



June 13, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Champlin 42-10 #4**

**Project Number - [none]**

Attached are your analytical results for KMG - Champlin 42-10 #4 received by Origins Laboratory, Inc. June 05, 2019. This project is associated with Origins project number Y906088-01.

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 - Champlin 42-10 #4

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B01@10'	Y906088-01	Soil	June 5, 2019 15:40	06/05/2019 18:20
S01@9'	Y906088-02	Soil	June 5, 2019 15:43	06/05/2019 18:20
E01@8'	Y906088-03	Soil	June 5, 2019 15:47	06/05/2019 18:20

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 - Champlin 42-10 #4

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1906089

ORIGINS  
LABORATORY, INC

Client: APC/TASMAN  
Address: 6899 Pecos St  
Telephone Number: 970-922-0343  
Email Address: bcornez@tasman-geo.com

Project Manager: Robert Cornez  
Project Name: Champlin 42-10 #4  
Project Number: 1906089  
Samples Collected By: M. R. Randa

Project Turned Over For the Email from Mike on 6/17/19

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	At Surface			Other
B01 @ 10	6/5/14	15:40	2	X					X		X	X	1
S01 @ 9'		15:43	1								X	X	2
E01 @ 8'		15:47	1								X	X	3
B01 @ 6"		16:10	1								X	X	4
													5
													6
													7
													8
													9
													10

Requisitioned By: [Signature] Date: 06/05/14 Time: 17:50  
Relinquished By: [Signature] Date: 6/5/19 Time: 1820

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

Date Results Needed

5/2

Origins Laboratory, Inc.

Jefe Pellegrini

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: Y906088

Client: Tasman

Client Project ID: Champlin 42-10 #24

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 6/5/2019

Airbill #: N/A

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

(Describe)

Cooler Number/Temperature: 1/5.2 °C          °C          °C          °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <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 type="checkbox"/>	<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) [Signature]

Date/Time Reviewed 6/5/19

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 - Champlin 42-10 #4

B01@10'

6/5/2019 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y906088-01 (Soil)

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F0509	JTD	06/05/2019	06/06/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 76.8 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B9F0508	JTD	06/05/2019	06/05/2019	U
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U
Naphthalene	ND	0.200	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "  
Surrogate: Toluene-d8 103 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 105 % 70-130 " " "

**Metals (Saturated Paste Prep)**

Calcium	20.39	me/L	1	'[none]'	06/10/2019	06/13/2019
Magnesium	23.91	"	"	"	"	"
Sodium	73.56	"	"	"	"	"

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Project Number: [none]  
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B01@10'

6/5/2019 3:40:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
---------	--------	--------------------	-------	----------	-------	---------	----------	----------	-------

**Origins Laboratory, Inc.**  
Y906088-01 (Soil)

**pH in Soil by EPA 9045D**

pH	8.18	pH Units	1	B9F0511	OLAB	06/05/2019	06/05/2019
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**SAR by 20B Saturated Paste**

SAR	15.63		1	'[none]'		06/10/2019	06/13/2019
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	1.38	0.00503	mmhos/cm	1	B9F0512	OLAB	06/05/2019	06/05/2019
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Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

S01@9'

6/5/2019 3:43:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y906088-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	291	25.0	mg/kg	1	B9F0509	JTD	06/05/2019	06/06/2019	
Residual Range Organics (C28-C40)	136	100	"	"	"	JTD	"	"	

Surrogate: o-Terphenyl 78.4 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	61.8	5.00	mg/kg	25	B9F0508	JTD	06/05/2019	06/05/2019	
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U
Naphthalene	0.236	0.200	"	"	"	JTD	"	"	

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "  
Surrogate: Toluene-d8 102 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 101 % 70-130 " " "

Origins Laboratory, Inc.



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Project Number: [none]  
Project: KMG - Champlin 42-10 #4

E01@8'

6/5/2019 3:47:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y906088-03 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F0509	JTD	06/05/2019	06/06/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 67.9 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B9F0508	JTD	06/05/2019	06/06/2019	U
Benzene	ND	0.050	"	"	"	JTD	"	"	U
Toluene	ND	0.050	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.050	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.050	"	"	"	JTD	"	"	U
Naphthalene	ND	0.200	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "  
Surrogate: Toluene-d8 104 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 104 % 70-130 " " "

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0508 - EPA 5030 (soil)</b>										
<b>Blank (B9F0508-BLK1)</b>					Prepared: 06/05/2019 Analyzed: 06/05/2019					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.9	70-130			

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Project Number: [none]  
Project: KMG - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0508 - EPA 5030 (soil)</b>										
<b>Blank (B9F0508-BLK2)</b>					Prepared: 06/05/2019 Analyzed: 06/05/2019					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.7	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0508 - EPA 5030 (soil)</b>										
<b>LCS (B9F0508-BS1)</b>					Prepared: 06/05/2019 Analyzed: 06/05/2019					
Benzene	0.100	0.002	mg/kg	0.100		100	70-130			
Toluene	0.091	0.002	"	0.100		90.8	70-130			
Ethylbenzene	0.095	0.002	"	0.100		95.1	70-130			
m,p-Xylene	0.195	0.004	"	0.200		97.5	70-130			
o-Xylene	0.102	0.002	"	0.100		102	70-130			
Naphthalene	0.102	0.008	"	0.100		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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Project Number: [none]  
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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0508 - EPA 5030 (soil)</b>										
<b>LCS (B9F0508-BS2)</b>					Prepared: 06/05/2019 Analyzed: 06/05/2019					
Benzene	0.097	0.002	mg/kg	0.100		97.5	70-130			
Toluene	0.098	0.002	"	0.100		97.7	70-130			
Ethylbenzene	0.098	0.002	"	0.100		98.3	70-130			
m,p-Xylene	0.203	0.004	"	0.200		102	70-130			
o-Xylene	0.104	0.002	"	0.100		104	70-130			
Naphthalene	0.097	0.008	"	0.100		97.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - 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 B9F0508 - EPA 5030 (soil)**

Matrix Spike (B9F0508-MS1)		Source: Y906035-01			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Benzene	0.087	0.002	mg/kg	0.100	ND	86.8	70-130			
Toluene	0.078	0.002	"	0.100	ND	77.9	70-130			
Ethylbenzene	0.079	0.002	"	0.100	ND	79.3	70-130			
m,p-Xylene	0.163	0.004	"	0.200	ND	81.4	70-130			
o-Xylene	0.087	0.002	"	0.100	ND	86.5	70-130			
Naphthalene	0.108	0.008	"	0.100	0.004	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0508 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B9F0508-MS2)</b>		<b>Source: Y906082-01</b>			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Benzene	0.072	0.002	mg/kg	0.100	ND	71.6	70-130			
Toluene	0.068	0.002	"	0.100	ND	67.5	70-130			QM-07
Ethylbenzene	0.065	0.002	"	0.100	ND	65.0	70-130			QM-07
m,p-Xylene	0.135	0.004	"	0.200	ND	67.4	70-130			QM-07
o-Xylene	0.070	0.002	"	0.100	ND	70.1	70-130			
Naphthalene	0.100	0.008	"	0.100	ND	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		119	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		91.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0508 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B9F0508-MSD1)</b>		<b>Source: Y906035-01</b>			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Benzene	0.072	0.002	mg/kg	0.100	ND	71.9	70-130	18.8	20	
Toluene	0.065	0.002	"	0.100	ND	64.8	70-130	18.4	20	QM-07
Ethylbenzene	0.066	0.002	"	0.100	ND	66.2	70-130	18.1	20	QM-07
m,p-Xylene	0.136	0.004	"	0.200	ND	68.2	70-130	17.7	20	QM-07
o-Xylene	0.073	0.002	"	0.100	ND	72.7	70-130	17.4	20	
Naphthalene	0.097	0.008	"	0.100	0.004	92.2	70-130	10.8	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0508 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B9F0508-MSD2)</b>		<b>Source: Y906082-01</b>			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Benzene	0.069	0.002	mg/kg	0.100	ND	69.3	70-130	3.24	20	QM-07
Toluene	0.065	0.002	"	0.100	ND	64.7	70-130	4.27	20	QM-07
Ethylbenzene	0.062	0.002	"	0.100	ND	61.8	70-130	5.08	20	QM-07
m,p-Xylene	0.127	0.004	"	0.200	ND	63.6	70-130	5.77	20	QM-07
o-Xylene	0.066	0.002	"	0.100	ND	65.9	70-130	6.12	20	QM-07
Naphthalene	0.085	0.008	"	0.100	ND	85.2	70-130	15.9	20	
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		120	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		91.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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 - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0509 - EPA 3580</b>										
<b>Blank (B9F0509-BLK1)</b>					Prepared: 06/05/2019 Analyzed: 06/05/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	44		"	50.0		88.9	50-150			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

## Extractable Petroleum Hydrocarbons by 8015D - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0509 - EPA 3580</b>										
<b>Blank (B9F0509-BLK2)</b>					Prepared: 06/05/2019 Analyzed: 06/05/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	40		"	50.0		80.6	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0509 - EPA 3580</b>										
<b>LCS (B9F0509-BS1)</b>					Prepared: 06/05/2019 Analyzed: 06/05/2019					
Diesel (C10-C28)	1030	50.0	mg/kg	1000		103	70-130			
Residual Range Organics (C28-C40)	999	200	"	1000		99.9	70-130			
Surrogate: o-Terphenyl	49		"	50.0		98.3	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0509 - EPA 3580

**LCS (B9F0509-BS2)**

Prepared: 06/05/2019 Analyzed: 06/05/2019

Diesel (C10-C28)	1110	50.0	mg/kg	1000		111	70-130			
Residual Range Organics (C28-C40)	1060	200	"	1000		106	70-130			
Surrogate: o-Terphenyl	52		"	50.0		104	50-150			

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 - Champlin 42-10 #4

## Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0509 - EPA 3580

Matrix Spike (B9F0509-MS1)		Source: Y906035-01			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Diesel (C10-C28)	1070	50.0	mg/kg	1000	ND	107	70-130			
Residual Range Organics (C28-C40)	999	200	"	1000	ND	99.9	70-130			
Surrogate: o-Terphenyl	44		"	50.0		88.5	50-150			

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 - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0509 - EPA 3580**

Matrix Spike (B9F0509-MS2)		Source: Y906082-01			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Diesel (C10-C28)	1170	50.0	mg/kg	1000	ND	117	70-130			
Residual Range Organics (C28-C40)	1100	200	"	1000	ND	110	70-130			
Surrogate: o-Terphenyl	48		"	50.0		96.0	50-150			

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0509 - EPA 3580

Matrix Spike Dup (B9F0509-MSD1)		Source: Y906035-01			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Diesel (C10-C28)	946	50.0	mg/kg	1000	ND	94.6	70-130	12.8	35	
Residual Range Organics (C28-C40)	922	200	"	1000	ND	92.2	70-130	8.01	35	
Surrogate: o-Terphenyl	46		"	50.0		91.8	50-150			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

Extractable Petroleum Hydrocarbons by 8015D - Quality Control  
Origins Laboratory, Inc.

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

Batch B9F0509 - EPA 3580

Matrix Spike Dup (B9F0509-MSD2)		Source: Y906082-01			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Diesel (C10-C28)	1040	50.0	mg/kg	1000	ND	104	70-130	12.0	35	
Residual Range Organics (C28-C40)	1010	200	"	1000	ND	101	70-130	8.53	35	
Surrogate: o-Terphenyl	50		"	50.0		100	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

## Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0511 - NO PREP

<b>Duplicate (B9F0511-DUP1)</b>		<b>Source: Y906083-02</b>			Prepared: 06/05/2019 Analyzed: 06/05/2019					
pH	7.96		pH Units		8.32			4.42	25	
<b>Duplicate (B9F0511-DUP2)</b>		<b>Source: Y906087-01</b>			Prepared: 06/05/2019 Analyzed: 06/05/2019					
pH	8.67		pH Units		8.63			0.462	25	

#### Batch B9F0512 - NO PREP

<b>Blank (B9F0512-BLK1)</b>		Prepared: 06/05/2019 Analyzed: 06/05/2019								
Specific Conductance (EC)	0.00220	0.00500	mmhos/cm							
<b>Blank (B9F0512-BLK2)</b>		Prepared: 06/05/2019 Analyzed: 06/05/2019								
Specific Conductance (EC)	0.00250	0.00500	mmhos/cm							
<b>Duplicate (B9F0512-DUP1)</b>		<b>Source: Y906083-02</b>			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Specific Conductance (EC)	0.0532	0.00510	mmhos/cm		0.0612			14.0	25	
<b>Duplicate (B9F0512-DUP2)</b>		<b>Source: Y906087-01</b>			Prepared: 06/05/2019 Analyzed: 06/05/2019					
Specific Conductance (EC)	0.318	0.00500	mmhos/cm		0.329			3.30	25	

Origins Laboratory, Inc.



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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Champlin 42-10 #4

### Notes and Definitions

U Sample is Non-Detect.

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.*

Jen Pellegrini For Noelle Doyle Mathis, President

September 03, 2019

Tasman Geosciences

Bob Cornez

6899 Pecos Street, Unit C

Denver

CO 80211

**Project Name - KMG - Champlin 42-10 #4****Project Number - [none]**

Attached are your analytical results for KMG - Champlin 42-10 #4 received by Origins Laboratory, Inc. June 07, 2019. This project is associated with Origins project number Y906135-01.

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 - Champlin 42-10 #4

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B02@10'	Y906135-01	Soil	June 7, 2019 14:30	06/07/2019 17:00
N01@8'	Y906135-02	Soil	June 7, 2019 14:33	06/07/2019 17:00
E02@8'	Y906135-03	Soil	June 7, 2019 14:36	06/07/2019 17:00
W01@9'	Y906135-04	Soil	June 7, 2019 14:40	06/07/2019 17:00
W02@9'	Y906135-05	Soil	June 7, 2019 14:45	06/07/2019 17:00

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

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page ☐ of ☐

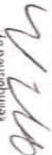
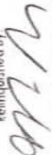
**ORIGINS** LABORATORY, INC

190635

Client: APC/TASMAN  
Address: 6899 Pecos St

Project Manager: Robert Cornez  
Project Name: Champlin 42-10 #4  
Project Number: [blank]  
Samples Collected By: M Rimola

Telephone Number: 970-922-0393  
Email Address: rcornez@tasman-ge.com

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix				Analysis				Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air/Summit	Other	DEO/BAO	FC	PH	SPR	
B02@10	6/7/19	14:30	2	X					X			X	X	X	S	
N01@8'		14:33	1									X			A	
E02@8'		14:36	1									X			M D	
N01@9'		14:40	1									X	X		E A	
W02@4'		14:45	1									X	X		Y	
Sample ID changed per the email from Eric on 9/3/19. 27																
Reinquired by: 	Date: 6/7/19															
Reinquired by: 	Date: 6/7/19															

4.4

Date Results Needed: [blank]

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 - Champlin 42-10 #4

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: Y906735

Client: Tasman

Client Project ID: Champlin 42-10 #4

Checklist Completed by: JG

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

Date/time completed: 6/7/2019

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 4.4 °C      /      °C      /      °C      /      °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <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 type="checkbox"/>	<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)

Date/Time Reviewed 6/7/19

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 - Champlin 42-10 #4

**B02@10'**

**6/7/2019 2:30:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y906135-01 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F0710	JTD	06/07/2019	06/08/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 143 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B9F0709	KDK	06/07/2019	06/10/2019	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " 06/07/2019  
Surrogate: Toluene-d8 95.7 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.4 % 70-130 " " "

**Metals (Saturated Paste Prep)**

Calcium	21.96	me/L	1	'[none]'	06/11/2019	05/01/2017
Magnesium	36.50	"	"	"	"	06/14/2019
Sodium	97.58	"	"	"	"	"

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

B02@10'

6/7/2019 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y906135-01 (Soil)

**pH in Soil by EPA 9045D**

pH	8.33	pH Units	1	B9F0702	OLAB	06/07/2019	06/07/2019
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**SAR by 20B Saturated Paste**

SAR	18.05		1	'[none]'		06/11/2019	06/14/2019
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.659	0.00500	mmhos/cm	1	B9F0703	OLAB	06/07/2019	06/07/2019
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Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

N01@8'

6/7/2019 2:33:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y906135-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	212	25.0	mg/kg	1	B9F0710	JTD	06/07/2019	06/08/2019	
Residual Range Organics (C28-C40)	104	100	"	"	"	JTD	"	"	

Surrogate: o-Terphenyl 73.5 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	35.3	5.00	mg/kg	25	B9F0709	KDK	06/07/2019	06/10/2019	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 105 % 70-130 " " "  
Surrogate: Toluene-d8 98.9 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 95.6 % 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 - Champlin 42-10 #4

E02@8'

6/7/2019 2:36:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y906135-03 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F0710	JTD	06/07/2019	06/08/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 72.8 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B9F0709	KDK	06/07/2019	06/08/2019	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "  
Surrogate: Toluene-d8 98.6 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 96.5 % 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 - Champlin 42-10 #4

W01@9'

6/7/2019 2:40:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y906135-04 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F0710	JTD	06/07/2019	06/08/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 73.4 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B9F0709	KDK	06/07/2019	06/08/2019	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 109 % 70-130 " " "  
Surrogate: Toluene-d8 98.4 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 97.4 % 70-130 " " "

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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

W02@9'

6/7/2019 2:45:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y906135-05 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B9F0710	JTD	06/07/2019	06/08/2019	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	JTD	"	"	U

Surrogate: o-Terphenyl 68.9 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B9F0709	KDK	06/07/2019	06/08/2019	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 108 % 70-130 " " "  
Surrogate: Toluene-d8 98.6 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 95.5 % 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 - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0709 - EPA 5030 (soil)</b>										
<b>Blank (B9F0709-BLK1)</b>					Prepared: 06/07/2019 Analyzed: 06/07/2019					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		114	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.2	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 - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0709 - EPA 5030 (soil)</b>										
<b>Blank (B9F0709-BLK2)</b>					Prepared: 06/07/2019 Analyzed: 06/07/2019					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.2	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0709 - EPA 5030 (soil)</b>										
<b>LCS (B9F0709-BS1)</b>					Prepared: 06/07/2019 Analyzed: 06/07/2019					
Benzene	0.104	0.002	mg/kg	0.100		104	70-130			
Toluene	0.097	0.002	"	0.100		97.1	70-130			
Ethylbenzene	0.098	0.002	"	0.100		98.5	70-130			
m,p-Xylene	0.203	0.004	"	0.200		101	70-130			
o-Xylene	0.104	0.002	"	0.100		104	70-130			
Naphthalene	0.096	0.008	"	0.100		95.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0709 - EPA 5030 (soil)</b>										
<b>LCS (B9F0709-BS2)</b>					Prepared: 06/07/2019 Analyzed: 06/07/2019					
Benzene	0.104	0.002	mg/kg	0.100		104	70-130			
Toluene	0.098	0.002	"	0.100		97.6	70-130			
Ethylbenzene	0.096	0.002	"	0.100		96.0	70-130			
m,p-Xylene	0.200	0.004	"	0.200		100	70-130			
o-Xylene	0.101	0.002	"	0.100		101	70-130			
Naphthalene	0.095	0.008	"	0.100		94.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		113	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		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 - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0709 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B9F0709-MS1)</b>		<b>Source: Y906132-01</b>			Prepared: 06/07/2019 Analyzed: 06/07/2019					
Benzene	0.091	0.002	mg/kg	0.100	ND	91.4	70-130			
Toluene	0.087	0.002	"	0.100	ND	86.8	70-130			
Ethylbenzene	0.086	0.002	"	0.100	ND	85.8	70-130			
m,p-Xylene	0.180	0.004	"	0.200	ND	89.9	70-130			
o-Xylene	0.092	0.002	"	0.100	ND	92.1	70-130			
Naphthalene	0.088	0.008	"	0.100	ND	88.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		108	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 - Champlin 42-10 #4

**Volatile Organic Compounds by GC/MS SW846 8260D - 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 B9F0709 - EPA 5030 (soil)**

Matrix Spike (B9F0709-MS2)		Source: Y906133-02			Prepared: 06/07/2019 Analyzed: 06/07/2019					
Benzene	0.098	0.002	mg/kg	0.100	0.003	95.4	70-130			
Toluene	0.091	0.002	"	0.100	ND	90.7	70-130			
Ethylbenzene	0.092	0.002	"	0.100	ND	92.3	70-130			
m,p-Xylene	0.193	0.004	"	0.200	ND	96.3	70-130			
o-Xylene	0.099	0.002	"	0.100	ND	99.1	70-130			
Naphthalene	0.103	0.008	"	0.100	0.004	99.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

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 - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0709 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B9F0709-MSD1)</b>					<b>Source: Y906132-01</b>					Prepared: 06/07/2019 Analyzed: 06/07/2019
Benzene	0.091	0.002	mg/kg	0.100	ND	91.1	70-130	0.394	20	
Toluene	0.085	0.002	"	0.100	ND	85.2	70-130	1.79	20	
Ethylbenzene	0.084	0.002	"	0.100	ND	83.8	70-130	2.34	20	
m,p-Xylene	0.175	0.004	"	0.200	ND	87.5	70-130	2.67	20	
o-Xylene	0.090	0.002	"	0.100	ND	89.6	70-130	2.82	20	
Naphthalene	0.095	0.008	"	0.100	ND	94.8	70-130	7.05	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		110	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		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 - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0709 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B9F0709-MSD2)</b>										
					<b>Source: Y906133-02</b>					
										Prepared: 06/07/2019 Analyzed: 06/07/2019
Benzene	0.089	0.002	mg/kg	0.100	0.003	86.1	70-130	9.96	20	
Toluene	0.083	0.002	"	0.100	ND	82.5	70-130	9.40	20	
Ethylbenzene	0.084	0.002	"	0.100	ND	84.3	70-130	9.03	20	
m,p-Xylene	0.175	0.004	"	0.200	ND	87.5	70-130	9.61	20	
o-Xylene	0.090	0.002	"	0.100	ND	90.4	70-130	9.16	20	
Naphthalene	0.095	0.008	"	0.100	0.004	91.8	70-130	7.96	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		110	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	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 - Champlin 42-10 #4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0710 - EPA 3550B</b>										
<b>Blank (B9F0710-BLK1)</b>					Prepared: 06/07/2019 Analyzed: 06/07/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	38		"	50.0		75.1	50-150			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

## Extractable Petroleum Hydrocarbons by 8015D - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9F0710 - EPA 3550B</b>										
<b>Blank (B9F0710-BLK2)</b>					Prepared: 06/07/2019 Analyzed: 06/07/2019					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	43		"	50.0		86.5	50-150			

Origins Laboratory, Inc.



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6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0710 - EPA 3550B

**LCS (B9F0710-BS1)**

Prepared: 06/07/2019 Analyzed: 06/07/2019

Diesel (C10-C28)	939	50.0	mg/kg	1000		93.9	70-130			
Residual Range Organics (C28-C40)	980	200	"	1000		98.0	70-130			
Surrogate: o-Terphenyl	45		"	50.0		90.7	50-150			

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 - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0710 - EPA 3550B

**LCS (B9F0710-BS2)**

Prepared: 06/07/2019 Analyzed: 06/07/2019

Diesel (C10-C28)	1000	50.0	mg/kg	1000		100	70-130			
Residual Range Organics (C28-C40)	975	200	"	1000		97.5	70-130			
Surrogate: o-Terphenyl	48		"	50.0		96.0	50-150			

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 - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0710 - EPA 3550B**

Matrix Spike (B9F0710-MS1)		Source: Y906132-01			Prepared: 06/07/2019 Analyzed: 06/07/2019					
Diesel (C10-C28)	985	50.0	mg/kg	1000	ND	98.5	70-130			
Residual Range Organics (C28-C40)	923	200	"	1000	ND	92.3	70-130			
Surrogate: o-Terphenyl	45		"	50.0		89.9	50-150			

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 - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0710 - EPA 3550B**

Matrix Spike (B9F0710-MS2)		Source: Y906133-02			Prepared: 06/07/2019 Analyzed: 06/07/2019					
Diesel (C10-C28)	915	50.0	mg/kg	1000	ND	91.5	70-130			
Residual Range Organics (C28-C40)	886	200	"	1000	27.6	85.8	70-130			
Surrogate: o-Terphenyl	33		"	50.0		66.1	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences  
6899 Pecos Street, Unit C  
Denver CO 80211

Bob Cornez  
Project Number: [none]  
Project: KMG - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0710 - EPA 3550B**

Matrix Spike Dup (B9F0710-MSD1)		Source: Y906132-01			Prepared: 06/07/2019 Analyzed: 06/07/2019					
Diesel (C10-C28)	930	50.0	mg/kg	1000	ND	93.0	70-130	5.70	35	
Residual Range Organics (C28-C40)	936	200	"	1000	ND	93.6	70-130	1.48	35	
Surrogate: o-Terphenyl	46		"	50.0		91.1	50-150			

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 - Champlin 42-10 #4

**Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0710 - EPA 3550B**

Matrix Spike Dup (B9F0710-MSD2)		Source: Y906133-02			Prepared: 06/07/2019 Analyzed: 06/07/2019					
Diesel (C10-C28)	938	50.0	mg/kg	1000	ND	93.8	70-130	2.45	35	
Residual Range Organics (C28-C40)	963	200	"	1000	27.6	93.5	70-130	8.59	35	
Surrogate: o-Terphenyl	41		"	50.0		82.2	50-150			

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 - Champlin 42-10 #4

## Extractable Petroleum Hydrocarbons by 8015D - 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 B9F0702 - NO PREP

<b>Duplicate (B9F0702-DUP1)</b>		<b>Source: Y906111-01</b>			Prepared: 06/07/2019 Analyzed: 06/07/2019					
pH	7.28		pH Units		7.27			0.137	25	

#### Batch B9F0703 - NO PREP

<b>Blank (B9F0703-BLK1)</b>		Prepared: 06/07/2019 Analyzed: 06/07/2019								
Specific Conductance (EC)	0.00360	0.00500	mmhos/cm							
<b>Duplicate (B9F0703-DUP1)</b>		<b>Source: Y906111-01</b>			Prepared: 06/07/2019 Analyzed: 06/07/2019					
Specific Conductance (EC)	0.104	0.00500	mmhos/cm		0.104			0.0957	25	

Origins Laboratory, Inc.



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Tasman Geosciences

6899 Pecos Street, Unit C

Denver CO 80211

Bob Cornez

Project Number: [none]

Project: KMG - Champlin 42-10 #4

### 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.



*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

March 06, 2020

Tasman Geosciences

Bob Cornez

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Champlin 42-10 #4 Pumping Unit Project Number - 2132603.PAB**

Attached are your analytical results for KMG - Champlin 42-10 #4 Pumping Unit received by Origins Laboratory, Inc. January 14, 2020. This project is associated with Origins project number Y001175-01.

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B03@9'	Y001175-01	Soil	January 14, 2020 14:30	01/14/2020 18:09
N02@7'	Y001175-02	Soil	January 14, 2020 14:32	01/14/2020 18:09
S02@7'	Y001175-03	Soil	January 14, 2020 14:34	01/14/2020 18:09
E03@7'	Y001175-04	Soil	January 14, 2020 14:36	01/14/2020 18:09
W03@7'	Y001175-05	Soil	January 14, 2020 14:38	01/14/2020 18:09

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

www.originslaboratory.com

page 1 of 1

601175

**ORIGINS**  
LABORATORY, INC

Client: APC/TASMAN  
Address: 6855 W 119th AVE

Project Manager: Robert Cornez  
Project Name: Champlin 42-10 #4 Pumping Unit  
Project Number: 2132603.PAB  
Samples Collected By: ZH

Telephone Number: 970-927-0393  
Email Address: rcornez@tasman-geo.com

Project name raised per the email from Mike on 1/15/2009

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	As Sampled		
203091	1/14/20	2:50	2	X				X			G-512X + N	1
N02071		2:52	1								PH	2
S02071		2:34	1								EC	3
E03071		2:36	1								OR	4
W03071		2:38	1								OR	5
IDs raised per the email from Eric on 3/15/2009												6
												7
												8
												9
												10

Relinquished By: [Signature] Date: 1/14/20 Time: 1804

Relinquished By: [Signature] Date: 1/14/20 Time: 1804

Received By: [Signature] Date: 1-14-20 Time: 1809

Received By: [Signature] Date: 1-14-20 Time: 1809

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

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

1.4 Date Results Needed

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: 4601175

Client: Tasman

Client Project ID: KMG - Champlin 42-10 Pumping Unit

Checklist Completed by: De Lu

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

Date/time completed: 1-14-20

Airbill #: N/A

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

Cooler Number/Temperature: 1 44 °C 1 °C 1 °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 1002

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"/>	
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 type="checkbox"/>	<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) [Signature]

1-14-20  
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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

B03@9'

1/14/2020 2:30:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y001175-01 (Soil)

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	5510	250	mg/kg	10	B0A1403	KDK	01/14/2020	01/15/2020	
Residual Range Organics (C28-C40)	1840	1000	"	"	"	KDK	"	"	

Surrogate: o-Terphenyl 735 % 50-150 " " " S-04

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	268	50.0	mg/kg	250	B0A1407	KDK	01/14/2020	01/14/2020	
Benzene	0.234	0.050	"	25	"	KDK	"	01/15/2020	
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	1.06	0.498	"	250	"	KDK	"	01/14/2020	
Xylenes, total	4.13	0.050	"	25	"	KDK	"	01/15/2020	
Naphthalene	2.55	0.200	"	"	"	KDK	"	"	

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " 01/14/2020  
Surrogate: Toluene-d8 95.3 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 96.9 % 70-130 " " "

**Metals (Saturated Paste Prep)**

Calcium	11.30		me/L	1	[none]		01/16/2020	01/20/2020	
Magnesium	11.87		"	"	"		"	"	
Sodium	55.28		"	"	"		"	"	

**pH in Soil by EPA 9045D**

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

B03@9'

1/14/2020 2:30:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y001175-01 (Soil)

**pH in Soil by EPA 9045D**

pH	8.47	pH Units	1	B0A1405	DJL	01/14/2020	01/14/2020
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**SAR by 20B Saturated Paste**

SAR	16.24		1	[none]		01/16/2020	01/20/2020
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**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.590	0.00504	mmhos/cm	1	B0A1406	DJL	01/14/2020	01/14/2020
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Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

N02@7'

1/14/2020 2:32:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001175-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B0A1403	KDK	01/14/2020	01/14/2020	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 64.1 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	8.50	5.00	mg/kg	25	B0A1407	KDK	01/14/2020	01/14/2020	
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " "  
Surrogate: Toluene-d8 105 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 95.2 % 70-130 " " "

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

S02@7'

1/14/2020 2:34:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001175-03 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B0A1403	KDK	01/14/2020	01/14/2020	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 68.1 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B0A1407	KDK	01/14/2020	01/14/2020	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 104 % 70-130 " " "  
Surrogate: Toluene-d8 93.7 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 105 % 70-130 " " "

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

E03@7'

1/14/2020 2:36:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001175-04 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B0A1403	KDK	01/14/2020	01/14/2020	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	KDK	"	"	U

Surrogate: o-Terphenyl 77.9 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B0A1407	KDK	01/14/2020	01/14/2020	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 103 % 70-130 " " "  
Surrogate: Toluene-d8 98.8 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 99.1 % 70-130 " " "

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

W03@7'

1/14/2020 2:38:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001175-05 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	357	25.0	mg/kg	1	B0A1403	KDK	01/14/2020	01/14/2020	
Residual Range Organics (C28-C40)	2030	100	"	"	"	KDK	"	"	

Surrogate: o-Terphenyl 88.1 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B0A1407	KDK	01/14/2020	01/14/2020	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 106 % 70-130 " " "  
Surrogate: Toluene-d8 102 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 95.7 % 70-130 " " "

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

Extractable Petroleum Hydrocarbons by 8015D - Quality Control  
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0A1403 - EPA 3580										
Blank (B0A1403-BLK1)					Prepared: 01/14/2020 Analyzed: 01/14/2020					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	20		"	25.0		78.1	50-150			

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

Extractable Petroleum Hydrocarbons by 8015D - Quality Control  
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0A1403 - EPA 3580										
LCS (B0A1403-BS1)					Prepared: 01/14/2020 Analyzed: 01/14/2020					
Diesel (C10-C28)	902	50.0	mg/kg	1000		90.2	70-130			
Residual Range Organics (C28-C40)	773	200	"	1000		77.3	70-130			
Surrogate: o-Terphenyl	38		"	50.0		76.5	50-150			

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

Extractable Petroleum Hydrocarbons by 8015D - 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 B0A1403 - EPA 3580

Matrix Spike (B0A1403-MS1)		Source: Y001159-01			Prepared: 01/14/2020 Analyzed: 01/14/2020					
Diesel (C10-C28)	946	50.0	mg/kg	1000	ND	94.6	70-130			
Residual Range Organics (C28-C40)	744	200	"	1000	ND	74.4	70-130			
Surrogate: o-Terphenyl	36		"	50.0		72.5	50-150			

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

Extractable Petroleum Hydrocarbons by 8015D - Quality Control  
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0A1403 - EPA 3580										
Matrix Spike Dup (B0A1403-MSD1)		Source: Y001159-01			Prepared: 01/14/2020 Analyzed: 01/14/2020					
Diesel (C10-C28)	1110	50.0	mg/kg	1000	ND	111	70-130	16.2	35	
Residual Range Organics (C28-C40)	902	200	"	1000	ND	90.2	70-130	19.3	35	
Surrogate: o-Terphenyl	44		"	50.0		88.6	50-150			

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

## Extractable Petroleum Hydrocarbons by 8015D - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B0A1407 - EPA 5030 (soil)</b>										
<b>Blank (B0A1407-BLK1)</b>					Prepared: 01/14/2020 Analyzed: 01/14/2020					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B0A1407 - EPA 5030 (soil)</b>										
<b>LCS (B0A1407-BS1)</b>					Prepared: 01/14/2020 Analyzed: 01/14/2020					
Benzene	0.096	0.002	mg/kg	0.100		95.9	70-130			
Toluene	0.095	0.002	"	0.100		94.9	70-130			
Ethylbenzene	0.098	0.002	"	0.100		98.1	70-130			
m,p-Xylene	0.200	0.004	"	0.200		100	70-130			
o-Xylene	0.101	0.002	"	0.100		101	70-130			
Naphthalene	0.117	0.008	"	0.100		117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		91.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.3	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

**Volatile Organic Compounds by GC/MS SW846 8260D - 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 B0A1407 - EPA 5030 (soil)

Matrix Spike (B0A1407-MS1)		Source: Y001174-06			Prepared: 01/14/2020 Analyzed: 01/14/2020					
Benzene	0.106	0.002	mg/kg	0.100	ND	106	70-130			
Toluene	0.103	0.002	"	0.100	ND	103	70-130			
Ethylbenzene	0.110	0.002	"	0.100	ND	110	70-130			
m,p-Xylene	0.222	0.004	"	0.200	ND	111	70-130			
o-Xylene	0.106	0.002	"	0.100	ND	106	70-130			
Naphthalene	0.103	0.008	"	0.100	ND	103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.4	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B0A1407 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B0A1407-MSD1)</b>		<b>Source: Y001174-06</b>			Prepared: 01/14/2020 Analyzed: 01/14/2020					
Benzene	0.095	0.002	mg/kg	0.100	ND	95.4	70-130	10.9	20	
Toluene	0.094	0.002	"	0.100	ND	94.0	70-130	9.06	20	
Ethylbenzene	0.097	0.002	"	0.100	ND	97.0	70-130	12.1	20	
m,p-Xylene	0.197	0.004	"	0.200	ND	98.3	70-130	12.3	20	
o-Xylene	0.094	0.002	"	0.100	ND	93.8	70-130	12.0	20	
Naphthalene	0.093	0.008	"	0.100	ND	92.7	70-130	10.2	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.7	70-130			

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

## Volatile Organic Compounds by GC/MS SW846 8260D - 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 B0A1405 - NO PREP

<b>Duplicate (B0A1405-DUP1)</b>		<b>Source: Y001169-01</b>			Prepared: 01/14/2020 Analyzed: 01/14/2020					
pH	7.85		pH Units		7.85			0.00	25	

#### Batch B0A1406 - NO PREP

<b>Blank (B0A1406-BLK1)</b>		Prepared: 01/14/2020 Analyzed: 01/14/2020								
Specific Conductance (EC)	0.00300	0.00500	mmhos/cm							
<b>Duplicate (B0A1406-DUP1)</b>		<b>Source: Y001169-01</b>			Prepared: 01/14/2020 Analyzed: 01/14/2020					
Specific Conductance (EC)	0.0589	0.00505	mmhos/cm		0.0622			5.45	25	

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

### Notes and Definitions

U Sample is Non-Detect.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

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.



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March 06, 2020

Tasman Geosciences

Bob Cornez

6855 West 119th Avenue

Broomfield CO 80020

**Project Name - KMG - Champlin 42-10 #4 Pumping Unit Project Number - 2132603.PAB**

Attached are your analytical results for KMG - Champlin 42-10 #4 Pumping Unit received by Origins Laboratory, Inc. January 15, 2020. This project is associated with Origins project number Y001194-01.

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  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

### CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B04@15'	Y001194-01	Soil	January 15, 2020 14:20	01/15/2020 16:30
B05@15'	Y001194-02	Soil	January 15, 2020 14:22	01/15/2020 16:30
N03@12'	Y001194-03	Soil	January 15, 2020 14:24	01/15/2020 16:30
S03@12'	Y001194-04	Soil	January 15, 2020 14:26	01/15/2020 16:30
W04@9'	Y001194-05	Soil	January 15, 2020 14:28	01/15/2020 16:30

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

www.originslaboratory.com

page 1 of 1

1001194

**ORIGINS**  
LABORATORY, INC

Client: APC/TASMAN  
Address: 6855 W 119th AVE  
Telephone Number: 970-927-0393  
Email Address: rcornez@tasman-geo.com

Project Manager: Robert Cornez  
Project Name: Champlin 42-10 #4 Pumping Unit  
Project Number: 2132603 - PAB  
Samples Collected By: DS, AH

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Sample			
B03@15' B04@15'	11/15/20	14:20	2	X					X		X	X	1
B03@15' B05@15'	11/15/20	14:22	2	X					X		X	X	2
W03@12' N03@12'	11/15/20	14:24	1	X					X		X	X	3
S03@12' S03@12'	11/15/20	14:26	1	X					X		X	X	4
B04@14' W04@9'	11/15/20	14:28	1	X					X		X	X	5
op													6
11/15 revised per this													7
email from Eric on													8
3/5/20 yr.													9
													10

Relinquished By: [Signature] Date: 01/15/20 Time: 16:30  
Relinquished By: [Signature] Date: 01/15/20 Time: 16:30

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

5.9 Date Results Needed

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

6855 West 119th Avenue

Broomfield CO 80020

Bob Cornez

Project Number: 2132603.PAB

Project: KMG - Champlin 42-10 #4 Pumping Unit

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

## Sample Receipt Checklist

Origins Work Order: 465194

Client: Tasman

Client Project ID: KMG - Champlin 42-10 #4 Pumping Unit

Checklist Completed by: Jim K

Shipped Via AD

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

Date/time completed: 1-15-20

Airbill #: 29

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

Cooler Number/Temperature: 15.9 °C ☐ °C ☐ °C

(Describe) °C

Thermometer ID: 6003

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</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 (> 1/4 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 type="checkbox"/>	<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) [Signature]

Date/Time Reviewed 1-15-20

Origins Laboratory, Inc.

Jen Pellegrini

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

**B04@15'**  
**1/15/2020 2:20:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001194-01 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B0A1515	TEM	01/15/2020	01/15/2020	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	TEM	"	"	U

Surrogate: o-Terphenyl 76.5 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B0A1505	ZZZ	01/15/2020	01/16/2020	U
Benzene	ND	0.050	"	"	"	ZZZ	"	"	U
Toluene	ND	0.050	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.050	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.050	"	"	"	ZZZ	"	"	U
Naphthalene	ND	0.008	"	1	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 96.6 % 70-130 " " "  
Surrogate: Toluene-d8 102 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 93.6 % 70-130 " " "

**Metals (Saturated Paste Prep)**

Calcium	2.88	me/L	1	[none]	01/16/2020	01/20/2020
Magnesium	5.50	"	"	"	"	"
Sodium	40.85	"	"	"	"	"

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

**B04@15'**

**1/15/2020 2:20:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001194-01 (Soil)**

## pH in Soil by EPA 9045D

pH	8.14		pH Units	1	B0A1506	TEM	01/15/2020	01/15/2020
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## SAR by 20B Saturated Paste

SAR	19.96			1	[none]		01/16/2020	01/20/2020
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.509	0.00501	mmhos/cm	1	B0A1507	TEM	01/15/2020	01/15/2020
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Origins Laboratory, Inc.



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6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

**B05@15'**  
**1/15/2020 2:22:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001194-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B0A1515	TEM	01/15/2020	01/15/2020	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	TEM	"	"	U

Surrogate: o-Terphenyl 78.5 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B0A1505	ZZZ	01/15/2020	01/16/2020	U
Benzene	ND	0.050	"	"	"	ZZZ	"	"	U
Toluene	ND	0.050	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.050	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.050	"	"	"	ZZZ	"	"	U
Naphthalene	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 98.8 % 70-130 " " "  
Surrogate: Toluene-d8 102 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 92.0 % 70-130 " " "

**Metals (Saturated Paste Prep)**

Calcium	2.67	me/L	1	[none]	01/16/2020	01/20/2020
Magnesium	4.91	"	"	"	"	"
Sodium	48.15	"	"	"	"	"

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

**B05@15'**

**1/15/2020 2:22:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001194-02 (Soil)**

## pH in Soil by EPA 9045D

pH	8.56	pH Units	1	B0A1506	TEM	01/15/2020	01/15/2020
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## SAR by 20B Saturated Paste

SAR	24.73		1	[none]		01/16/2020	01/20/2020
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.488	0.00500	mmhos/cm	1	B0A1507	TEM	01/15/2020	01/15/2020
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Origins Laboratory, Inc.



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Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

N03@12'

1/15/2020 2:24:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001194-03 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B0A1515	TEM	01/15/2020	01/15/2020	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	TEM	"	"	U

Surrogate: o-Terphenyl 74.0 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B0A1505	ZZZ	01/15/2020	01/16/2020	U
Benzene	ND	0.050	"	"	"	ZZZ	"	"	U
Toluene	ND	0.050	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.050	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.050	"	"	"	ZZZ	"	"	U
Naphthalene	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 98.7 % 70-130 " " "  
Surrogate: Toluene-d8 103 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 92.8 % 70-130 " " "

Origins Laboratory, Inc.



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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

S03@12'

1/15/2020 2:26:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001194-04 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B0A1515	TEM	01/15/2020	01/15/2020	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	TEM	"	"	U

Surrogate: o-Terphenyl 72.0 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B0A1505	ZZZ	01/15/2020	01/16/2020	U
Benzene	ND	0.050	"	"	"	ZZZ	"	"	U
Toluene	ND	0.050	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.050	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.050	"	"	"	ZZZ	"	"	U
Naphthalene	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4 97.8 % 70-130 " " "  
Surrogate: Toluene-d8 103 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 93.3 % 70-130 " " "

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Tasman Geosciences  
6855 West 119th Avenue  
Broomfield CO 80020

Bob Cornez  
Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

W04@9'

1/15/2020 2:28:00PM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y001194-05 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B0A1515	TEM	01/15/2020	01/15/2020	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	TEM	"	"	U

Surrogate: o-Terphenyl 74.5 % 50-150 " " "

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	5.00	mg/kg	25	B0A1505	KDK	01/15/2020	01/16/2020	U
Benzene	ND	0.050	"	"	"	KDK	"	"	U
Toluene	ND	0.050	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.050	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.050	"	"	"	KDK	"	"	U
Naphthalene	ND	0.200	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4 99.3 % 70-130 " " "  
Surrogate: Toluene-d8 96.4 % 70-130 " " "  
Surrogate: 4-Bromofluorobenzene 98.2 % 70-130 " " "

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Project Number: 2132603.PAB  
Project: KMG - Champlin 42-10 #4 Pumping Unit

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B0A1505 - EPA 5030 (soil)</b>										
<b>Blank (B0A1505-BLK1)</b>					Prepared: 01/15/2020 Analyzed: 01/15/2020					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.2	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B0A1505 - EPA 5030 (soil)</b>										
<b>LCS (B0A1505-BS1)</b>					Prepared: 01/15/2020 Analyzed: 01/15/2020					
Benzene	0.089	0.002	mg/kg	0.100		88.6	70-130			
Toluene	0.086	0.002	"	0.100		86.0	70-130			
Ethylbenzene	0.086	0.002	"	0.100		86.2	70-130			
m,p-Xylene	0.176	0.004	"	0.200		88.2	70-130			
o-Xylene	0.090	0.002	"	0.100		90.0	70-130			
Naphthalene	0.086	0.008	"	0.100		86.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.6	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.2	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B0A1505 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B0A1505-MS1)</b>		<b>Source: Y001184-09</b>			Prepared: 01/15/2020 Analyzed: 01/15/2020					
Benzene	0.092	0.002	mg/kg	0.100	ND	91.5	70-130			
Toluene	0.096	0.002	"	0.100	ND	96.0	70-130			
Ethylbenzene	0.095	0.002	"	0.100	0.004	91.0	70-130			
m,p-Xylene	0.192	0.004	"	0.200	ND	96.0	70-130			
o-Xylene	0.092	0.002	"	0.100	ND	91.8	70-130			
Naphthalene	0.070	0.008	"	0.100	0.030	39.7	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.5	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.4	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - 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 B0A1505 - EPA 5030 (soil)**

Matrix Spike Dup (B0A1505-MSD1)		Source: Y001184-09			Prepared: 01/15/2020 Analyzed: 01/15/2020					
Benzene	0.121	0.002	mg/kg	0.100	ND	121	70-130	27.6	20	QR-03
Toluene	0.128	0.002	"	0.100	ND	128	70-130	28.9	20	QR-03
Ethylbenzene	0.127	0.002	"	0.100	0.004	123	70-130	28.8	20	QR-03
m,p-Xylene	0.251	0.004	"	0.200	ND	125	70-130	26.6	20	QR-03
o-Xylene	0.119	0.002	"	0.100	ND	119	70-130	25.5	20	QR-03
Naphthalene	0.100	0.008	"	0.100	0.030	69.8	70-130	35.4	20	QM-07, QR-03
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.0	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B0A1515 - EPA 3580										
Blank (B0A1515-BLK1)					Prepared: 01/15/2020 Analyzed: 01/15/2020					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	19		"	25.0		75.3	50-150			

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Project: KMG - Champlin 42-10 #4 Pumping Unit

Extractable Petroleum Hydrocarbons by 8015D - 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 B0A1515 - EPA 3580

LCS (B0A1515-BS1)

Prepared: 01/15/2020 Analyzed: 01/15/2020

Diesel (C10-C28)	1040	50.0	mg/kg	1000		104	70-130			
Residual Range Organics (C28-C40)	871	200	"	1000		87.1	70-130			
Surrogate: o-Terphenyl	48		"	50.0		96.1	50-150			

Origins Laboratory, Inc.



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Project: KMG - Champlin 42-10 #4 Pumping Unit

## Extractable Petroleum Hydrocarbons by 8015D - 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 B0A1515 - EPA 3580

Matrix Spike (B0A1515-MS1)		Source: Y001193-07			Prepared: 01/15/2020 Analyzed: 01/15/2020					
Diesel (C10-C28)	1000	50.0	mg/kg	1000	ND	100	70-130			
Residual Range Organics (C28-C40)	851	200	"	1000	ND	85.1	70-130			
Surrogate: o-Terphenyl	46		"	50.0		91.5	50-150			

Origins Laboratory, Inc.



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**Extractable Petroleum Hydrocarbons by 8015D - 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 B0A1515 - EPA 3580**

Matrix Spike Dup (B0A1515-MSD1)		Source: Y001193-07			Prepared: 01/15/2020 Analyzed: 01/15/2020					
Diesel (C10-C28)	1030	50.0	mg/kg	1000	ND	103	70-130	2.36	35	
Residual Range Organics (C28-C40)	879	200	"	1000	ND	87.9	70-130	3.23	35	
Surrogate: o-Terphenyl	47		"	50.0		93.7	50-150			

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## Extractable Petroleum Hydrocarbons by 8015D - 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 B0A1506 - NO PREP

<b>Duplicate (B0A1506-DUP1)</b>		<b>Source: Y001185-01</b>			Prepared: 01/15/2020 Analyzed: 01/15/2020					
pH	9.00		pH Units		8.78			2.47	25	

#### Batch B0A1507 - NO PREP

<b>Blank (B0A1507-BLK1)</b>		Prepared: 01/15/2020 Analyzed: 01/15/2020								
Specific Conductance (EC)	0.00390	0.00500	mmhos/cm							
<b>Duplicate (B0A1507-DUP1)</b>		<b>Source: Y001185-01</b>			Prepared: 01/15/2020 Analyzed: 01/15/2020					
Specific Conductance (EC)	0.162	0.00508	mmhos/cm		0.165			1.47	25	

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Project: KMG - Champlin 42-10 #4 Pumping Unit

### 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.

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.

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