



**Quandary Consultants**

**Mike Dinkel**

**2252 Emerson St.**

**Denver**

**CO**

**80205**

**November 08, 2024**

**Project Name - KMG - Kiteley 21-27**

**Project Number - [none]**

Attached are your analytical results for KMG - Kiteley 21-27 received by Origins Laboratory November 07, 2024. This project is associated with Origins project number E4K0207-01.

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  
303.433.1322  
projectmanager@originslab.com



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

Quandary Consultants  
2252 Emerson St.  
Denver CO 80205

Mike Dinkel  
Project Number: [none]  
Project: KMG - Kiteley 21-27

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
21-27-WH-B01@6'	E4K0207-01	Soil	November 7, 2024 13:46	11/07/2024 16:52
21-27-FL-B01@4'	E4K0207-02	Soil	November 7, 2024 13:48	11/07/2024 16:52
21-27-GW01	E4K0207-03	Water	November 7, 2024 14:30	11/07/2024 16:52

Origins Laboratory



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Denver CO 80205

Mike Dinkel  
 Project Number: [none]  
 Project: KMG - Kiteley 21-27

# ORIGINS

LABORATORY INC

ORIGINS WORK ORDER #

6400207

Page 1 of 1

Client: Lea-Nicco Oil & Gas Division, LP  
 Address: 501 D. Division St.  
RATTVILLE, CO 80651

Project Manager: Mike Dinkel

Project Name: Kiteley 21-27  
 Project Number: 6400207

Telephone Number: 785 691-7788  
 Email Address: MDIVELY@QUANDARYCONSULTANTS.COM

Collected By: WJ/RH/PS

Invoice/Billing Info: Eric Michelson

S=Soil | SO=soil | O=Oil | A=Air | G=Gas | UMP=Impres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

#	Sample ID	Date	Time	# of Containers	Matrix Preservative	Analysis		Comments
1	21-27-WH-B01@04	11/07/24	1346	3 S	N/A			
2	21-27-FL-B01@04	11/07/24	1345	3 S	N/A			
3	21-27-GW01	11/07/24	1430	4 GW	N/A			
4								
5								
6								
7								
8								
9								
10								

Relinquished By: WJ Date: 11/07/24 Time: 1652  
 Received By: STP Date: 11/17/24 Time: 1652

Temp Received: 4/1 Received On Ice?  Yes  No

*Jefe Pellegrini*

Jen Pellegrini For Jordan A. Bynon, Project Manager

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Denver CO 80205

Mike Dinkel  
Project Number: [none]  
Project: KMG - Kiteley 21-27

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: E4K.0207

Client: Quandary

Client Project ID: Kiteley

Checklist Completed by: SHD

Shipped Via: HOO

Date/time completed: 11/7/24

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

Airbill #: N/A

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

Cooler Number/Temperature: 1, 4, 1 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C

Thermometer ID: 7007

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>	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			/	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			/	
Were all samples received intact <sup>(1)?</sup>	/			
Was adequate sample volume provided <sup>(1)?</sup>	/			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)?</sup>		/		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)?</sup>	/			
Does the COC agree with the number and type of sample bottles received <sup>(1)?</sup>	/			
Do the sample IDs on the bottle labels match the COC <sup>(1)?</sup>	/			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)?</sup>	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.		/		
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 HNO3, HCl, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			/	
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) SHD

Date/Time Reviewed 11/7/24

Origins Laboratory



Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Denver CO 80205

Mike Dinkel  
 Project Number: [none]  
 Project: KMG - Kiteley 21-27

**21-27-WH-B01@6'**  
**11/7/2024 1:46:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E4K0207-01 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4K0761	11/07/2024	11/07/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	87.6 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	0.0241		0.00200	mg/kg	1	B4K0762	11/07/2024	11/08/2024	
1,3,5-Trimethylbenzene	0.00802		0.00200	"	"	"	"	"	
Benzene	0.0390		0.00200	"	"	"	"	"	
Ethylbenzene	0.00456		0.00200	"	"	"	"	"	
Toluene	0.0608		0.00200	"	"	"	"	"	
Xylenes, total	0.0382		0.00200	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.799		0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	115 %		70-130			"	"	"	
Surrogate: Toluene-d8	101 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	102 %		70-130			"	"	"	

**Table 915 metals by EPA 6020B**

Arsenic	5.11		0.271	mg/kg	10	B4K0763	11/07/2024	11/08/2024	
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Origins Laboratory



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Jen Pellegrini For Jordan A. Bynon, Project Manager

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 Denver CO 80205

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 Project Number: [none]  
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**21-27-WH-B01@6'**  
**11/7/2024 1:46:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E4K0207-01 (Soil)**

**Table 915 metals by EPA 6020B**

Barium	1330		9.34	mg/kg	10	B4K0763	11/07/2024	11/08/2024	
Cadmium	0.306		0.0934	"	"	"	"	"	
Copper	24.4		9.34	"	"	"	"	"	
Lead	90.8		0.934	"	"	"	"	"	
Nickel	13.7		0.934	"	"	"	"	"	
Selenium	0.355		0.243	"	"	"	"	"	
Silver	0.101		0.0934	"	"	"	"	"	
Zinc	894		34.6	"	"	"	"	"	

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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Denver CO 80205

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Project Number: [none]  
Project: KMG - Kiteley 21-27

**21-27-FL-B01@4'**  
**11/7/2024 1:48:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E4K0207-02 (Soil)**

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4K0761	11/07/2024	11/08/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	54.5 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4K0762	11/07/2024	11/08/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	116 %		70-130			"	"	"	
Surrogate: Toluene-d8	100 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

**Table 915 metals by EPA 6020B**

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 Denver CO 80205

Mike Dinkel  
 Project Number: [none]  
 Project: KMG - Kiteley 21-27

**21-27-FL-B01@4'**  
**11/7/2024 1:48:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E4K0207-02 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	4.83		0.266	mg/kg	10	B4K0763	11/07/2024	11/08/2024	
Barium	438		9.16	"	"	"	"	"	
Cadmium	0.329		0.0916	"	"	"	"	"	
Copper	19.3		9.16	"	"	"	"	"	
Lead	19.8		0.916	"	"	"	"	"	
Nickel	13.2		0.916	"	"	"	"	"	
Selenium	0.353		0.238	"	"	"	"	"	
Silver	0.138		0.0916	"	"	"	"	"	
Zinc	125		33.9	"	"	"	"	"	

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 Denver CO 80205

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**21-27-GW01**  
**11/7/2024 2:30:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E4K0207-03 (Water)**

**BTEX+N+TMBs by 8260D**

1,2,4-Trimethylbenzene	13.8		2.00	ug/L	1	B4K0639	11/07/2024	11/07/2024	
1,3,5-Trimethylbenzene	4.65		2.00	"	"	"	"	"	
Benzene	30.3		1.00	"	"	"	"	"	
Ethylbenzene	3.36		1.00	"	"	"	"	"	
Naphthalene	2.12		2.00	"	"	"	"	"	
Toluene	43.4		1.00	"	"	"	"	"	
Xylenes, total	27.6		1.00	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	103 %		70-130			"	"	"	
Surrogate: Toluene-d8	91.4 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	99.6 %		70-130			"	"	"	

Origins Laboratory



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 Denver CO 80205

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 Project Number: [none]  
 Project: KMG - Kiteley 21-27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0639 - EPA 5030B (Water)**

**Blank (B4K0639-BLK1)**

Prepared: 11/06/2024 Analyzed: 11/07/2024

1,2,4-Trimethylbenzene	ND	2.00	ug/L							U
1,3,5-Trimethylbenzene	ND	2.00	"							U
Benzene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Naphthalene	ND	2.00	"							U
Toluene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5	102		70-130			
Surrogate: Toluene-d8	58		"	62.5	92.7		70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5	98.3		70-130			

Origins Laboratory



Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0639 - EPA 5030B (Water)**

**LCS (B4K0639-BS1)**

Prepared: 11/06/2024 Analyzed: 11/07/2024

1,2,4-Trimethylbenzene	46.8	2.00	ug/L	50.0		93.5	70-130			
1,3,5-Trimethylbenzene	46.9	2.00	"	50.0		93.7	70-130			
Benzene	50.7	1.00	"	50.0		101	70-130			
Ethylbenzene	46.3	1.00	"	50.0		92.6	70-130			
m,p-Xylene	89.6	2.00	"	100		89.6	70-130			
Naphthalene	56.4	2.00	"	50.0		113	70-130			
o-Xylene	44.8	1.00	"	50.0		89.5	70-130			
Toluene	46.7	1.00	"	50.0		93.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5		110	70-130			
Surrogate: Toluene-d8	58		"	62.5		92.2	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	70-130			

Origins Laboratory



Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0639 - EPA 5030B (Water)**

<b>Matrix Spike (B4K0639-MS1)</b>	<b>Source: E4K0116-01</b>			<b>Prepared: 11/06/2024 Analyzed: 11/07/2024</b>						
1,2,4-Trimethylbenzene	45.6	2.00	ug/L	50.0	0.430	90.4	70-130			
1,3,5-Trimethylbenzene	45.0	2.00	"	50.0	ND	90.0	70-130			
Benzene	43.4	1.00	"	50.0	ND	86.9	70-130			
Ethylbenzene	43.8	1.00	"	50.0	ND	87.7	70-130			
m,p-Xylene	84.3	2.00	"	100	0.210	84.1	70-130			
Naphthalene	50.9	2.00	"	50.0	0.260	101	70-130			
o-Xylene	42.2	1.00	"	50.0	ND	84.3	70-130			
Toluene	42.3	1.00	"	50.0	ND	84.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		103	70-130			
Surrogate: Toluene-d8	57		"	62.5		91.6	70-130			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	70-130			

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Mike Dinkel  
 Project Number: [none]  
 Project: KMG - Kiteley 21-27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0639 - EPA 5030B (Water)**

Matrix Spike Dup (B4K0639-MSD1)	Source: E4K0116-01			Prepared: 11/06/2024 Analyzed: 11/07/2024						
1,2,4-Trimethylbenzene	47.3	2.00	ug/L	50.0	0.430	93.7	70-130	3.55	20	
1,3,5-Trimethylbenzene	47.7	2.00	"	50.0	ND	95.4	70-130	5.78	20	
Benzene	46.5	1.00	"	50.0	ND	93.0	70-130	6.80	20	
Ethylbenzene	46.6	1.00	"	50.0	ND	93.1	70-130	6.04	20	
m,p-Xylene	89.7	2.00	"	100	0.210	89.5	70-130	6.28	20	
Naphthalene	56.8	2.00	"	50.0	0.260	113	70-130	11.0	20	
o-Xylene	43.9	1.00	"	50.0	ND	87.7	70-130	3.98	20	
Toluene	43.9	1.00	"	50.0	ND	87.9	70-130	3.71	20	
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		103	70-130			
Surrogate: Toluene-d8	58		"	62.5		92.0	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

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Mike Dinkel  
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 Project: KMG - Kiteley 21-27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4K0761 - EPA 3550B</b>										
<b>Blank (B4K0761-BLK1)</b>										
					Prepared: 11/07/2024 Analyzed: 11/07/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	20		"	24.9		81.4	50-150			

Origins Laboratory



Jen Pellegrini For Jordan A. Bynon, Project Manager

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Mike Dinkel  
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 Project: KMG - Kiteley 21-27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0761 - EPA 3550B**

**LCS (B4K0761-BS1)**

Prepared: 11/07/2024 Analyzed: 11/07/2024

Diesel (C10-C28)	966	50.0	mg/kg	1000		96.6	70-130			
Residual Range Organics (C28-C40)	1120	200	"	1000		112	70-130			
Surrogate: o-Terphenyl	47		"	49.8		94.6	50-150			

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Mike Dinkel  
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**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0761 - EPA 3550B**

<b>Matrix Spike (B4K0761-MS1)</b>	<b>Source: E4K0201-01</b>			Prepared: 11/07/2024 Analyzed: 11/07/2024						
Diesel (C10-C28)	904	50.0	mg/kg	1000	ND	90.4	70-130			
Residual Range Organics (C28-C40)	1070	200	"	1000	58.2	101	70-130			
Surrogate: o-Terphenyl	41		"	49.8		82.0	50-150			

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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Quandary Consultants  
2252 Emerson St.  
Denver CO 80205

Mike Dinkel  
Project Number: [none]  
Project: KMG - Kiteley 21-27

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B4K0761 - EPA 3550B</b>										
<b>Matrix Spike Dup (B4K0761-MSD1)</b>			<b>Source: E4K0201-01</b>			Prepared: 11/07/2024 Analyzed: 11/07/2024				
Diesel (C10-C28)	1040	50.0	mg/kg	1000	ND	104	70-130	13.5	35	
Residual Range Organics (C28-C40)	1230	200	"	1000	58.2	117	70-130	14.2	35	
Surrogate: o-Terphenyl	52		"	49.8		105	50-150			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0762 - EPA 5030 (soil)**

**Blank (B4K0762-BLK1)**

Prepared: 11/07/2024 Analyzed: 11/07/2024

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
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	99.3		70-130			

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0762 - EPA 5030 (soil)**

**LCS (B4K0762-BS1)**

Prepared: 11/07/2024 Analyzed: 11/07/2024

1,2,4-Trimethylbenzene	0.116	0.00200	mg/kg	0.100		116	70-130			
1,3,5-Trimethylbenzene	0.117	0.00200	"	0.100		117	70-130			
Benzene	0.115	0.00200	"	0.100		115	70-130			
Ethylbenzene	0.113	0.00200	"	0.100		113	70-130			
Naphthalene	0.104	0.00380	"	0.100		104	70-130			
Toluene	0.112	0.00200	"	0.100		112	70-130			
o-Xylene	0.109	0.00200	"	0.100		109	70-130			
m,p-Xylene	0.226	0.00400	"	0.200		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4K0762 - EPA 5030 (soil)

Matrix Spike (B4K0762-MS1)	Source: E4K0199-01			Prepared: 11/07/2024 Analyzed: 11/07/2024						
1,2,4-Trimethylbenzene	0.104	0.00200	mg/kg	0.100	ND	104	70-130			
1,3,5-Trimethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130			
Benzene	0.102	0.00200	"	0.100	ND	102	70-130			
Ethylbenzene	0.103	0.00200	"	0.100	ND	103	70-130			
Naphthalene	0.0924	0.00380	"	0.100	0.00100	91.4	70-130			
Toluene	0.100	0.00200	"	0.100	ND	100	70-130			
o-Xylene	0.101	0.00200	"	0.100	ND	101	70-130			
m,p-Xylene	0.204	0.00400	"	0.200	ND	102	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0762 - EPA 5030 (soil)**

Matrix Spike Dup (B4K0762-MSD1)	Source: E4K0199-01			Prepared: 11/07/2024 Analyzed: 11/07/2024						
1,2,4-Trimethylbenzene	0.104	0.00200	mg/kg	0.100	ND	104	70-130	0.173	20	
1,3,5-Trimethylbenzene	0.104	0.00200	"	0.100	ND	104	70-130	2.25	20	
Benzene	0.103	0.00200	"	0.100	ND	103	70-130	1.23	20	
Ethylbenzene	0.110	0.00200	"	0.100	ND	110	70-130	6.64	20	
Naphthalene	0.0968	0.00380	"	0.100	0.00100	95.8	70-130	4.67	20	
Toluene	0.101	0.00200	"	0.100	ND	101	70-130	0.418	20	
o-Xylene	0.104	0.00200	"	0.100	ND	104	70-130	3.40	20	
m,p-Xylene	0.225	0.00400	"	0.200	ND	112	70-130	9.52	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	70-130			

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Jen Pellegrini For Jordan A. Bynon, Project Manager

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0763 - EPA 3050B**

**Blank (B4K0763-BLK1)**

Prepared: 11/07/2024 Analyzed: 11/08/2024

Arsenic	ND	0.290	mg/kg							U
Barium	ND	10.0	"							U
Cadmium	ND	0.100	"							U
Copper	ND	10.0	"							U
Lead	ND	1.00	"							U
Nickel	ND	1.00	"							U
Selenium	ND	0.260	"							U
Silver	ND	0.100	"							U
Zinc	ND	37.0	"							U

**LCS (B4K0763-BS1)**

Prepared: 11/07/2024 Analyzed: 11/08/2024

Arsenic	5.32	0.290	mg/kg	5.00		106	80-120			
Barium	502	10.0	"	500		100	80-120			
Cadmium	5.32	0.100	"	5.00		106	80-120			
Copper	52.9	10.0	"	50.0		106	80-120			
Lead	4.85	1.00	"	5.00		96.9	80-120			
Nickel	5.50	1.00	"	5.00		110	80-120			
Selenium	5.18	0.260	"	5.00		104	80-120			
Silver	5.55	0.100	"	5.00		111	80-120			
Zinc	52.6	37.0	"	50.0		105	80-120			

**Matrix Spike (B4K0763-MS1)**

**Source: E4K0203-04**

Prepared: 11/07/2024 Analyzed: 11/08/2024

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**Metals by EPA 6000/7000 Series Methods - Quality Control**  
**Origins Laboratory**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B4K0763 - EPA 3050B**

<b>Matrix Spike (B4K0763-MS1)</b>	<b>Source: E4K0203-04</b>			<b>Prepared: 11/07/2024 Analyzed: 11/08/2024</b>						
Arsenic	11.7	0.256	mg/kg	4.41	6.41	120	75-125			
Barium	584	8.83	"	441	116	106	75-125			
Cadmium	5.04	0.0883	"	4.41	0.223	109	75-125			
Copper	62.6	8.83	"	44.1	14.2	110	75-125			
Lead	16.1	0.883	"	4.41	11.6	101	75-125			
Nickel	22.1	0.883	"	4.41	16.4	129	75-125			QM-07
Selenium	5.00	0.230	"	4.41	0.270	107	75-125			
Silver	4.95	0.0883	"	4.41	0.0572	111	75-125			
Zinc	106	32.7	"	44.1	57.5	110	75-125			

<b>Matrix Spike Dup (B4K0763-MSD1)</b>	<b>Source: E4K0203-04</b>			<b>Prepared: 11/07/2024 Analyzed: 11/08/2024</b>						
Arsenic	12.0	0.281	mg/kg	4.85	6.41	115	75-125	2.41	20	
Barium	689	9.70	"	485	116	118	75-125	16.6	20	
Cadmium	5.42	0.0970	"	4.85	0.223	107	75-125	7.13	20	
Copper	66.9	9.70	"	48.5	14.2	109	75-125	6.68	20	
Lead	16.8	0.970	"	4.85	11.6	107	75-125	4.46	20	
Nickel	23.7	0.970	"	4.85	16.4	151	75-125	7.16	20	QM-07
Selenium	5.51	0.252	"	4.85	0.270	108	75-125	9.73	20	
Silver	5.43	0.0970	"	4.85	0.0572	111	75-125	9.29	20	
Zinc	112	35.9	"	48.5	57.5	113	75-125	5.55	20	

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### 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 on a wet weight basis.

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