



Absaroka
Max Dahlgren
112 High St.

December 20, 2024

Buffalo WY 82834

Project Name - KMG - Labrisa 11-35 HZ Facility Project Number - [none]

Attached are your analytical results for KMG - Labrisa 11-35 HZ Facility received by Origins Laboratory November 21, 2024. This project is associated with Origins project number E4K0650-01.

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



Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
REL-B01@1'	E4K0650-01	Soil	November 21, 2024 9:50	11/21/2024 15:12
REL-B02@1'	E4K0650-02	Soil	November 21, 2024 9:55	11/21/2024 15:12

Origins Laboratory

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.

Jordan A. Bynon, Project Manager

ORIGINS

LABORATORY

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

Origins Laboratory

Sample Receipt Checklist

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

Origins Work Order: E4 KOG 50

Client: Absaroka

Client Project ID: Labrisa 11-35 HZ Fac

Checklist Completed by: KN / KLC

Shipped Via: HD

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

Date/time completed: 11/21/24

Airbill #: N/A

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

☐ Water

☐ Other:

Cooler Number/Temperature: 1 / 8.5 °C / °C / °C (Describe) °C

Thermometer ID: TOOT

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

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

Reviewed by (Project Manager)

11/21/24
Date/Time Reviewed

Origins Laboratory

J. Bynon

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.

Jordan A. Bynon, Project Manager

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

REL-B01@1'

11/21/2024 9:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory

E4K0650-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.288	0.0998	mg/L	1	B4K2210	11/22/2024	11/25/2024
-------	-------	--------	------	---	---------	------------	------------

DRO/ORO by EPA 8015D

Diesel (C10-C28)	39.1	25.0	mg/kg	1	B4K2142	11/21/2024	11/21/2024
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	Ua

Surrogate: o-Terphenyl	85.9 %	50-150	"	"	"
------------------------	--------	--------	---	---	---

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.295	0.00200	mg/kg	1	B4K2137	11/21/2024	11/21/2024
1,3,5-Trimethylbenzene	0.0775	0.00200	"	"	"	"	"
Benzene	0.0191	0.00200	"	"	"	"	"
Ethylbenzene	0.109	0.00200	"	"	"	"	"
Toluene	0.262	0.00200	"	"	"	"	"
Xylenes, total	0.649	0.00200	"	"	"	"	"
Gasoline Range Hydrocarbons	14.3	0.200	"	"	"	"	"

Surrogate: 1,2-Dichloroethane-d4	132 %	70-130	"	"	"	S-GC
Surrogate: Toluene-d8	99.5 %	70-130	"	"	"	"
Surrogate: 4-Bromofluorobenzene	104 %	70-130	"	"	"	"

Origins Laboratory



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.

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

REL-B01@1'

11/21/2024 9:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

GEL Laboratories, LLC
E4K0650-01 (Soil)

PAH by 3541/8270

1-Methylnaphthalene	0.0783	0.00126	0.00382	mg/kg dry	1	2714193	12/03/2024	12/03/2024	
2-Methylnaphthalene	0.0256	0.00126	0.00382	"	"	"	"	"	
Acenaphthene	0.00229	0.00126	0.00382	"	"	"	"	"	J
Acenaphthylene	ND	0.00126	0.00382	"	"	"	"	"	U
Anthracene	ND	0.00126	0.00382	"	"	"	"	"	U
Benzo(a)anthracene	0.00497	0.00126	0.00382	"	"	"	"	"	
Benzo(a)pyrene	ND	0.00126	0.00382	"	"	"	"	"	U
Benzo(b)fluoranthene	ND	0.00126	0.00382	"	"	"	"	"	U
Benzo(k)fluoranthene	ND	0.00126	0.00382	"	"	"	"	"	U
Chrysene	0.00306	0.00126	0.00382	"	"	"	"	"	J
Dibenzo(a,h)anthracene	ND	0.00126	0.00382	"	"	"	"	"	U
Fluoranthene	ND	0.00126	0.00382	"	"	"	"	"	U
Fluorene	0.0218	0.00126	0.00382	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.00126	0.00382	"	"	"	"	"	U
Naphthalene	0.00420	0.00126	0.00382	"	"	"	"	"	
Pyrene	0.00306	0.00126	0.00382	"	"	"	"	"	J

Surrogate: 5-alpha-Androstane 84 % 22-135 " " "

Table 915 metals by EPA 6020B

Origins Laboratory



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.



Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

REL-B01@1'

11/21/2024 9:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	------------------------	--------------------	-------	----------	-------	----------	----------	-------

Origins Laboratory

E4K0650-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	3.76	0.275	mg/kg	10	B4K2145	11/21/2024	11/22/2024
Barium	101	9.48	"	"	"	"	"
Cadmium	0.139	0.0948	"	"	"	"	"
Copper	9.56	9.48	"	"	"	"	"
Lead	6.43	0.948	"	"	"	"	"
Nickel	7.67	0.948	"	"	"	"	"
Selenium	ND	0.246	"	"	"	"	"
Silver	ND	0.0948	"	"	"	"	"
Zinc	ND	35.1	"	"	"	"	"

Origins Laboratory

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.

Jordan A. Bynon, Project Manager

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

REL-B02@1'

11/21/2024 9:55:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory E4K0650-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.395	0.0981	mg/L	1	B4K2210	11/22/2024	11/25/2024	
-------	-------	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4K2142	11/21/2024	11/21/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	85.7 %	50-150	"	"	"	"	"	
------------------------	--------	--------	---	---	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.0110	0.00200	mg/kg	1	B4K2137	11/21/2024	11/22/2024	
1,3,5-Trimethylbenzene	0.00494	0.00200	"	"	"	"	"	
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Toluene	0.00278	0.00200	"	"	"	"	"	
Xylenes, total	0.0304	0.00200	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130	"	"	"	"	"	S-GC
Surrogate: Toluene-d8	101 %	70-130	"	"	"	"	"	

Origins Laboratory



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.

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

REL-B02@1'

11/21/2024 9:55:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

Origins Laboratory

E4K0650-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene 108 % 70-130 B4K21 37 11/21/2024 11/22/2024

PAH by 3541/8270

1-Methylnaphthalene	0.0239	0.00120	0.00362	mg/kg dry	1	2714193	12/03/2024	12/03/2024	
2-Methylnaphthalene	0.00616	0.00120	0.00362	"	"	"	"	"	
Acenaphthene	ND	0.00120	0.00362	"	"	"	"	"	U
Acenaphthylene	ND	0.00120	0.00362	"	"	"	"	"	U
Anthracene	ND	0.00120	0.00362	"	"	"	"	"	U
Benzo(a)anthracene	0.00217	0.00120	0.00362	"	"	"	"	"	J
Benzo(a)pyrene	ND	0.00120	0.00362	"	"	"	"	"	U
Benzo(b)fluoranthene	0.00217	0.00120	0.00362	"	"	"	"	"	J
Benzo(k)fluoranthene	ND	0.00120	0.00362	"	"	"	"	"	U
Chrysene	0.00290	0.00120	0.00362	"	"	"	"	"	J
Dibenzo(a,h)anthracene	ND	0.00120	0.00362	"	"	"	"	"	U
Fluoranthene	0.00290	0.00120	0.00362	"	"	"	"	"	J
Fluorene	0.0130	0.00120	0.00362	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.00120	0.00362	"	"	"	"	"	U
Naphthalene	0.00254	0.00120	0.00362	"	"	"	"	"	J
Pyrene	0.00290	0.00120	0.00362	"	"	"	"	"	J

Origins Laboratory



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.

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

REL-B02@1'

11/21/2024 9:55:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
---------	--------	---------------------	-----------------	-------	----------	-------	----------	----------	-------

GEL Laboratories, LLC

E4K0650-02 (Soil)

PAH by 3541/8270

Surrogate: 5-alpha-Androstane	79 %	22-135	27141 93	12/03/2024	12/03/2024
-------------------------------	------	--------	-------------	------------	------------

Table 915 metals by EPA 6020B

Arsenic	5.20	0.271	mg/kg	10	B4K2145	11/21/2024	11/22/2024
Barium	147	9.34	"	"	"	"	"
Cadmium	0.178	0.0934	"	"	"	"	"
Copper	12.9	9.34	"	"	"	"	"
Lead	9.69	0.934	"	"	"	"	"
Nickel	11.6	0.934	"	"	"	"	"
Selenium	ND	0.243	"	"	"	"	"
Silver	ND	0.0934	"	"	"	"	"
Zinc	44.9	34.6	"	"	"	"	"

Origins Laboratory



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.

Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

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
Batch B4K2137 - EPA 5030 (soil)										
Blank (B4K2137-BLK1)					Prepared: 11/21/2024 Analyzed: 11/21/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.17		"	0.125	134		70-130			S-GC
Surrogate: Toluene-d8	0.13		"	0.125	100		70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	96.0		70-130			

Origins Laboratory



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.

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

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
Batch B4K2137 - EPA 5030 (soil)										
LCS (B4K2137-BS1)					Prepared: 11/21/2024 Analyzed: 11/21/2024					
1,2,4-Trimethylbenzene	0.114	0.00200	mg/kg	0.100		114	70-130			
1,3,5-Trimethylbenzene	0.115	0.00200	"	0.100		115	70-130			
Benzene	0.115	0.00200	"	0.100		115	70-130			
Ethylbenzene	0.109	0.00200	"	0.100		109	70-130			
Naphthalene	0.116	0.00380	"	0.100		116	70-130			
Toluene	0.119	0.00200	"	0.100		119	70-130			
o-Xylene	0.106	0.00200	"	0.100		106	70-130			
m,p-Xylene	0.223	0.00400	"	0.200		112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.17		"	0.125		135	70-130			S-GC
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.8	70-130			

Origins Laboratory



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.

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

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
Batch B4K2137 - EPA 5030 (soil)										
Matrix Spike (B4K2137-MS1)		Source: E4K0488-01			Prepared: 11/21/2024 Analyzed: 11/21/2024					
1,2,4-Trimethylbenzene	0.0322	0.00200	mg/kg	0.100	0.0134	18.8	70-130			QM-07
1,3,5-Trimethylbenzene	0.0207	0.00200	"	0.100	0.00480	15.9	70-130			QM-07
Benzene	0.0685	0.00200	"	0.100	0.00140	67.1	70-130			QM-07
Ethylbenzene	0.0400	0.00200	"	0.100	0.00658	33.4	70-130			QM-07
Naphthalene	0.0189	0.00380	"	0.100	0.00372	15.2	70-130			QM-07
Toluene	0.0645	0.00200	"	0.100	0.0169	47.6	70-130			QM-07
o-Xylene	0.0418	0.00200	"	0.100	0.00908	32.8	70-130			QM-07
m,p-Xylene	0.0971	0.00400	"	0.200	0.0268	35.1	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.16		"	0.125		131	70-130			QM-07
Surrogate: Toluene-d8	0.13		"	0.125		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.16		"	0.125		126	70-130			

Origins Laboratory



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.

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

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
Batch B4K2137 - EPA 5030 (soil)										
Matrix Spike Dup (B4K2137-MSD1)		Source: E4K0488-01			Prepared: 11/21/2024 Analyzed: 11/21/2024					
1,2,4-Trimethylbenzene	0.0279	0.00200	mg/kg	0.100	0.0134	14.5	70-130	14.3	20	QM-07
1,3,5-Trimethylbenzene	0.0197	0.00200	"	0.100	0.00480	14.9	70-130	5.25	20	QM-07
Benzene	0.0760	0.00200	"	0.100	0.00140	74.6	70-130	10.4	20	
Ethylbenzene	0.0378	0.00200	"	0.100	0.00658	31.2	70-130	5.81	20	QM-07
Naphthalene	0.0200	0.00380	"	0.100	0.00372	16.2	70-130	5.24	20	QM-07
Toluene	0.0679	0.00200	"	0.100	0.0169	51.0	70-130	5.08	20	QM-07
o-Xylene	0.0386	0.00200	"	0.100	0.00908	29.5	70-130	8.16	20	QM-07
m,p-Xylene	0.0872	0.00400	"	0.200	0.0268	30.2	70-130	10.7	20	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.16		"	0.125		129	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		115	70-130			

Origins Laboratory



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.



Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B4K2142 - EPA 3550B

Blank (B4K2142-BLK1)

Prepared: 11/21/2024 Analyzed: 11/21/2024

Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	24		"	24.9		98.4	50-150			

Origins Laboratory

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.

Jordan A. Bynon, Project Manager



Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B4K2142 - EPA 3550B

LCS (B4K2142-BS1)

Prepared: 11/21/2024 Analyzed: 11/21/2024

Diesel (C10-C28)	1140	50.0	mg/kg	1000		114	70-130			
Residual Range Organics (C28-C40)	1220	200	"	1000		122	70-130			
Surrogate: o-Terphenyl	64		"	49.8		128	50-150			

Origins Laboratory

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.

Jordan A. Bynon, Project Manager



Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B4K2142 - EPA 3550B

Matrix Spike (B4K2142-MS1)		Source: E4K0651-01			Prepared: 11/21/2024 Analyzed: 11/21/2024					
Diesel (C10-C28)	1150	50.0	mg/kg	1000	ND	115	70-130			
Residual Range Organics (C28-C40)	1170	200	"	1000	ND	117	70-130			
Surrogate: o-Terphenyl	44		"	49.8		88.1	50-150			

Origins Laboratory

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.

Jordan A. Bynon, Project Manager



Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B4K2142 - EPA 3550B

Matrix Spike Dup (B4K2142-MSD1)		Source: E4K0651-01			Prepared: 11/21/2024 Analyzed: 11/21/2024					
Diesel (C10-C28)	1180	50.0	mg/kg	1000	ND	118	70-130	1.96	35	
Residual Range Organics (C28-C40)	1230	200	"	1000	ND	123	70-130	5.08	35	
Surrogate: o-Terphenyl	68		"	49.8		136	50-150			

Origins Laboratory

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.

Jordan A. Bynon, Project Manager



Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B4K2145 - EPA 3050B

Blank (B4K2145-BLK1)

Prepared: 11/21/2024 Analyzed: 11/22/2024

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

LCS (B4K2145-BS1)

Prepared: 11/21/2024 Analyzed: 11/22/2024

Arsenic	5.91	0.290	mg/kg	5.00	118	80-120
Barium	528	10.0	"	500	106	80-120
Cadmium	5.86	0.100	"	5.00	117	80-120
Copper	59.0	10.0	"	50.0	118	80-120
Lead	5.45	1.00	"	5.00	109	80-120
Nickel	5.79	1.00	"	5.00	116	80-120
Selenium	5.50	0.260	"	5.00	110	80-120
Silver	5.81	0.100	"	5.00	116	80-120
Zinc	58.9	37.0	"	50.0	118	80-120

Matrix Spike (B4K2145-MS1)

Source: E4K0648-03

Prepared: 11/21/2024 Analyzed: 11/22/2024

Origins Laboratory

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.

Jordan A. Bynon, Project Manager

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B4K2145 - EPA 3050B

Matrix Spike (B4K2145-MS1)		Source: E4K0648-03			Prepared: 11/21/2024 Analyzed: 11/22/2024					
Arsenic	8.33	0.268	mg/kg	4.62	4.37	85.7	75-125			
Barium	598	9.23	"	462	52.4	118	75-125			
Cadmium	5.64	0.0923	"	4.62	0.110	120	75-125			
Copper	62.2	9.23	"	46.2	6.61	120	75-125			
Lead	9.59	0.923	"	4.62	5.07	97.9	75-125			
Nickel	11.8	0.923	"	4.62	7.17	101	75-125			
Selenium	5.31	0.240	"	4.62	0.159	112	75-125			
Silver	5.56	0.0923	"	4.62	0.0112	120	75-125			
Zinc	76.0	34.2	"	46.2	23.3	114	75-125			
Matrix Spike Dup (B4K2145-MSD1)		Source: E4K0648-03			Prepared: 11/21/2024 Analyzed: 11/22/2024					
Arsenic	8.77	0.277	mg/kg	4.78	4.37	92.2	75-125	5.21	20	
Barium	609	9.55	"	478	52.4	117	75-125	1.80	20	
Cadmium	5.80	0.0955	"	4.78	0.110	119	75-125	2.88	20	
Copper	62.4	9.55	"	47.8	6.61	117	75-125	0.302	20	
Lead	10.3	0.955	"	4.78	5.07	109	75-125	6.80	20	
Nickel	11.9	0.955	"	4.78	7.17	98.6	75-125	0.462	20	
Selenium	5.53	0.248	"	4.78	0.159	112	75-125	4.11	20	
Silver	5.69	0.0955	"	4.78	0.0112	119	75-125	2.22	20	
Zinc	78.4	35.3	"	47.8	23.3	116	75-125	3.19	20	

Origins Laboratory



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.



Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4K2210 - DTPA Sorbitol Preparation										
Blank (B4K2210-BLK1)					Prepared: 11/22/2024 Analyzed: 11/25/2024					
Boron	ND	0.100	mg/L							
Duplicate (B4K2210-DUP1)					Source: E4K0648-01 Prepared: 11/22/2024 Analyzed: 11/25/2024					
Boron	0.0464	0.0987	mg/L		0.0424			8.99	50	

Origins Laboratory

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.

Jordan A. Bynon, Project Manager



Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

PAH by 3541/8270 - Quality Control
GEL Laboratories, LLC

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

Batch 2714193 - SW846 3541

BLANK (1205936372-BLK)

Prepared: 12/03/2024 Analyzed: 12/03/2024

Benzo(b)fluoranthene	ND	0.00328	mg/kg				-			U
Naphthalene	ND	0.00328	"				-			U
Indeno(1,2,3-cd)pyrene	ND	0.00328	"				-			U
Fluorene	ND	0.00328	"				-			U
Fluoranthene	ND	0.00328	"				-			U
Dibenzo(a,h)anthracene	ND	0.00328	"				-			U
Benzo(k)fluoranthene	ND	0.00328	"				-			U
2-Methylnaphthalene	ND	0.00328	"				-			U
Chrysene	ND	0.00328	"				-			U
1-Methylnaphthalene	ND	0.00328	"				-			U
Pyrene	ND	0.00328	"				-			U
Acenaphthene	ND	0.00328	"				-			U
Anthracene	ND	0.00328	"				-			U
Benzo(a)anthracene	ND	0.00328	"				-			U
Benzo(a)pyrene	ND	0.00328	"				-			U

Surrogate: 5-alpha-Androstane

0.162

"

0.164

99

22-135

LCS (1205936373-BKS)

Prepared: 12/03/2024 Analyzed: 12/03/2024

Benzo(k)fluoranthene	0.293	0.00331	mg/kg	0.331		88	40-122
Naphthalene	0.278	0.00331	"	0.331		84	38-109
Indeno(1,2,3-cd)pyrene	0.294	0.00331	"	0.331		89	38-133
Fluorene	0.284	0.00331	"	0.331		86	37-115
Fluoranthene	0.300	0.00331	"	0.331		90	39-119
Dibenzo(a,h)anthracene	0.297	0.00331	"	0.331		90	38-132
Chrysene	0.303	0.00331	"	0.331		91	42-117
Pyrene	0.293	0.00331	"	0.331		89	38-117
1-Methylnaphthalene	0.272	0.00331	"	0.331		82	39-109

Origins Laboratory

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.

Jordan A. Bynon, Project Manager

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

PAH by 3541/8270 - Quality Control GEL Laboratories, LLC

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

Batch 2714193 - SW846 3541

LCS (1205936373-BKS)

Prepared: 12/03/2024 Analyzed: 12/03/2024

Benzo(a)pyrene	0.312	0.00331	mg/kg	0.331		94	39-127			
Benzo(a)anthracene	0.306	0.00331	"	0.331		92	42-120			
Anthracene	0.297	0.00331	"	0.331		90	41-117			
Acenaphthene	0.287	0.00331	"	0.331		87	41-112			
Benzo(b)fluoranthene	0.299	0.00331	"	0.331		90	39-123			
2-Methylnaphthalene	0.283	0.00331	"	0.331		86	39-110			
Surrogate: 5-alpha-Androstane	0.174		"	0.166		105	22-135			

LCSD (1205936374-BKSD)

Prepared: 12/03/2024 Analyzed: 12/03/2024

Dibenzo(a,h)anthracene	0.287	0.00332	mg/kg	0.332		87	38-132	3	30	
Acenaphthene	0.275	0.00332	"	0.332		83	41-112	4	30	
Fluoranthene	0.286	0.00332	"	0.332		86	39-119	5	30	
Fluorene	0.269	0.00332	"	0.332		81	37-115	5	30	
Indeno(1,2,3-cd)pyrene	0.289	0.00332	"	0.332		87	38-133	2	30	
Pyrene	0.278	0.00332	"	0.332		84	38-117	5	30	
Chrysene	0.296	0.00332	"	0.332		89	42-117	2	30	
Naphthalene	0.270	0.00332	"	0.332		81	38-109	3	30	
Benzo(b)fluoranthene	0.289	0.00332	"	0.332		87	39-123	4	30	
Benzo(a)pyrene	0.298	0.00332	"	0.332		90	39-127	5	30	
Anthracene	0.284	0.00332	"	0.332		85	41-117	5	30	
2-Methylnaphthalene	0.279	0.00332	"	0.332		84	39-110	1	30	
1-Methylnaphthalene	0.264	0.00332	"	0.332		80	39-109	3	30	
Benzo(a)anthracene	0.297	0.00332	"	0.332		89	42-120	3	30	
Benzo(k)fluoranthene	0.280	0.00332	"	0.332		84	40-122	4	30	
Surrogate: 5-alpha-Androstane	0.167		"	0.166		101	22-135			

MS (1205936375 S)

Source: E4K0650-01

Prepared: 12/03/2024 Analyzed: 12/03/2024

Origins Laboratory



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.

Absaroka
112 High St.
Buffalo

WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Labrisa 11-35 HZ Facility

PAH by 3541/8270 - Quality Control

GEL Laboratories, LLC

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

Batch 2714193 - SW846 3541

MS (1205936375 S)		Source: E4K0650-01			Prepared: 12/03/2024 Analyzed: 12/03/2024					
Fluoranthene	0.291	0.00384	mg/kg dry	0.384	<0.00127	76	14-136			
Pyrene	0.287	0.00384	"	0.384	0.00306	74	12-139			
Naphthalene	0.280	0.00384	"	0.384	0.00420	72	16-126			
Fluorene	0.316	0.00384	"	0.384	0.0218	77	16-134			
Dibenzo(a,h)anthracene	0.280	0.00384	"	0.384	<0.00127	73	11-134			
Chrysene	0.306	0.00384	"	0.384	0.00306	79	19-129			
Benzo(k)fluoranthene	0.269	0.00384	"	0.384	<0.00127	70	18-138			
1-Methylnaphthalene	0.465	0.00384	"	0.384	0.0783	101	15-129			
Benzo(a)pyrene	0.292	0.00384	"	0.384	<0.00127	76	16-133			
Benzo(a)anthracene	0.295	0.00384	"	0.384	0.00497	76	20-132			
Anthracene	0.293	0.00384	"	0.384	<0.00127	76	18-136			
Acenaphthene	0.285	0.00384	"	0.384	0.00229	74	17-129			
2-Methylnaphthalene	0.382	0.00384	"	0.384	0.0256	93	15-132			
Indeno(1,2,3-cd)pyrene	0.285	0.00384	"	0.384	<0.00127	74	13-134			
Benzo(b)fluoranthene	0.275	0.00384	"	0.384	<0.00127	72	14-136			
Surrogate: 5-alpha-Androstane	0.181		"	0.192	0.160	94	22-135			

MSD (1205936376 SD)		Source: E4K0650-01			Prepared: 12/03/2024 Analyzed: 12/03/2024					
Chrysene	0.239	0.00377	mg/kg dry	0.377	0.00306	63	19-129	24	30	
Dibenzo(a,h)anthracene	0.227	0.00377	"	0.377	<0.00124	60	11-134	21	30	
Fluoranthene	0.233	0.00377	"	0.377	<0.00124	62	14-136	22	30	
Fluorene	0.229	0.00377	"	0.377	0.0218	55	16-134	32	30	
Benzo(k)fluoranthene	0.216	0.00377	"	0.377	<0.00124	57	18-138	22	30	
Naphthalene	0.193	0.00377	"	0.377	0.00420	50	16-126	37	30	
Indeno(1,2,3-cd)pyrene	0.230	0.00377	"	0.377	<0.00124	61	13-134	22	30	
Benzo(b)fluoranthene	0.227	0.00377	"	0.377	<0.00124	60	14-136	19	30	
Benzo(a)pyrene	0.237	0.00377	"	0.377	<0.00124	63	16-133	21	30	

Origins Laboratory



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.



Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

PAH by 3541/8270 - Quality Control
GEL Laboratories, LLC

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

Batch 2714193 - SW846 3541

MSD (1205936376 SD)		Source: E4K0650-01			Prepared: 12/03/2024 Analyzed: 12/03/2024					
Benzo(a)anthracene	0.239	0.00377	mg/kg dry	0.377	0.00497	62	20-132	21	30	
Acenaphthene	0.213	0.00377	"	0.377	0.00229	56	17-129	29	30	
2-Methylnaphthalene	0.241	0.00377	"	0.377	0.0256	57	15-132	45	30	
1-Methylnaphthalene	0.275	0.00377	"	0.377	0.0783	52	15-129	51	30	
Pyrene	0.231	0.00377	"	0.377	0.00306	60	12-139	22	30	
Anthracene	0.233	0.00377	"	0.377	<0.00124	62	18-136	23	30	
Surrogate: 5-alpha-Androstane	0.129		"	0.188	0.160	68	22-135			

Origins Laboratory

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.

Jordan A. Bynon, Project Manager

Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Labrisa 11-35 HZ Facility

Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

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

J Greater than the detection limit but less than the reporting limit

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

Origins Laboratory



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.