-1,3-Dichloropropene	0.100	0.00200	"	0.100	ND	100	70-130			
Trichloroethene	0.0946	0.00200	"	0.100	ND	94.6	70-130			
Trichlorofluoromethane	0.0987	0.00300	"	0.100	ND	98.7	70-130			
Vinyl chloride	0.0941	0.00200	"	0.100	ND	94.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	63		ug/L	62.5		100	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

Matrix Spike (B7E3001-MS2)		Source: Y705335-02			Prepared: 05/30/2017 Analyzed: 05/31/2017					
1,1,1,2-Tetrachloroethane	0.0984	0.00200	mg/kg	0.100	ND	98.4	70-130			
1,1,1-Trichloroethane	0.0994	0.00200	"	0.100	ND	99.4	70-130			
1,1,2,2-Tetrachloroethane	0.0962	0.00200	"	0.100	ND	96.2	70-130			
1,1,2-Trichloroethane	0.0954	0.00200	"	0.100	ND	95.4	70-130			
1,1-Dichloroethane	0.0996	0.00200	"	0.100	ND	99.6	70-130			
1,1-Dichloroethene	0.0983	0.00200	"	0.100	ND	98.3	70-130			
1,1-Dichloropropene	0.0969	0.00200	"	0.100	ND	96.9	70-130			
1,2,3-Trichlorobenzene	0.0875	0.00500	"	0.100	ND	87.5	70-130			
1,2,3-Trichloropropane	0.0893	0.00500	"	0.100	ND	89.3	70-130			
1,2,4-Trichlorobenzene	0.0893	0.00500	"	0.100	ND	89.3	70-130			
1,2,4-Trimethylbenzene	0.0961	0.00200	"	0.100	ND	96.1	70-130			
1,2-Dibromo-3-chloropropane	0.104	0.00500	"	0.100	ND	104	70-130			
1,2-Dibromoethane (EDB)	0.0976	0.00200	"	0.100	ND	97.6	70-130			
1,2-Dichlorobenzene	0.0933	0.00200	"	0.100	ND	93.3	70-130			
1,2-Dichloroethane	0.0974	0.00200	"	0.100	ND	97.4	70-130			
1,2-Dichloropropane	0.0997	0.00200	"	0.100	ND	99.7	70-130			
1,3,5-Trimethylbenzene	0.0890	0.00200	"	0.100	ND	89.0	70-130			
1,3-Dichlorobenzene	0.0919	0.00200	"	0.100	ND	91.9	70-130			
1,3-Dichloropropane	0.0985	0.00200	"	0.100	ND	98.5	70-130			
1,4-Dichlorobenzene	0.0956	0.00200	"	0.100	ND	95.6	70-130			
2,2-Dichloropropane	0.0967	0.00200	"	0.100	ND	96.7	70-130			
2-Butanone	0.479	0.0100	"	0.500	ND	95.9	70-130			
2-Chlorotoluene	0.0896	0.00200	"	0.100	ND	89.6	70-130			
2-Hexanone	0.493	0.0100	"	0.500	ND	98.7	70-130			
4-Chlorotoluene	0.0978	0.00200	"	0.100	ND	97.8	70-130			
4-Isopropyltoluene	0.0911	0.00200	"	0.100	ND	91.1	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

Matrix Spike (B7E3001-MS2)		Source: Y705335-02			Prepared: 05/30/2017 Analyzed: 05/31/2017					
4-Methyl-2-pentanone	0.484	0.0100	mg/kg	0.500	0.00512	95.8	70-130			
Acetone	0.459	0.0200	"	0.500	ND	91.9	70-130			
Benzene	0.0990	0.00200	"	0.100	ND	99.0	70-130			
Bromobenzene	0.0948	0.00200	"	0.100	ND	94.8	70-130			
Bromochloromethane	0.0993	0.00200	"	0.100	ND	99.3	70-130			
Bromodichloromethane	0.102	0.00200	"	0.100	ND	102	70-130			
Bromoform	0.0969	0.00200	"	0.100	ND	96.9	70-130			
Bromomethane	0.101	0.00200	"	0.100	ND	101	70-130			
Carbon disulfide	0.0989	0.00500	"	0.100	ND	98.9	70-130			
Carbon tetrachloride	0.101	0.00200	"	0.100	ND	101	70-130			
Chlorobenzene	0.0980	0.00200	"	0.100	ND	98.0	70-130			
Chloroethane	0.108	0.00500	"	0.100	ND	108	70-130			
Chloroform	0.106	0.00200	"	0.100	ND	106	70-130			
Chloromethane	0.0972	0.00200	"	0.100	ND	97.2	70-130			
cis-1,2-Dichloroethene	0.0973	0.00200	"	0.100	ND	97.3	70-130			
cis-1,3-Dichloropropene	0.0970	0.00200	"	0.100	ND	97.0	70-130			
Dibromochloromethane	0.102	0.00200	"	0.100	ND	102	70-130			
Dibromomethane	0.100	0.00200	"	0.100	ND	100	70-130			
Ethylbenzene	0.0959	0.00200	"	0.100	ND	95.9	70-130			
Hexachlorobutadiene	0.0829	0.00500	"	0.100	ND	82.9	70-130			
Iodomethane	0.0989	0.0150	"	0.100	ND	98.9	70-130			
Isopropylbenzene	0.0935	0.00200	"	0.100	ND	93.5	70-130			
m,p-Xylene	0.187	0.00400	"	0.200	ND	93.6	70-130			
Methyl tert-Butyl Ether	0.103	0.00200	"	0.100	ND	103	70-130			
Methylene Chloride	0.108	0.0200	"	0.100	ND	108	70-130			
Naphthalene	0.0950	0.0100	"	0.100	ND	95.0	70-130			

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Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

Matrix Spike (B7E3001-MS2)		Source: Y705335-02			Prepared: 05/30/2017 Analyzed: 05/31/2017					
n-Butylbenzene	0.0909	0.00200	mg/kg	0.100	ND	90.9	70-130			
n-Propylbenzene	0.0933	0.00200	"	0.100	ND	93.3	70-130			
o-Xylene	0.0948	0.00200	"	0.100	ND	94.8	70-130			
sec-Butylbenzene	0.0915	0.00200	"	0.100	ND	91.5	70-130			
Styrene	0.0968	0.00200	"	0.100	ND	96.8	70-130			
tert-Butylbenzene	0.0947	0.00200	"	0.100	ND	94.7	70-130			
Tetrachloroethene	0.0954	0.00200	"	0.100	ND	95.4	70-130			
Toluene	0.0954	0.00200	"	0.100	ND	95.4	70-130			
trans-1,2-Dichloroethene	0.0987	0.00200	"	0.100	ND	98.7	70-130			
trans-1,3-Dichloropropene	0.0971	0.00200	"	0.100	ND	97.1	70-130			
Trichloroethene	0.0961	0.00200	"	0.100	ND	96.1	70-130			
Trichlorofluoromethane	0.0995	0.00300	"	0.100	ND	99.5	70-130			
Vinyl chloride	0.0973	0.00200	"	0.100	ND	97.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		ug/L	62.5		100	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3001 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B7E3001-MSD1)</b>		<b>Source: Y705335-01</b>			Prepared: 05/30/2017 Analyzed: 05/31/2017					
1,1,1,2-Tetrachloroethane	0.0959	0.00200	mg/kg	0.100	ND	95.9	70-130	6.46	20	
1,1,1-Trichloroethane	0.0959	0.00200	"	0.100	ND	95.9	70-130	1.67	20	
1,1,2,2-Tetrachloroethane	0.0940	0.00200	"	0.100	ND	94.0	70-130	8.67	20	
1,1,2-Trichloroethane	0.0929	0.00200	"	0.100	ND	92.9	70-130	7.54	20	
1,1-Dichloroethane	0.0951	0.00200	"	0.100	ND	95.1	70-130	1.34	20	
1,1-Dichloroethene	0.0954	0.00200	"	0.100	ND	95.4	70-130	1.10	20	
1,1-Dichloropropene	0.0948	0.00200	"	0.100	ND	94.8	70-130	0.232	20	
1,2,3-Trichlorobenzene	0.0889	0.00500	"	0.100	ND	88.9	70-130	1.50	20	
1,2,3-Trichloropropane	0.0875	0.00500	"	0.100	ND	87.5	70-130	9.21	20	
1,2,4-Trichlorobenzene	0.0890	0.00500	"	0.100	ND	89.0	70-130	1.65	20	
1,2,4-Trimethylbenzene	0.0935	0.00200	"	0.100	ND	93.5	70-130	5.31	20	
1,2-Dibromo-3-chloropropane	0.104	0.00500	"	0.100	ND	104	70-130	5.50	20	
1,2-Dibromoethane (EDB)	0.0949	0.00200	"	0.100	ND	94.9	70-130	5.49	20	
1,2-Dichlorobenzene	0.0921	0.00200	"	0.100	ND	92.1	70-130	6.37	20	
1,2-Dichloroethane	0.0939	0.00200	"	0.100	ND	93.9	70-130	0.170	20	
1,2-Dichloropropane	0.0952	0.00200	"	0.100	ND	95.2	70-130	1.93	20	
1,3,5-Trimethylbenzene	0.0921	0.00200	"	0.100	ND	92.1	70-130	4.23	20	
1,3-Dichlorobenzene	0.0919	0.00200	"	0.100	ND	91.9	70-130	5.48	20	
1,3-Dichloropropane	0.0954	0.00200	"	0.100	ND	95.4	70-130	5.84	20	
1,4-Dichlorobenzene	0.0959	0.00200	"	0.100	ND	95.9	70-130	5.93	20	
2,2-Dichloropropane	0.0941	0.00200	"	0.100	ND	94.1	70-130	1.69	20	
2-Butanone	0.476	0.0100	"	0.500	ND	95.2	70-130	4.28	20	
2-Chlorotoluene	0.0803	0.00200	"	0.100	ND	80.3	70-130	4.10	20	
2-Hexanone	0.483	0.0100	"	0.500	ND	96.7	70-130	9.78	20	
4-Chlorotoluene	0.0953	0.00200	"	0.100	ND	95.3	70-130	4.31	20	
4-Isopropyltoluene	0.0902	0.00200	"	0.100	ND	90.2	70-130	6.02	20	

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3001 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B7E3001-MSD1)</b>		<b>Source: Y705335-01</b>			Prepared: 05/30/2017 Analyzed: 05/31/2017					
4-Methyl-2-pentanone	0.469	0.0100	mg/kg	0.500	0.00488	92.8	70-130	8.53	20	
Acetone	0.445	0.0200	"	0.500	ND	89.0	70-130	5.26	20	
Benzene	0.0948	0.00200	"	0.100	ND	94.8	70-130	1.40	20	
Bromobenzene	0.0931	0.00200	"	0.100	ND	93.1	70-130	6.49	20	
Bromochloromethane	0.0976	0.00200	"	0.100	ND	97.6	70-130	1.65	20	
Bromodichloromethane	0.0980	0.00200	"	0.100	ND	98.0	70-130	2.48	20	
Bromoform	0.0959	0.00200	"	0.100	ND	95.9	70-130	6.89	20	
Bromomethane	0.0955	0.00200	"	0.100	ND	95.5	70-130	20.1	20	QR-02
Carbon disulfide	0.0956	0.00500	"	0.100	ND	95.6	70-130	1.51	20	
Carbon tetrachloride	0.0955	0.00200	"	0.100	ND	95.5	70-130	2.36	20	
Chlorobenzene	0.0942	0.00200	"	0.100	ND	94.2	70-130	3.73	20	
Chloroethane	0.0992	0.00500	"	0.100	ND	99.2	70-130	7.16	20	
Chloroform	0.101	0.00200	"	0.100	ND	101	70-130	2.32	20	
Chloromethane	0.0887	0.00200	"	0.100	ND	88.7	70-130	3.76	20	
cis-1,2-Dichloroethene	0.0945	0.00200	"	0.100	ND	94.5	70-130	2.07	20	
cis-1,3-Dichloropropene	0.0958	0.00200	"	0.100	ND	95.8	70-130	2.04	20	
Dibromochloromethane	0.100	0.00200	"	0.100	ND	100	70-130	4.86	20	
Dibromomethane	0.0953	0.00200	"	0.100	ND	95.3	70-130	2.61	20	
Ethylbenzene	0.0928	0.00200	"	0.100	ND	92.8	70-130	3.22	20	
Hexachlorobutadiene	0.0735	0.00500	"	0.100	ND	73.5	70-130	5.35	20	
Iodomethane	0.0972	0.0150	"	0.100	ND	97.2	70-130	0.636	20	
Isopropylbenzene	0.0919	0.00200	"	0.100	ND	91.9	70-130	4.03	20	
m,p-Xylene	0.181	0.00400	"	0.200	ND	90.6	70-130	4.31	20	
Methyl tert-Butyl Ether	0.0998	0.00200	"	0.100	ND	99.8	70-130	3.23	20	
Methylene Chloride	0.104	0.0200	"	0.100	ND	104	70-130	1.79	20	
Naphthalene	0.0969	0.0100	"	0.100	ND	96.9	70-130	3.29	20	

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

Matrix Spike Dup (B7E3001-MSD1)		Source: Y705335-01			Prepared: 05/30/2017 Analyzed: 05/31/2017					
n-Butylbenzene	0.0866	0.00200	mg/kg	0.100	ND	86.6	70-130	6.07	20	
n-Propylbenzene	0.0914	0.00200	"	0.100	ND	91.4	70-130	3.29	20	
o-Xylene	0.0920	0.00200	"	0.100	ND	92.0	70-130	4.90	20	
sec-Butylbenzene	0.0887	0.00200	"	0.100	ND	88.7	70-130	5.82	20	
Styrene	0.0950	0.00200	"	0.100	ND	95.0	70-130	5.59	20	
tert-Butylbenzene	0.0917	0.00200	"	0.100	ND	91.7	70-130	7.55	20	
Tetrachloroethene	0.0918	0.00200	"	0.100	ND	91.8	70-130	0.997	20	
Toluene	0.0919	0.00200	"	0.100	ND	91.9	70-130	2.49	20	
trans-1,2-Dichloroethene	0.0948	0.00200	"	0.100	ND	94.8	70-130	3.28	20	
trans-1,3-Dichloropropene	0.0957	0.00200	"	0.100	ND	95.7	70-130	4.41	20	
Trichloroethene	0.0941	0.00200	"	0.100	ND	94.1	70-130	0.466	20	
Trichlorofluoromethane	0.0924	0.00300	"	0.100	ND	92.4	70-130	6.55	20	
Vinyl chloride	0.0886	0.00200	"	0.100	ND	88.6	70-130	6.09	20	
Surrogate: 1,2-Dichloroethane-d4	62		ug/L	62.5		99.1	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.2	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3001 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B7E3001-MSD2)</b>	<b>Source: Y705335-02</b>				Prepared: 05/30/2017 Analyzed: 05/31/2017					
1,1,1,2-Tetrachloroethane	0.0950	0.00200	mg/kg	0.100	ND	95.0	70-130	3.52	20	
1,1,1-Trichloroethane	0.0949	0.00200	"	0.100	ND	94.9	70-130	4.61	20	
1,1,2,2-Tetrachloroethane	0.0924	0.00200	"	0.100	ND	92.4	70-130	3.94	20	
1,1,2-Trichloroethane	0.0912	0.00200	"	0.100	ND	91.2	70-130	4.50	20	
1,1-Dichloroethane	0.0953	0.00200	"	0.100	ND	95.3	70-130	4.35	20	
1,1-Dichloroethene	0.0939	0.00200	"	0.100	ND	93.9	70-130	4.58	20	
1,1-Dichloropropene	0.0929	0.00200	"	0.100	ND	92.9	70-130	4.21	20	
1,2,3-Trichlorobenzene	0.0760	0.00500	"	0.100	ND	76.0	70-130	14.1	20	
1,2,3-Trichloropropane	0.0851	0.00500	"	0.100	ND	85.1	70-130	4.86	20	
1,2,4-Trichlorobenzene	0.0771	0.00500	"	0.100	ND	77.1	70-130	14.6	20	
1,2,4-Trimethylbenzene	0.0899	0.00200	"	0.100	ND	89.9	70-130	6.58	20	
1,2-Dibromo-3-chloropropane	0.0961	0.00500	"	0.100	ND	96.1	70-130	8.24	20	
1,2-Dibromoethane (EDB)	0.0915	0.00200	"	0.100	ND	91.5	70-130	6.37	20	
1,2-Dichlorobenzene	0.0863	0.00200	"	0.100	ND	86.3	70-130	7.84	20	
1,2-Dichloroethane	0.0919	0.00200	"	0.100	ND	91.9	70-130	5.79	20	
1,2-Dichloropropane	0.0956	0.00200	"	0.100	ND	95.6	70-130	4.18	20	
1,3,5-Trimethylbenzene	0.0887	0.00200	"	0.100	ND	88.7	70-130	0.338	20	
1,3-Dichlorobenzene	0.0864	0.00200	"	0.100	ND	86.4	70-130	6.19	20	
1,3-Dichloropropane	0.0927	0.00200	"	0.100	ND	92.7	70-130	6.13	20	
1,4-Dichlorobenzene	0.0903	0.00200	"	0.100	ND	90.3	70-130	5.72	20	
2,2-Dichloropropane	0.0934	0.00200	"	0.100	ND	93.4	70-130	3.51	20	
2-Butanone	0.462	0.0100	"	0.500	ND	92.5	70-130	3.58	20	
2-Chlorotoluene	0.0867	0.00200	"	0.100	ND	86.7	70-130	3.36	20	
2-Hexanone	0.465	0.0100	"	0.500	ND	93.1	70-130	5.85	20	
4-Chlorotoluene	0.0923	0.00200	"	0.100	ND	92.3	70-130	5.83	20	
4-Isopropyltoluene	0.0868	0.00200	"	0.100	ND	86.8	70-130	4.77	20	

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3001 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B7E3001-MSD2)</b>		<b>Source: Y705335-02</b>			Prepared: 05/30/2017 Analyzed: 05/31/2017					
4-Methyl-2-pentanone	0.459	0.0100	mg/kg	0.500	0.00512	90.7	70-130	5.37	20	
Acetone	0.433	0.0200	"	0.500	ND	86.7	70-130	5.87	20	
Benzene	0.0944	0.00200	"	0.100	ND	94.4	70-130	4.78	20	
Bromobenzene	0.0905	0.00200	"	0.100	ND	90.5	70-130	4.62	20	
Bromochloromethane	0.0955	0.00200	"	0.100	ND	95.5	70-130	3.86	20	
Bromodichloromethane	0.0964	0.00200	"	0.100	ND	96.4	70-130	5.35	20	
Bromoform	0.0908	0.00200	"	0.100	ND	90.8	70-130	6.44	20	
Bromomethane	0.0929	0.00200	"	0.100	ND	92.9	70-130	8.73	20	
Carbon disulfide	0.0940	0.00500	"	0.100	ND	94.0	70-130	5.12	20	
Carbon tetrachloride	0.0949	0.00200	"	0.100	ND	94.9	70-130	5.79	20	
Chlorobenzene	0.0912	0.00200	"	0.100	ND	91.2	70-130	7.19	20	
Chloroethane	0.0929	0.00500	"	0.100	ND	92.9	70-130	14.6	20	
Chloroform	0.101	0.00200	"	0.100	ND	101	70-130	5.27	20	
Chloromethane	0.0862	0.00200	"	0.100	ND	86.2	70-130	11.9	20	
cis-1,2-Dichloroethene	0.0946	0.00200	"	0.100	ND	94.6	70-130	2.81	20	
cis-1,3-Dichloropropene	0.0931	0.00200	"	0.100	ND	93.1	70-130	4.08	20	
Dibromochloromethane	0.0968	0.00200	"	0.100	ND	96.8	70-130	5.09	20	
Dibromomethane	0.0927	0.00200	"	0.100	ND	92.7	70-130	7.67	20	
Ethylbenzene	0.0924	0.00200	"	0.100	ND	92.4	70-130	3.76	20	
Hexachlorobutadiene	0.0621	0.00500	"	0.100	ND	62.1	70-130	28.7	20	QM-07, QR-03
Iodomethane	0.0942	0.0150	"	0.100	ND	94.2	70-130	4.89	20	
Isopropylbenzene	0.0892	0.00200	"	0.100	ND	89.2	70-130	4.73	20	
m,p-Xylene	0.180	0.00400	"	0.200	ND	90.2	70-130	3.63	20	
Methyl tert-Butyl Ether	0.0977	0.00200	"	0.100	ND	97.7	70-130	4.97	20	
Methylene Chloride	0.102	0.0200	"	0.100	ND	102	70-130	6.21	20	
Naphthalene	0.0852	0.0100	"	0.100	ND	85.2	70-130	10.9	20	

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3001 - EPA 5030 (soil)**

Matrix Spike Dup (B7E3001-MSD2)		Source: Y705335-02			Prepared: 05/30/2017 Analyzed: 05/31/2017					
n-Butylbenzene	0.0822	0.00200	mg/kg	0.100	ND	82.2	70-130	10.1	20	
n-Propylbenzene	0.0881	0.00200	"	0.100	ND	88.1	70-130	5.71	20	
o-Xylene	0.0916	0.00200	"	0.100	ND	91.6	70-130	3.37	20	
sec-Butylbenzene	0.0859	0.00200	"	0.100	ND	85.9	70-130	6.32	20	
Styrene	0.0916	0.00200	"	0.100	ND	91.6	70-130	5.46	20	
tert-Butylbenzene	0.0902	0.00200	"	0.100	ND	90.2	70-130	4.87	20	
Tetrachloroethene	0.0897	0.00200	"	0.100	ND	89.7	70-130	6.12	20	
Toluene	0.0907	0.00200	"	0.100	ND	90.7	70-130	5.07	20	
trans-1,2-Dichloroethene	0.0947	0.00200	"	0.100	ND	94.7	70-130	4.18	20	
trans-1,3-Dichloropropene	0.0926	0.00200	"	0.100	ND	92.6	70-130	4.79	20	
Trichloroethene	0.0928	0.00200	"	0.100	ND	92.8	70-130	3.58	20	
Trichlorofluoromethane	0.0833	0.00300	"	0.100	ND	83.3	70-130	17.8	20	
Vinyl chloride	0.0864	0.00200	"	0.100	ND	86.4	70-130	11.9	20	
Surrogate: 1,2-Dichloroethane-d4	62		ug/L	62.5		99.5	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**Blank (B7E3003-BLK1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

1,1,1,2-Tetrachloroethane	ND	1.00	ug/L							U
1,1,1-Trichloroethane	ND	1.00	"							U
1,1,2,2-Tetrachloroethane	ND	1.00	"							U
1,1,2-Trichloroethane	ND	1.00	"							U
1,1-Dichloroethane	ND	1.00	"							U
1,1-Dichloroethene	ND	1.00	"							U
1,1-Dichloropropene	ND	1.00	"							U
1,2,3-Trichlorobenzene	ND	5.00	"							U
1,2,3-Trichloropropane	ND	5.00	"							U
1,2,4-Trichlorobenzene	ND	5.00	"							U
1,2,4-Trimethylbenzene	ND	1.00	"							U
1,2-Dibromo-3-chloropropane	ND	5.00	"							U
1,2-Dibromoethane (EDB)	ND	1.00	"							U
1,2-Dichlorobenzene	ND	1.00	"							U
1,2-Dichloroethane	ND	1.00	"							U
1,2-Dichloropropane	ND	1.00	"							U
1,3,5-Trimethylbenzene	ND	1.00	"							U
1,3-Dichlorobenzene	ND	1.00	"							U
1,3-Dichloropropane	ND	1.00	"							U
1,4-Dichlorobenzene	ND	1.00	"							U
2,2-Dichloropropane	ND	1.00	"							U
2-Butanone	ND	5.00	"							U
2-Chlorotoluene	ND	1.00	"							U
2-Hexanone	ND	5.00	"							U
4-Chlorotoluene	ND	1.00	"							U
4-Isopropyltoluene	ND	1.00	"							U

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3003 - EPA 5030B (Water)</b>										
<b>Blank (B7E3003-BLK1)</b>					Prepared: 05/30/2017 Analyzed: 05/30/2017					
4-Methyl-2-pentanone	ND	5.00	ug/L							U
Acetone	ND	8.00	"							U
Benzene	ND	1.00	"							U
Bromobenzene	ND	1.00	"							U
Bromochloromethane	ND	1.00	"							U
Bromodichloromethane	ND	1.00	"							U
Bromoform	ND	1.00	"							U
Bromomethane	ND	1.00	"							U
Carbon disulfide	ND	5.00	"							U
Carbon tetrachloride	ND	1.00	"							U
Chlorobenzene	ND	1.00	"							U
Chloroethane	ND	1.00	"							U
Chloroform	ND	1.00	"							U
Chloromethane	ND	1.00	"							U
cis-1,2-Dichloroethene	ND	1.00	"							U
cis-1,3-Dichloropropene	ND	1.00	"							U
Dibromochloromethane	ND	1.00	"							U
Dibromomethane	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Hexachlorobutadiene	ND	5.00	"							U
Iodomethane	ND	10.0	"							U
Isopropylbenzene	ND	1.00	"							U
m,p-Xylene	ND	2.00	"							U
Methylene Chloride	ND	5.00	"							U
Methyl tert-Butyl Ether	ND	1.00	"							U
Naphthalene	ND	4.00	"							U

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**Blank (B7E3003-BLK1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

n-Butylbenzene	ND	1.00	ug/L							U
n-Propylbenzene	ND	1.00	"							U
o-Xylene	ND	1.00	"							U
sec-Butylbenzene	ND	1.00	"							U
Styrene	ND	1.00	"							U
tert-Butylbenzene	ND	1.00	"							U
Tetrachloroethene	ND	1.00	"							U
Toluene	ND	1.00	"							U
trans-1,2-Dichloroethene	ND	1.00	"							U
trans-1,3-Dichloropropene	ND	1.00	"							U
Trichloroethene	ND	1.00	"							U
Trichlorofluoromethane	ND	1.00	"							U
Vinyl chloride	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	72		"	62.5	116		84-121			
Surrogate: Toluene-d8	64		"	62.5	102		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		84-114			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**Blank (B7E3003-BLK2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

1,1,1,2-Tetrachloroethane	ND	1.00	ug/L							U
1,1,1-Trichloroethane	ND	1.00	"							U
1,1,2,2-Tetrachloroethane	ND	1.00	"							U
1,1,2-Trichloroethane	ND	1.00	"							U
1,1-Dichloroethane	ND	1.00	"							U
1,1-Dichloroethene	ND	1.00	"							U
1,1-Dichloropropene	ND	1.00	"							U
1,2,3-Trichlorobenzene	ND	5.00	"							U
1,2,3-Trichloropropane	ND	5.00	"							U
1,2,4-Trichlorobenzene	ND	5.00	"							U
1,2,4-Trimethylbenzene	ND	1.00	"							U
1,2-Dibromo-3-chloropropane	ND	5.00	"							U
1,2-Dibromoethane (EDB)	ND	1.00	"							U
1,2-Dichlorobenzene	ND	1.00	"							U
1,2-Dichloroethane	ND	1.00	"							U
1,2-Dichloropropane	ND	1.00	"							U
1,3,5-Trimethylbenzene	ND	1.00	"							U
1,3-Dichlorobenzene	ND	1.00	"							U
1,3-Dichloropropane	ND	1.00	"							U
1,4-Dichlorobenzene	ND	1.00	"							U
2,2-Dichloropropane	ND	1.00	"							U
2-Butanone	ND	5.00	"							U
2-Chlorotoluene	ND	1.00	"							U
2-Hexanone	ND	5.00	"							U
4-Chlorotoluene	ND	1.00	"							U
4-Isopropyltoluene	ND	1.00	"							U

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**Blank (B7E3003-BLK2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

4-Methyl-2-pentanone	ND	5.00	ug/L							U
Acetone	ND	8.00	"							U
Benzene	ND	1.00	"							U
Bromobenzene	ND	1.00	"							U
Bromochloromethane	ND	1.00	"							U
Bromodichloromethane	ND	1.00	"							U
Bromoform	ND	1.00	"							U
Bromomethane	ND	1.00	"							U
Carbon disulfide	ND	5.00	"							U
Carbon tetrachloride	ND	1.00	"							U
Chlorobenzene	ND	1.00	"							U
Chloroethane	ND	1.00	"							U
Chloroform	ND	1.00	"							U
Chloromethane	ND	1.00	"							U
cis-1,2-Dichloroethene	ND	1.00	"							U
cis-1,3-Dichloropropene	ND	1.00	"							U
Dibromochloromethane	ND	1.00	"							U
Dibromomethane	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Hexachlorobutadiene	ND	5.00	"							U
Iodomethane	ND	10.0	"							U
Isopropylbenzene	ND	1.00	"							U
m,p-Xylene	ND	2.00	"							U
Methylene Chloride	ND	5.00	"							U
Methyl tert-Butyl Ether	ND	1.00	"							U
Naphthalene	ND	4.00	"							U

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**Blank (B7E3003-BLK2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

n-Butylbenzene	ND	1.00	ug/L							U
n-Propylbenzene	ND	1.00	"							U
o-Xylene	ND	1.00	"							U
sec-Butylbenzene	ND	1.00	"							U
Styrene	ND	1.00	"							U
tert-Butylbenzene	ND	1.00	"							U
Tetrachloroethene	ND	1.00	"							U
Toluene	ND	1.00	"							U
trans-1,2-Dichloroethene	ND	1.00	"							U
trans-1,3-Dichloropropene	ND	1.00	"							U
Trichloroethene	ND	1.00	"							U
Trichlorofluoromethane	ND	1.00	"							U
Vinyl chloride	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	70		"	62.5	112		84-121			
Surrogate: Toluene-d8	63		"	62.5	101		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		84-114			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**LCS (B7E3003-BS1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

1,1,1,2-Tetrachloroethane	56.4	1.00	ug/L	50.0		113	78.8-128			
1,1,1-Trichloroethane	53.2	1.00	"	50.0		106	80-120			
1,1,2,2-Tetrachloroethane	54.8	1.00	"	50.0		110	67.9-120			
1,1,2-Trichloroethane	49.4	1.00	"	50.0		98.8	75.4-120			
1,1-Dichloroethane	51.3	1.00	"	50.0		103	80-120			
1,1-Dichloroethene	59.2	1.00	"	50.0		118	79.4-120			
1,1-Dichloropropene	50.4	1.00	"	50.0		101	78-120			
1,2,3-Trichlorobenzene	55.9	5.00	"	50.0		112	63.8-134			
1,2,3-Trichloropropane	56.3	5.00	"	50.0		113	63.3-121			
1,2,4-Trichlorobenzene	56.2	5.00	"	50.0		112	70.4-125			
1,2,4-Trimethylbenzene	57.1	1.00	"	50.0		114	73.3-123			
1,2-Dibromo-3-chloropropane	49.6	5.00	"	50.0		99.1	80-120			
1,2-Dibromoethane (EDB)	51.7	1.00	"	50.0		103	74.7-127			
1,2-Dichlorobenzene	57.5	1.00	"	50.0		115	80-120			
1,2-Dichloroethane	56.5	1.00	"	50.0		113	71.1-120			
1,2-Dichloropropane	48.6	1.00	"	50.0		97.3	80-120			
1,3,5-Trimethylbenzene	57.8	1.00	"	50.0		116	71.9-128			
1,3-Dichlorobenzene	55.5	1.00	"	50.0		111	82.1-120			
1,3-Dichloropropane	49.9	1.00	"	50.0		99.8	75.1-123			
1,4-Dichlorobenzene	57.4	1.00	"	50.0		115	76.8-120			
2,2-Dichloropropane	52.6	1.00	"	50.0		105	80-120			
2-Butanone	262	5.00	"	250		105	64.9-123			
2-Chlorotoluene	58.2	1.00	"	50.0		116	66-133			
2-Hexanone	263	5.00	"	250		105	80-120			
4-Chlorotoluene	51.6	1.00	"	50.0		103	73.2-120			
4-Isopropyltoluene	54.8	1.00	"	50.0		110	79.8-120			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**LCS (B7E3003-BS1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

4-Methyl-2-pentanone	240	5.00	ug/L	250		95.8	58.5-122			
Acetone	287	8.00	"	250		115	65.4-125			
Benzene	48.4	1.00	"	50.0		96.7	75.5-120			
Bromobenzene	52.4	1.00	"	50.0		105	70-130			
Bromochloromethane	54.8	1.00	"	50.0		110	80-120			
Bromodichloromethane	57.2	1.00	"	50.0		114	73-123			
Bromoform	56.8	1.00	"	50.0		114	75-128			
Bromomethane	61.6	1.00	"	50.0		123	72-138			
Carbon disulfide	57.0	5.00	"	50.0		114	69-129			
Carbon tetrachloride	59.6	1.00	"	50.0		119	80-124			
Chlorobenzene	49.9	1.00	"	50.0		99.8	78-121			
Chloroethane	58.1	1.00	"	50.0		116	77-138			
Chloroform	55.6	1.00	"	50.0		111	75-120			
Chloromethane	51.5	1.00	"	50.0		103	72-130			
cis-1,2-Dichloroethene	53.6	1.00	"	50.0		107	78-120			
cis-1,3-Dichloropropene	54.6	1.00	"	50.0		109	73-122			
Dibromochloromethane	61.1	1.00	"	50.0		122	78-120			
Dibromomethane	53.5	1.00	"	50.0		107	79-120			
Ethylbenzene	52.1	1.00	"	50.0		104	78-130			
Hexachlorobutadiene	58.1	5.00	"	50.0		116	72-129			
Iodomethane	52.2	10.0	"	50.0		104	74-121			
Isopropylbenzene	52.1	1.00	"	50.0		104	75-128			
m,p-Xylene	115	2.00	"	100		115	75-134			
Methylene Chloride	52.8	5.00	"	50.0		106	80-122			
Methyl tert-Butyl Ether	48.8	1.00	"	50.0		97.6	72-125			
Naphthalene	54.3	4.00	"	50.0		109	65-128			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**LCS (B7E3003-BS1)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

n-Butylbenzene	57.3	1.00	ug/L	50.0		115	69-134			
n-Propylbenzene	57.8	1.00	"	50.0		116	74-132			
o-Xylene	52.4	1.00	"	50.0		105	76-129			
sec-Butylbenzene	55.9	1.00	"	50.0		112	74-128			
Styrene	53.4	1.00	"	50.0		107	74-126			
tert-Butylbenzene	55.5	1.00	"	50.0		111	72-123			
Tetrachloroethene	49.7	1.00	"	50.0		99.5	78-132			
Toluene	48.8	1.00	"	50.0		97.6	76-128			
trans-1,2-Dichloroethene	54.2	1.00	"	50.0		108	79-120			
trans-1,3-Dichloropropene	56.9	1.00	"	50.0		114	74-122			
Trichloroethene	49.1	1.00	"	50.0		98.2	76-125			
Trichlorofluoromethane	61.2	1.00	"	50.0		122	66-149			
Vinyl chloride	52.2	1.00	"	50.0		104	70-137			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	64		"	62.5		102	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.5	84-114			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**LCS (B7E3003-BS2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

1,1,1,2-Tetrachloroethane	51.4	1.00	ug/L	50.0		103	78.8-128			
1,1,1-Trichloroethane	49.5	1.00	"	50.0		99.0	80-120			
1,1,2,2-Tetrachloroethane	51.1	1.00	"	50.0		102	67.9-120			
1,1,2-Trichloroethane	47.0	1.00	"	50.0		94.0	75.4-120			
1,1-Dichloroethane	46.5	1.00	"	50.0		93.0	80-120			
1,1-Dichloroethene	53.4	1.00	"	50.0		107	79.4-120			
1,1-Dichloropropene	47.3	1.00	"	50.0		94.6	78-120			
1,2,3-Trichlorobenzene	57.3	5.00	"	50.0		115	63.8-134			
1,2,3-Trichloropropane	53.1	5.00	"	50.0		106	63.3-121			
1,2,4-Trichlorobenzene	55.8	5.00	"	50.0		112	70.4-125			
1,2,4-Trimethylbenzene	54.1	1.00	"	50.0		108	73.3-123			
1,2-Dibromo-3-chloropropane	51.8	5.00	"	50.0		104	80-120			
1,2-Dibromoethane (EDB)	49.3	1.00	"	50.0		98.6	74.7-127			
1,2-Dichlorobenzene	52.9	1.00	"	50.0		106	80-120			
1,2-Dichloroethane	50.9	1.00	"	50.0		102	71.1-120			
1,2-Dichloropropane	45.9	1.00	"	50.0		91.8	80-120			
1,3,5-Trimethylbenzene	53.7	1.00	"	50.0		107	71.9-128			
1,3-Dichlorobenzene	52.1	1.00	"	50.0		104	82.1-120			
1,3-Dichloropropane	46.9	1.00	"	50.0		93.9	75.1-123			
1,4-Dichlorobenzene	53.4	1.00	"	50.0		107	76.8-120			
2,2-Dichloropropane	50.1	1.00	"	50.0		100	80-120			
2-Butanone	247	5.00	"	250		98.9	64.9-123			
2-Chlorotoluene	53.6	1.00	"	50.0		107	66-133			
2-Hexanone	259	5.00	"	250		104	80-120			
4-Chlorotoluene	48.3	1.00	"	50.0		96.6	73.2-120			
4-Isopropyltoluene	51.4	1.00	"	50.0		103	79.8-120			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**LCS (B7E3003-BS2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

4-Methyl-2-pentanone	229	5.00	ug/L	250		91.7	58.5-122			
Acetone	252	8.00	"	250		101	65.4-125			
Benzene	45.2	1.00	"	50.0		90.4	75.5-120			
Bromobenzene	49.1	1.00	"	50.0		98.2	70-130			
Bromochloromethane	50.2	1.00	"	50.0		100	80-120			
Bromodichloromethane	52.3	1.00	"	50.0		105	73-123			
Bromoform	52.0	1.00	"	50.0		104	75-128			
Bromomethane	52.3	1.00	"	50.0		105	72-138			
Carbon disulfide	52.8	5.00	"	50.0		106	69-129			
Carbon tetrachloride	48.6	1.00	"	50.0		97.1	80-124			
Chlorobenzene	46.1	1.00	"	50.0		92.1	78-121			
Chloroethane	51.8	1.00	"	50.0		104	77-138			
Chloroform	50.4	1.00	"	50.0		101	75-120			
Chloromethane	45.1	1.00	"	50.0		90.2	72-130			
cis-1,2-Dichloroethene	49.3	1.00	"	50.0		98.5	78-120			
cis-1,3-Dichloropropene	50.7	1.00	"	50.0		101	73-122			
Dibromochloromethane	56.6	1.00	"	50.0		113	78-120			
Dibromomethane	49.9	1.00	"	50.0		99.8	79-120			
Ethylbenzene	48.4	1.00	"	50.0		96.9	78-130			
Hexachlorobutadiene	56.8	5.00	"	50.0		114	72-129			
Iodomethane	47.3	10.0	"	50.0		94.6	74-121			
Isopropylbenzene	48.5	1.00	"	50.0		97.0	75-128			
m,p-Xylene	105	2.00	"	100		105	75-134			
Methylene Chloride	46.5	5.00	"	50.0		92.9	80-122			
Methyl tert-Butyl Ether	48.5	1.00	"	50.0		96.9	72-125			
Naphthalene	56.4	4.00	"	50.0		113	65-128			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

**LCS (B7E3003-BS2)**

Prepared: 05/30/2017 Analyzed: 05/30/2017

n-Butylbenzene	54.5	1.00	ug/L	50.0		109	69-134			
n-Propylbenzene	53.9	1.00	"	50.0		108	74-132			
o-Xylene	48.8	1.00	"	50.0		97.6	76-129			
sec-Butylbenzene	53.3	1.00	"	50.0		107	74-128			
Styrene	53.7	1.00	"	50.0		107	74-126			
tert-Butylbenzene	52.1	1.00	"	50.0		104	72-123			
Tetrachloroethene	46.7	1.00	"	50.0		93.4	78-132			
Toluene	45.5	1.00	"	50.0		91.0	76-128			
trans-1,2-Dichloroethene	50.0	1.00	"	50.0		99.9	79-120			
trans-1,3-Dichloropropene	53.5	1.00	"	50.0		107	74-122			
Trichloroethene	45.8	1.00	"	50.0		91.6	76-125			
Trichlorofluoromethane	53.0	1.00	"	50.0		106	66-149			
Vinyl chloride	46.6	1.00	"	50.0		93.2	70-137			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		106	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	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

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

Matrix Spike (B7E3003-MS1)		Source: Y705299-01			Prepared: 05/30/2017 Analyzed: 05/30/2017					
1,1,1,2-Tetrachloroethane	55.4	1.00	ug/L	50.0	111	82-130				
1,1,1-Trichloroethane	53.7	1.00	"	50.0	107	81-125				
1,1,2,2-Tetrachloroethane	50.3	1.00	"	50.0	101	74-120				
1,1,2-Trichloroethane	45.8	1.00	"	50.0	91.7	80-118				
1,1-Dichloroethane	48.3	1.00	"	50.0	96.6	79-120				
1,1-Dichloroethene	56.6	1.00	"	50.0	113	73-130				
1,1-Dichloropropene	50.1	1.00	"	50.0	100	77-124				
1,2,3-Trichlorobenzene	57.7	5.00	"	50.0	115	55-144				
1,2,3-Trichloropropane	52.4	5.00	"	50.0	105	67-126				
1,2,4-Trichlorobenzene	56.5	5.00	"	50.0	113	56-141				
1,2,4-Trimethylbenzene	58.0	1.00	"	50.0	116	62-132				
1,2-Dibromo-3-chloropropane	48.1	5.00	"	50.0	96.2	56-142				
1,2-Dibromoethane (EDB)	47.3	1.00	"	50.0	94.6	84-124				
1,2-Dichlorobenzene	54.9	1.00	"	50.0	110	74-124				
1,2-Dichloroethane	48.3	1.00	"	50.0	96.7	76-120				
1,2-Dichloropropane	46.1	1.00	"	50.0	92.1	78-117				
1,3,5-Trimethylbenzene	59.9	1.00	"	50.0	120	64-138				
1,3-Dichlorobenzene	55.0	1.00	"	50.0	110	73-126				
1,3-Dichloropropane	46.1	1.00	"	50.0	92.2	83-120				
1,4-Dichlorobenzene	56.6	1.00	"	50.0	113	64-130				
2,2-Dichloropropane	55.9	1.00	"	50.0	112	77-129				
2-Butanone	218	5.00	"	250	87.4	66-128				
2-Chlorotoluene	59.4	1.00	"	50.0	119	71-130				
2-Hexanone	234	5.00	"	250	93.7	74-123				
4-Chlorotoluene	52.4	1.00	"	50.0	105	66-128				
4-Isopropyltoluene	57.5	1.00	"	50.0	115	60-140				

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

Matrix Spike (B7E3003-MS1)		Source: Y705299-01			Prepared: 05/30/2017 Analyzed: 05/30/2017					
4-Methyl-2-pentanone	228	5.00	ug/L	250	91.4	65-125				
Acetone	217	8.00	"	250	86.9	63-134				
Benzene	46.8	1.00	"	50.0	93.7	74-130				
Bromobenzene	51.8	1.00	"	50.0	104	70-130				
Bromochloromethane	48.8	1.00	"	50.0	97.6	80-118				
Bromodichloromethane	52.0	1.00	"	50.0	104	76-122				
Bromoform	50.1	1.00	"	50.0	100	80-128				
Bromomethane	52.6	1.00	"	50.0	105	69-144				
Carbon disulfide	57.4	5.00	"	50.0	115	70-131				
Carbon tetrachloride	54.3	1.00	"	50.0	109	81-130				
Chlorobenzene	48.3	1.00	"	50.0	96.6	72-128				
Chloroethane	52.9	1.00	"	50.0	106	79-140				
Chloroform	51.5	1.00	"	50.0	103	76-118				
Chloromethane	44.0	1.00	"	50.0	87.9	72-128				
cis-1,2-Dichloroethene	50.6	1.00	"	50.0	101	78-120				
cis-1,3-Dichloropropene	51.6	1.00	"	50.0	103	79-120				
Dibromochloromethane	56.2	1.00	"	50.0	112	81-121				
Dibromomethane	47.5	1.00	"	50.0	95.0	84-115				
Ethylbenzene	54.2	1.00	"	50.0	108	76-132				
Hexachlorobutadiene	61.4	5.00	"	50.0	123	70-130				
Iodomethane	49.5	10.0	"	50.0	99.0	72-127				
Isopropylbenzene	54.4	1.00	"	50.0	109	66-135				
m,p-Xylene	118	2.00	"	100	118	69-139				
Methylene Chloride	45.2	5.00	"	50.0	90.4	87-118				
Methyl tert-Butyl Ether	44.2	1.00	"	50.0	88.4	62-138				
Naphthalene	54.6	4.00	"	50.0	109	59-148				

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

Matrix Spike (B7E3003-MS1)		Source: Y705299-01			Prepared: 05/30/2017 Analyzed: 05/30/2017					
n-Butylbenzene	60.6	1.00	ug/L	50.0	121	52-146				
n-Propylbenzene	60.7	1.00	"	50.0	121	66-141				
o-Xylene	53.9	1.00	"	50.0	108	74-131				
sec-Butylbenzene	59.7	1.00	"	50.0	119	63-138				
Styrene	57.6	1.00	"	50.0	115	72-128				
tert-Butylbenzene	58.3	1.00	"	50.0	117	67-129				
Tetrachloroethene	51.0	1.00	"	50.0	102	76-134				
Toluene	48.5	1.00	"	50.0	97.0	73-131				
trans-1,2-Dichloroethene	52.2	1.00	"	50.0	104	78-123				
trans-1,3-Dichloropropene	52.8	1.00	"	50.0	106	75-125				
Trichloroethene	48.3	1.00	"	50.0	96.6	73-131				
Trichlorofluoromethane	53.5	1.00	"	50.0	107	83-141				
Vinyl chloride	47.7	1.00	"	50.0	95.4	73-139				
Surrogate: 1,2-Dichloroethane-d4	63		"	62.5	100	84-121				
Surrogate: Toluene-d8	65		"	62.5	104	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

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

Matrix Spike (B7E3003-MS2)		Source: Y705299-02			Prepared: 05/30/2017 Analyzed: 05/30/2017					
1,1,1,2-Tetrachloroethane	58.4	1.00	ug/L	50.0	117	82-130				
1,1,1-Trichloroethane	55.1	1.00	"	50.0	110	81-125				
1,1,2,2-Tetrachloroethane	61.9	1.00	"	50.0	124	74-120				
1,1,2-Trichloroethane	52.0	1.00	"	50.0	104	80-118				
1,1-Dichloroethane	50.1	1.00	"	50.0	100	79-120				
1,1-Dichloroethene	57.5	1.00	"	50.0	115	73-130				
1,1-Dichloropropene	51.8	1.00	"	50.0	104	77-124				
1,2,3-Trichlorobenzene	67.3	5.00	"	50.0	135	55-144				
1,2,3-Trichloropropane	63.1	5.00	"	50.0	126	67-126				
1,2,4-Trichlorobenzene	65.0	5.00	"	50.0	130	56-141				
1,2,4-Trimethylbenzene	60.6	1.00	"	50.0	121	62-132				
1,2-Dibromo-3-chloropropane	59.1	5.00	"	50.0	118	56-142				
1,2-Dibromoethane (EDB)	54.4	1.00	"	50.0	109	84-124				
1,2-Dichlorobenzene	60.8	1.00	"	50.0	122	74-124				
1,2-Dichloroethane	57.2	1.00	"	50.0	114	76-120				
1,2-Dichloropropane	50.6	1.00	"	50.0	101	78-117				
1,3,5-Trimethylbenzene	60.9	1.00	"	50.0	122	64-138				
1,3-Dichlorobenzene	58.7	1.00	"	50.0	117	73-126				
1,3-Dichloropropane	52.5	1.00	"	50.0	105	83-120				
1,4-Dichlorobenzene	57.5	1.00	"	50.0	115	64-130				
2,2-Dichloropropane	56.2	1.00	"	50.0	112	77-129				
2-Butanone	279	5.00	"	250	112	66-128				
2-Chlorotoluene	60.6	1.00	"	50.0	121	71-130				
2-Hexanone	301	5.00	"	250	120	74-123				
4-Chlorotoluene	53.9	1.00	"	50.0	108	66-128				
4-Isopropyltoluene	58.2	1.00	"	50.0	116	60-140				

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

Matrix Spike (B7E3003-MS2)		Source: Y705299-02			Prepared: 05/30/2017 Analyzed: 05/30/2017					
4-Methyl-2-pentanone	266	5.00	ug/L	250	106	65-125				
Acetone	276	8.00	"	250	110	63-134				
Benzene	49.7	1.00	"	50.0	99.4	74-130				
Bromobenzene	55.4	1.00	"	50.0	111	70-130				
Bromochloromethane	55.0	1.00	"	50.0	110	80-118				
Bromodichloromethane	58.7	1.00	"	50.0	117	76-122				
Bromoform	59.7	1.00	"	50.0	119	80-128				
Bromomethane	53.9	1.00	"	50.0	108	69-144				
Carbon disulfide	56.8	5.00	"	50.0	114	70-131				
Carbon tetrachloride	60.7	1.00	"	50.0	121	81-130				
Chlorobenzene	50.7	1.00	"	50.0	101	72-128				
Chloroethane	57.0	1.00	"	50.0	114	79-140				
Chloroform	54.8	1.00	"	50.0	110	76-118				
Chloromethane	45.9	1.00	"	50.0	91.8	72-128				
cis-1,2-Dichloroethene	54.0	1.00	"	50.0	108	78-120				
cis-1,3-Dichloropropene	56.6	1.00	"	50.0	113	79-120				
Dibromochloromethane	64.0	1.00	"	50.0	128	81-121				
Dibromomethane	55.2	1.00	"	50.0	110	84-115				
Ethylbenzene	54.2	1.00	"	50.0	108	76-132				
Hexachlorobutadiene	62.2	5.00	"	50.0	124	70-130				
Iodomethane	50.8	10.0	"	50.0	102	72-127				
Isopropylbenzene	54.5	1.00	"	50.0	109	66-135				
m,p-Xylene	118	2.00	"	100	118	69-139				
Methylene Chloride	50.1	5.00	"	50.0	100	87-118				
Methyl tert-Butyl Ether	62.2	1.00	"	50.0	124	62-138				
Naphthalene	66.9	4.00	"	50.0	134	59-148				

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

Matrix Spike (B7E3003-MS2)		Source: Y705299-02			Prepared: 05/30/2017 Analyzed: 05/30/2017					
n-Butylbenzene	62.0	1.00	ug/L	50.0	124	52-146				
n-Propylbenzene	60.2	1.00	"	50.0	120	66-141				
o-Xylene	54.9	1.00	"	50.0	110	74-131				
sec-Butylbenzene	59.6	1.00	"	50.0	119	63-138				
Styrene	58.2	1.00	"	50.0	116	72-128				
tert-Butylbenzene	58.3	1.00	"	50.0	117	67-129				
Tetrachloroethene	51.2	1.00	"	50.0	102	76-134				
Toluene	49.5	1.00	"	50.0	98.9	73-131				
trans-1,2-Dichloroethene	53.8	1.00	"	50.0	108	78-123				
trans-1,3-Dichloropropene	60.4	1.00	"	50.0	121	75-125				
Trichloroethene	50.5	1.00	"	50.0	101	73-131				
Trichlorofluoromethane	55.3	1.00	"	50.0	111	83-141				
Vinyl chloride	50.1	1.00	"	50.0	100	73-139				
Surrogate: 1,2-Dichloroethane-d4	68		"	62.5	109	84-121				
Surrogate: Toluene-d8	63		"	62.5	101	85-115				
Surrogate: 4-Bromofluorobenzene	64		"	62.5	103	84-114				

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3003 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (B7E3003-MSD1)</b>		<b>Source: Y705299-01</b>			<b>Prepared: 05/30/2017 Analyzed: 05/30/2017</b>					
1,1,1,2-Tetrachloroethane	55.3	1.00	ug/L	50.0	111	82-130	0.235	20		
1,1,1-Trichloroethane	52.0	1.00	"	50.0	104	81-125	3.22	20		
1,1,2,2-Tetrachloroethane	56.4	1.00	"	50.0	113	74-120	11.5	20		
1,1,2-Trichloroethane	48.9	1.00	"	50.0	97.8	80-118	6.48	20		
1,1-Dichloroethane	47.9	1.00	"	50.0	95.9	79-120	0.748	20		
1,1-Dichloroethene	54.9	1.00	"	50.0	110	73-130	3.10	20		
1,1-Dichloropropene	49.4	1.00	"	50.0	98.9	77-124	1.27	20		
1,2,3-Trichlorobenzene	48.2	5.00	"	50.0	96.5	55-144	17.9	20		
1,2,3-Trichloropropane	57.2	5.00	"	50.0	114	67-126	8.71	20		
1,2,4-Trichlorobenzene	46.6	5.00	"	50.0	93.1	56-141	19.3	20		
1,2,4-Trimethylbenzene	53.4	1.00	"	50.0	107	62-132	8.25	20		
1,2-Dibromo-3-chloropropane	51.4	5.00	"	50.0	103	56-142	6.61	20		
1,2-Dibromoethane (EDB)	49.9	1.00	"	50.0	99.8	84-124	5.37	20		
1,2-Dichlorobenzene	52.9	1.00	"	50.0	106	74-124	3.65	20		
1,2-Dichloroethane	52.7	1.00	"	50.0	105	76-120	8.57	20		
1,2-Dichloropropane	47.6	1.00	"	50.0	95.3	78-117	3.37	20		
1,3,5-Trimethylbenzene	54.4	1.00	"	50.0	109	64-138	9.57	20		
1,3-Dichlorobenzene	51.8	1.00	"	50.0	104	73-126	6.12	20		
1,3-Dichloropropane	49.0	1.00	"	50.0	98.0	83-120	6.08	20		
1,4-Dichlorobenzene	53.4	1.00	"	50.0	107	64-130	5.75	20		
2,2-Dichloropropane	53.2	1.00	"	50.0	106	77-129	5.01	20		
2-Butanone	253	5.00	"	250	101	66-128	14.6	20		
2-Chlorotoluene	54.9	1.00	"	50.0	110	71-130	7.82	20		
2-Hexanone	268	5.00	"	250	107	74-123	13.6	20		
4-Chlorotoluene	50.0	1.00	"	50.0	100	66-128	4.80	20		
4-Isopropyltoluene	52.3	1.00	"	50.0	105	60-140	9.49	20		

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3003 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (B7E3003-MSD1)</b>		<b>Source: Y705299-01</b>			Prepared: 05/30/2017 Analyzed: 05/30/2017					
4-Methyl-2-pentanone	240	5.00	ug/L	250		96.0	65-125	4.94	20	
Acetone	247	8.00	"	250		98.7	63-134	12.7	20	
Benzene	46.9	1.00	"	50.0		93.8	74-130	0.0640	20	
Bromobenzene	51.0	1.00	"	50.0		102	70-130	1.42	20	
Bromochloromethane	51.0	1.00	"	50.0		102	80-118	4.55	20	
Bromodichloromethane	53.8	1.00	"	50.0		108	76-122	3.40	20	
Bromoform	54.0	1.00	"	50.0		108	80-128	7.55	20	
Bromomethane	50.7	1.00	"	50.0		101	69-144	3.81	20	
Carbon disulfide	54.6	5.00	"	50.0		109	70-131	4.93	20	
Carbon tetrachloride	57.9	1.00	"	50.0		116	81-130	6.43	20	
Chlorobenzene	47.0	1.00	"	50.0		94.0	72-128	2.64	20	
Chloroethane	50.9	1.00	"	50.0		102	79-140	3.89	20	
Chloroform	51.7	1.00	"	50.0		103	76-118	0.426	20	
Chloromethane	39.8	1.00	"	50.0		79.7	72-128	9.79	20	
cis-1,2-Dichloroethene	51.1	1.00	"	50.0		102	78-120	0.984	20	
cis-1,3-Dichloropropene	52.7	1.00	"	50.0		105	79-120	2.05	20	
Dibromochloromethane	59.2	1.00	"	50.0		118	81-121	5.34	20	
Dibromomethane	50.8	1.00	"	50.0		102	84-115	6.77	20	
Ethylbenzene	51.3	1.00	"	50.0		103	76-132	5.63	20	
Hexachlorobutadiene	50.2	5.00	"	50.0		100	70-130	20.0	20	
Iodomethane	48.4	10.0	"	50.0		96.9	72-127	2.17	20	
Isopropylbenzene	51.0	1.00	"	50.0		102	66-135	6.49	20	
m,p-Xylene	112	2.00	"	100		112	69-139	5.19	20	
Methylene Chloride	46.3	5.00	"	50.0		92.5	87-118	2.36	20	
Methyl tert-Butyl Ether	49.5	1.00	"	50.0		99.0	62-138	11.2	20	
Naphthalene	47.5	4.00	"	50.0		95.0	59-148	14.0	20	

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

Matrix Spike Dup (B7E3003-MSD1)		Source: Y705299-01			Prepared: 05/30/2017 Analyzed: 05/30/2017					
n-Butylbenzene	52.0	1.00	ug/L	50.0	104	52-146	15.2	20		
n-Propylbenzene	55.4	1.00	"	50.0	111	66-141	9.20	20		
o-Xylene	51.3	1.00	"	50.0	103	74-131	4.98	20		
sec-Butylbenzene	53.7	1.00	"	50.0	107	63-138	10.6	20		
Styrene	54.6	1.00	"	50.0	109	72-128	5.33	20		
tert-Butylbenzene	54.1	1.00	"	50.0	108	67-129	7.44	20		
Tetrachloroethene	48.6	1.00	"	50.0	97.2	76-134	4.84	20		
Toluene	47.6	1.00	"	50.0	95.2	73-131	1.85	20		
trans-1,2-Dichloroethene	51.4	1.00	"	50.0	103	78-123	1.60	20		
trans-1,3-Dichloropropene	55.6	1.00	"	50.0	111	75-125	5.15	20		
Trichloroethene	47.9	1.00	"	50.0	95.9	73-131	0.748	20		
Trichlorofluoromethane	51.0	1.00	"	50.0	102	83-141	4.63	20		
Vinyl chloride	45.2	1.00	"	50.0	90.4	73-139	5.34	20		
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5	110	84-121				
Surrogate: Toluene-d8	64		"	62.5	102	85-115				
Surrogate: 4-Bromofluorobenzene	64		"	62.5	102	84-114				

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3003 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (B7E3003-MSD2)</b>		<b>Source: Y705299-02</b>			<b>Prepared: 05/30/2017 Analyzed: 05/30/2017</b>					
1,1,1,2-Tetrachloroethane	56.8	1.00	ug/L	50.0	114	82-130	2.83	20		
1,1,1-Trichloroethane	53.8	1.00	"	50.0	108	81-125	2.41	20		
1,1,2,2-Tetrachloroethane	59.5	1.00	"	50.0	119	74-120	3.90	20		
1,1,2-Trichloroethane	51.5	1.00	"	50.0	103	80-118	0.966	20		
1,1-Dichloroethane	49.8	1.00	"	50.0	99.6	79-120	0.701	20		
1,1-Dichloroethene	56.0	1.00	"	50.0	112	73-130	2.75	20		
1,1-Dichloropropene	51.3	1.00	"	50.0	103	77-124	1.05	20		
1,2,3-Trichlorobenzene	65.0	5.00	"	50.0	130	55-144	3.58	20		
1,2,3-Trichloropropane	61.0	5.00	"	50.0	122	67-126	3.45	20		
1,2,4-Trichlorobenzene	61.5	5.00	"	50.0	123	56-141	5.59	20		
1,2,4-Trimethylbenzene	57.9	1.00	"	50.0	116	62-132	4.50	20		
1,2-Dibromo-3-chloropropane	58.8	5.00	"	50.0	118	56-142	0.492	20		
1,2-Dibromoethane (EDB)	53.6	1.00	"	50.0	107	84-124	1.52	20		
1,2-Dichlorobenzene	58.1	1.00	"	50.0	116	74-124	4.49	20		
1,2-Dichloroethane	55.4	1.00	"	50.0	111	76-120	3.14	20		
1,2-Dichloropropane	49.8	1.00	"	50.0	99.6	78-117	1.59	20		
1,3,5-Trimethylbenzene	58.4	1.00	"	50.0	117	64-138	4.16	20		
1,3-Dichlorobenzene	56.9	1.00	"	50.0	114	73-126	3.10	20		
1,3-Dichloropropane	51.8	1.00	"	50.0	104	83-120	1.34	20		
1,4-Dichlorobenzene	58.6	1.00	"	50.0	117	64-130	1.93	20		
2,2-Dichloropropane	54.8	1.00	"	50.0	110	77-129	2.45	20		
2-Butanone	274	5.00	"	250	110	66-128	1.97	20		
2-Chlorotoluene	58.7	1.00	"	50.0	117	71-130	3.15	20		
2-Hexanone	290	5.00	"	250	116	74-123	3.64	20		
4-Chlorotoluene	52.8	1.00	"	50.0	106	66-128	2.17	20		
4-Isopropyltoluene	55.7	1.00	"	50.0	111	60-140	4.46	20		

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Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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
<b>Batch B7E3003 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (B7E3003-MSD2)</b>		<b>Source: Y705299-02</b>			Prepared: 05/30/2017 Analyzed: 05/30/2017					
4-Methyl-2-pentanone	260	5.00	ug/L	250	104	65-125	2.18	20		
Acetone	266	8.00	"	250	106	63-134	3.65	20		
Benzene	48.7	1.00	"	50.0	97.3	74-130	2.13	20		
Bromobenzene	53.8	1.00	"	50.0	108	70-130	2.86	20		
Bromochloromethane	54.3	1.00	"	50.0	109	80-118	1.30	20		
Bromodichloromethane	57.0	1.00	"	50.0	114	76-122	3.03	20		
Bromoform	57.3	1.00	"	50.0	115	80-128	4.10	20		
Bromomethane	49.0	1.00	"	50.0	98.1	69-144	9.50	20		
Carbon disulfide	55.9	5.00	"	50.0	112	70-131	1.56	20		
Carbon tetrachloride	59.6	1.00	"	50.0	119	81-130	1.81	20		
Chlorobenzene	49.5	1.00	"	50.0	98.9	72-128	2.50	20		
Chloroethane	49.5	1.00	"	50.0	99.1	79-140	14.0	20		
Chloroform	54.0	1.00	"	50.0	108	76-118	1.42	20		
Chloromethane	41.8	1.00	"	50.0	83.6	72-128	9.35	20		
cis-1,2-Dichloroethene	53.2	1.00	"	50.0	106	78-120	1.59	20		
cis-1,3-Dichloropropene	55.6	1.00	"	50.0	111	79-120	1.82	20		
Dibromochloromethane	62.6	1.00	"	50.0	125	81-121	2.21	20		
Dibromomethane	53.2	1.00	"	50.0	106	84-115	3.86	20		
Ethylbenzene	52.5	1.00	"	50.0	105	76-132	3.13	20		
Hexachlorobutadiene	54.0	5.00	"	50.0	108	70-130	13.9	20		
Iodomethane	49.4	10.0	"	50.0	98.9	72-127	2.65	20		
Isopropylbenzene	53.1	1.00	"	50.0	106	66-135	2.55	20		
m,p-Xylene	116	2.00	"	100	116	69-139	2.19	20		
Methylene Chloride	47.5	5.00	"	50.0	95.1	87-118	5.18	20		
Methyl tert-Butyl Ether	59.9	1.00	"	50.0	120	62-138	3.70	20		
Naphthalene	63.6	4.00	"	50.0	127	59-148	5.05	20		

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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 B7E3003 - EPA 5030B (Water)**

Matrix Spike Dup (B7E3003-MSD2)		Source: Y705299-02			Prepared: 05/30/2017 Analyzed: 05/30/2017					
n-Butylbenzene	58.5	1.00	ug/L	50.0	117	52-146	5.69	20		
n-Propylbenzene	58.6	1.00	"	50.0	117	66-141	2.68	20		
o-Xylene	53.4	1.00	"	50.0	107	74-131	2.66	20		
sec-Butylbenzene	57.1	1.00	"	50.0	114	63-138	4.28	20		
Styrene	56.2	1.00	"	50.0	112	72-128	3.48	20		
tert-Butylbenzene	56.4	1.00	"	50.0	113	67-129	3.47	20		
Tetrachloroethene	50.2	1.00	"	50.0	100	76-134	1.99	20		
Toluene	48.9	1.00	"	50.0	97.8	73-131	1.18	20		
trans-1,2-Dichloroethene	52.9	1.00	"	50.0	106	78-123	1.67	20		
trans-1,3-Dichloropropene	58.9	1.00	"	50.0	118	75-125	2.52	20		
Trichloroethene	50.0	1.00	"	50.0	99.9	73-131	1.15	20		
Trichlorofluoromethane	50.4	1.00	"	50.0	101	83-141	9.32	20		
Vinyl chloride	44.8	1.00	"	50.0	89.6	73-139	11.2	20		
Surrogate: 1,2-Dichloroethane-d4	71		"	62.5	114	84-121				
Surrogate: Toluene-d8	63		"	62.5	100	85-115				
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101	84-114				

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Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

**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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**Classical Chemistry Parameters - 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 B7E3004 - NO PREP**

**Duplicate (B7E3004-DUP1)** **Source: Y705336-01** Prepared: 05/30/2017 Analyzed: 05/30/2017

pH	8.27	pH Units	8.30	0.362	25
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**Batch B7E3005 - NO PREP**

**Blank (B7E3005-BLK1)** Prepared: 05/30/2017 Analyzed: 05/30/2017

Specific Conductance (EC)	0.00380	mmhos/cm
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**Duplicate (B7E3005-DUP1)** **Source: Y705336-01** Prepared: 05/30/2017 Analyzed: 05/30/2017

Specific Conductance (EC)	0.0944	mmhos/cm	0.0827	13.2	25
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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

Bob Cornez

Project Number: [none]

Project: KMG-Fehr 16N-32HZ/Land Fed  
13N-32HZ TB

## Notes and Definitions

U Sample is Non-Detect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

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-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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.*

# Summit Scientific

---

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

June 22, 2017

Bob Cornez

Tasman Geosciences

6899 Pecos Street

Denver, CO 80221

RE: Fehr 16N-32Hz/ Land Fed 13N-32Hz

Enclosed are the results of analyses for samples received by Summit Scientific on 06/21/17 14:37. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury  
President



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SESE 10-IN-63W (Soil)-2	1706213-01	Soil	06/21/17 12:35	06/21/17 14:37
BG02	1706213-02	Soil	06/21/17 12:43	06/21/17 14:37
BG03	1706213-03	Soil	06/21/17 12:50	06/21/17 14:37
BG04	1706213-04	Soil	06/21/17 12:58	06/21/17 14:37
BG05	1706213-05	Soil	06/21/17 13:10	06/21/17 14:37
BG06	1706213-06	Soil	06/21/17 13:20	06/21/17 14:37
BG07	1706213-07	Soil	06/21/17 13:30	06/21/17 14:37
BG08	1706213-08	Soil	06/21/17 13:40	06/21/17 14:37

Summit Scientific

*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  
Denver CO, 80221

Project: Fehrn 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornezz

Reported:  
06/22/17 07:03

# Summit Scientific

S<sub>2</sub>

1706213

741 Corporate Circle, Suite J ♦ Golden, Colorado 80401  
303-277-9310 ♦ 303-374-5933

Client: APC (Tasman - geo) Project Manager: Bob Cornezz Page 1 of 1  
Address: \_\_\_\_\_ E-Mail: rcornezz@tasman-geo.com  
City/State/Zip: \_\_\_\_\_  
Phone: 303 810 2914 Fax: \_\_\_\_\_ Project Name: Fehrn 16N-32 Hz / Land Fed 13N-32 Hz  
Sampler Name: M.H. P. Project Number: \_\_\_\_\_

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions
					HCl	HNO <sub>3</sub>	None	Other (Specify)	Groundwater	Soil	Air-Canister #	Other (Specify)	ARSENIC			
1	SESE 16-1N-63W (Soil)-2	6/21/17	12:35	1			X			X						
2	B602		12:43	1												
3	B603		12:50	1												
4	B604		12:58	1												
5	B605		13:10	1												
6	B606		13:20	1												
7	B607		13:30	1												
8	B608		13:40	1												
9																
10																

Relinquished by: <u>[Signature]</u>	Date/Time: <u>6/21/17 14:37</u>	Received by: <u>[Signature]</u>	Date/Time: <u>6/21/17 14:37</u>	Turn Around Time (Check) Same Day <u>X</u> 72 hours _____ 24 hours _____ Standard _____ 48 hours _____	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: <u>14.2</u> Intact: <u>Yes</u> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

www.s2scientific.com

Summit Scientific

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  
Denver CO, 80221

Project: Fehrn 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

Reported:  
06/22/17 07:03

### Sample Receipt Checklist

S2 Work Order: 1706213

Client: APC (Tasman 230) Project ID: Fehrn 16N-32Hz/ Land Fed 13N-32Hz

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

Airbill #: \_\_\_\_\_

Matrix (check all that apply): ☐ Air ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_  
(Describe)

Cooler ID					
Temp (°C)	<u>14.2</u>				

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C <sup>(1)</sup> ?				
NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>			<u>on ice</u>
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present?	<input checked="" type="checkbox"/>			
Is a chain-of-custody (COC) form present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<input checked="" type="checkbox"/>	
Additional Comments (if any):				
<sup>(1)</sup> If NO, then contact the client before proceeding with analysis and note in case narrative.				

Logan S.  
Custodian Printed Name

[Signature]  
Signature or Initials of Custodian

6-20-17  
Date/Time



Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**SESE 10-IN-63W (Soil)-2**  
**1706213-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **06/21/17 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>1.22</b>	0.230	mg/kg dry	1	1706223	06/21/17	06/21/17	EPA 6020A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/21/17 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>86.8</b>		%	1	1706225	06/21/17	06/21/17	% calculation	

Summit Scientific

*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  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz  
Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**BG02**  
**1706213-02 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **06/21/17 12:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>1.20</b>	0.222	mg/kg dry	1	1706223	06/21/17	06/21/17	EPA 6020A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/21/17 12:43**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>90.0</b>		%	1	1706225	06/21/17	06/21/17	% calculation	

Summit Scientific

*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  
Denver CO, 80221

Project: Fehrn 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**BG03**  
**1706213-03 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **06/21/17 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>0.962</b>	0.228	mg/kg dry	1	1706223	06/21/17	06/21/17	EPA 6020A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/21/17 12:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>87.9</b>		%	1	1706225	06/21/17	06/21/17	% calculation	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**BG04**  
**1706213-04 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **06/21/17 12:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>1.15</b>	0.216	mg/kg dry	1	1706223	06/21/17	06/21/17	EPA 6020A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/21/17 12:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>92.4</b>		%	1	1706225	06/21/17	06/21/17	% calculation	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**BG05**  
**1706213-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **06/21/17 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>1.12</b>	0.191	mg/kg dry	1	1706223	06/21/17	06/21/17	EPA 6020A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/21/17 13:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>93.6</b>		%	1	1706225	06/21/17	06/21/17	% calculation	

Summit Scientific

*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  
Denver CO, 80221

Project: Fehrn 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**BG06**  
**1706213-06 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **06/21/17 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>1.06</b>	0.217	mg/kg dry	1	1706223	06/21/17	06/21/17	EPA 6020A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/21/17 13:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>92.2</b>		%	1	1706225	06/21/17	06/21/17	% calculation	

Summit Scientific

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Tasman Geosciences  
6899 Pecos Street  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**BG07**  
**1706213-07 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **06/21/17 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>0.926</b>	0.217	mg/kg dry	1	1706223	06/21/17	06/21/17	EPA 6020A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/21/17 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>92.3</b>		%	1	1706225	06/21/17	06/21/17	% calculation	

Summit Scientific

*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  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**BG08**  
**1706213-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA Method 6020 - Dry Weight Basis**

Date Sampled: **06/21/17 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	<b>1.24</b>	0.221	mg/kg dry	1	1706223	06/21/17	06/21/17	EPA 6020A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **06/21/17 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>90.6</b>		%	1	1706225	06/21/17	06/21/17	% calculation	

Summit Scientific

*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  
Denver CO, 80221

Project: Fehrn 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**Total Metals by EPA Method 6020 - Dry Weight Basis - Quality Control**

**Summit Scientific**

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

**Batch 1706223 - EPA 3050B**

**Blank (1706223-BLK1)**

Prepared & Analyzed: 06/21/17

Arsenic ND 0.200 mg/kg wet

**LCS (1706223-BS1)**

Prepared & Analyzed: 06/21/17

Arsenic 18.2 0.200 mg/kg wet 20.0 90.9 56.9-110

**Duplicate (1706223-DUP1)**

**Source: 1706213-02**

Prepared & Analyzed: 06/21/17

Arsenic 1.10 0.222 mg/kg dry 1.20 8.63 20

**Matrix Spike (1706223-MS1)**

**Source: 1706213-01**

Prepared & Analyzed: 06/21/17

Arsenic 19.9 0.230 mg/kg dry 21.9 1.22 85.1 75-125

**Matrix Spike Dup (1706223-MSD1)**

**Source: 1706213-01**

Prepared & Analyzed: 06/21/17

Arsenic 20.1 0.230 mg/kg dry 22.2 1.22 85.1 75-125 1.21 25

Summit Scientific

*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  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

**Physical Parameters by APHA/ASTM/EPA Methods - Quality Control**  
**Summit Scientific**

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

**Batch 1706225 - General Preparation**

Duplicate (1706225-DUP1)		Source: 1706213-08		Prepared & Analyzed: 06/21/17	
% Solids	90.8		%	90.6	0.221 20

Summit Scientific

*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  
Denver CO, 80221

Project: Fehr 16N-32Hz/ Land Fed 13N-32Hz

Project Number: [none]  
Project Manager: Bob Cornez

**Reported:**  
06/22/17 07:03

### Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

September 05, 2017

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Fehr 16N-32HZ/Land Fed 13N-32HZ**      **Project Number - [none]**

Attached are your analytical results for KMG - Fehr 16N-32HZ/Land Fed 13N-32HZ received by Origins Laboratory, Inc. September 01, 2017. This project is associated with Origins project number Y709020-01.

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

Bob Cornez

Project Number: [none]

Project: KMG - Fehr 16N-32HZ/Land Fed  
13N-32HZ

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SESE 10-1N-63W (TPH)	Y709020-01	Soil	September 1, 2017 13:30	09/01/2017 15:30

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.*

Jen Pellegrini For Noelle Doyle Mathis, President

Bob Cornez  
Project Number: [none]  
Project: KMG - Fehr 16N-32HZ/Land Fed  
13N-32HZ

**ORIGINS**

LABORATORY, INC

www.originslaboratory.com

4709020

page 1 of 1

Client: APC

Address: 6829 Rees St. Unit C

Project Manager: Bob Cornez



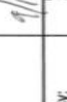



Project Name: Fehm 16N-32HZ Land Fed 13N-32HZ

Telephone Number: 303-810-2414

Email Address: Tcornez@hanna-geo.com

Project Number:

Samples Collected by: Matt P.

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis		Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summary & Analyte #	Other	(GC, IGC, DECCO, etc.)	
SESE 10-1N-63W (TPH)	9/1/17	13:30	2	X				X			X	1	
												2	
												3	
												4	
												5	
												6	
												7	
												8	
												9	
												10	
Relinquished By: 	Date: 9/1/17	Time: 1530	Received By: 	Date: 9/1/17	Time: 1530	Received By: 	Date: 9/1/17	Time: 1530	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>				
Relinquished By: 	Date: 9/1/17	Time: 1530	Received By: 	Date: 9/1/17	Time: 1530	Received By: 	Date: 9/1/17	Time: 1530	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>				

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Date Results Needed

5/3

Origins Laboratory, Inc.

Jeff Pellipini

*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

Bob Cornez  
Project Number: [none]  
Project: KMG - Fehr 16N-32HZ/Land Fed 13N-32HZ

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: 4709070

Client: Tasman

Client Project ID: WMA - Fehr 16N-32HZ/Land Fed 13N

Checklist Completed by: DL

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

Date/time completed: 9-1-17 1641

Airbill #: 128

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

Cooler Number/Temperature: ☒ / 5.5 °C ☐ / \_\_\_\_\_ °C ☐ / \_\_\_\_\_ °C (Describe)

Thermometer ID: 7003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (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 <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup> 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) DL

9-1-17 1641  
Date/Time Reviewed

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

Bob Cornez  
Project Number: [none]  
Project: KMG - Fehr 16N-32HZ/Land Fed  
13N-32HZ

**SESE 10-1N-63W (TPH)**

**9/1/2017 1:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y709020-01 (Soil)**

**DRO/RRO by EPA8015C**

Diesel (C10-C28)	<b>36.9</b>	25.0	mg/kg	1	B7I0102	09/01/2017	09/02/2017
Residual Range Organics (C28-C40)	<b>102</b>	100	"	"	"	"	"

Surrogate: o-Terphenyl	110 %	59-131			"	"	"
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**GRO/TVPH by EPA 8260C**

Gasoline Range Hydrocarbons	<b>0.180</b>	0.100	mg/kg	1	B7I0101	09/01/2017	09/02/2017
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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
<b>Batch B7I0102 - EPA 3550B</b>										
<b>Blank (B7I0102-BLK1)</b>					Prepared: 09/01/2017 Analyzed: 09/01/2017					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	32		"	50.0		63.6	59-131			
<b>LCS (B7I0102-BS1)</b>					Prepared: 09/01/2017 Analyzed: 09/01/2017					
Diesel (C10-C28)	727	50.0	mg/kg	1000		72.7	64-121			
Residual Range Organics (C28-C40)	793	200	"	1000		79.3	58-124			
Surrogate: o-Terphenyl	36		"	50.0		71.2	59-131			
<b>Matrix Spike (B7I0102-MS1)</b>					<b>Source: Y708405-05</b>		Prepared: 09/01/2017 Analyzed: 09/01/2017			
Diesel (C10-C28)	742	50.0	mg/kg	1000	26.0	71.6	53-125			
Residual Range Organics (C28-C40)	728	200	"	1000	37.4	69.1	47-133			
Surrogate: o-Terphenyl	35		"	50.0		70.4	59-131			
<b>Matrix Spike Dup (B7I0102-MSD1)</b>					<b>Source: Y708405-05</b>		Prepared: 09/01/2017 Analyzed: 09/01/2017			
Diesel (C10-C28)	744	50.0	mg/kg	1000	26.0	71.8	53-125	0.348	20	
Residual Range Organics (C28-C40)	658	200	"	1000	37.4	62.1	47-133	10.7	20	
Surrogate: o-Terphenyl	36		"	50.0		71.5	59-131			

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13N-32HZ

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B7I0101 - EPA 5030 (soil)</b>										
<b>Blank (B7I0101-BLK1)</b>					Prepared: 09/01/2017 Analyzed: 09/01/2017					
Gasoline Range Hydrocarbons	ND	0.100	mg/kg							U
<b>LCS (B7I0101-BS1)</b>					Prepared: 09/01/2017 Analyzed: 09/01/2017					
Gasoline Range Hydrocarbons	4.12	0.100	mg/kg	4.00		103	70-130			
<b>LCS Dup (B7I0101-BSD1)</b>					Prepared: 09/01/2017 Analyzed: 09/01/2017					
Gasoline Range Hydrocarbons	4.19	0.100	mg/kg	4.00		105	70-130	1.68	20	

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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Fehr 16N-32HZ/Land Fed  
13N-32HZ

### Notes and Definitions

U Sample is Non-Detect.

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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Jen Pellegrini For Noelle Doyle Mathis, President