



Absaroka

February 05, 2025

Max Dahlgren

112 High St.

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 December 12, 2024. This project is associated with Origins project number E4L0483-01.

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



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-B03@4'	E4L0483-01	Soil	December 12, 2024 14:00	12/12/2024 17:02
REL-B04@4'	E4L0483-02	Soil	December 12, 2024 14:05	12/12/2024 17:02
REL-N01@2'	E4L0483-03	Soil	December 12, 2024 14:10	12/12/2024 17:02
REL-N02@2'	E4L0483-04	Soil	December 12, 2024 14:15	12/12/2024 17:02
REL-E01@2'	E4L0483-05	Soil	December 12, 2024 14:20	12/12/2024 17:02
REL-E02@2'	E4L0483-06	Soil	December 12, 2024 14:25	12/12/2024 17:02
REL-S01@2'	E4L0483-07	Soil	December 12, 2024 14:30	12/12/2024 17:02
REL-W01@2'	E4L0483-08	Soil	December 12, 2024 14:35	12/12/2024 17:02

Origins Laboratory



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Absaroka
112 High St.
Buffalo

WY 82834

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

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: E4L0483

Client: Absaroka

Client Project ID: LABRISA

Checklist Completed by: JADAKK

Shipped Via: 4D
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 12/12/12

Airbill #: N/A

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

Cooler Number/Temperature: 19.6 °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 ⁽¹⁾ ?		/		SD
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 ⁽¹⁾ ?	/			
Was adequate sample volume provided ⁽¹⁾ ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		/		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	/			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	/			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	/			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	/			
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 ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCl, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			/	
Additional Comments (if any):				

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

Reviewed by (Project Manager) JADAKK

Date/Time Reviewed 12/12/12

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-B03@4'

12/12/2024 2:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
E4L0483-01 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.0994	mg/L	1	B4L1334	12/13/2024	12/16/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4L1245	12/12/2024	12/13/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	75.8 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4L1246	12/12/2024	12/12/2024	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	96.3 %		70-130			"	"	"	
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Origins Laboratory



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Absaroka
 112 High St.
 Buffalo WY 82834

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

REL-B03@4'

12/12/2024 2:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	95.6 %	70-130	B4L12 46	12/12/2024	12/12/2024
Surrogate: 4-Bromofluorobenzene	96.9 %	70-130	"	"	"

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4L1244	12/12/2024	12/13/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	99.9 %	60-130	"	"	"
Surrogate: Anthracene-d10	102 %	60-130	"	"	"
Surrogate: Pyrene-d10	105 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	105 %	60-130	"	"	"

Origins Laboratory



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

REL-B03@4'

12/12/2024 2:00:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.12	0.255	mg/kg	10	B4L1243	12/12/2024	12/13/2024
Barium	30.4	8.80	"	"	"	"	"
Cadmium	ND	0.0880	"	"	"	"	"
Copper	ND	8.80	"	"	"	"	"
Lead	3.20	0.880	"	"	"	"	"
Nickel	2.85	0.880	"	"	"	"	"

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-B04@4'

12/12/2024 2:05:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-02 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.0989	mg/L	1	B4L1334	12/13/2024	12/16/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4L1245	12/12/2024	12/13/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	81.4 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4L1246	12/12/2024	12/12/2024	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	98.1 %		70-130			"	"	"	
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112 High St.
Buffalo WY 82834

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

REL-B04@4'

12/12/2024 2:05:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	95.7 %		70-130			B4L1246	12/12/2024	12/12/2024	
Surrogate: 4-Bromofluorobenzene	97.7 %		70-130			"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4L1244	12/12/2024	12/13/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	101 %		60-130			"	"	"	
Surrogate: Anthracene-d10	96.8 %		60-130			"	"	"	
Surrogate: Pyrene-d10	104 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	105 %		60-130			"	"	"	

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

REL-B04@4'

12/12/2024 2:05:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-02 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.03		0.251	mg/kg	10	B4L1243	12/12/2024	12/13/2024	
Barium	27.3		8.66	"	"	"	"	"	
Cadmium	ND		0.0866	"	"	"	"	"	
Copper	ND		8.66	"	"	"	"	"	
Lead	4.08		0.866	"	"	"	"	"	
Nickel	2.41		0.866	"	"	"	"	"	

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112 High St.
Buffalo WY 82834

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

REL-N01@2'

12/12/2024 2:10:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-03 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.100	mg/L	1	B4L1334	12/13/2024	12/16/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4L1245	12/12/2024	12/13/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	86.3 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4L1246	12/12/2024	12/12/2024	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	97.8 %		70-130			"	"	"	
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Origins Laboratory



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112 High St.
Buffalo WY 82834

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

REL-N01@2'

12/12/2024 2:10:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-03 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	95.7 %		70-130			B4L1246	12/12/2024	12/12/2024	
Surrogate: 4-Bromofluorobenzene	97.5 %		70-130			"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4L1244	12/12/2024	12/13/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	102 %		60-130			"	"	"	
Surrogate: Anthracene-d10	91.9 %		60-130			"	"	"	
Surrogate: Pyrene-d10	105 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	102 %		60-130			"	"	"	

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Absaroka
112 High St.
Buffalo WY 82834

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

REL-N01@2'

12/12/2024 2:10:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-03 (Soil)

Table 915 metals by EPA 6020B

Arsenic	0.925		0.280	mg/kg	10	B4L1243	12/12/2024	12/13/2024	
Barium	22.8		9.66	"	"	"	"	"	
Cadmium	ND		0.0966	"	"	"	"	"	
Copper	ND		9.66	"	"	"	"	"	
Lead	3.47		0.966	"	"	"	"	"	
Nickel	1.97		0.966	"	"	"	"	"	

Origins Laboratory



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Absaroka
 112 High St.
 Buffalo WY 82834

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

REL-N02@2'

12/12/2024 2:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-04 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.101	mg/L	1	B4L1334	12/13/2024	12/16/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4L1245	12/12/2024	12/13/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl 86.5 % 50-150 " " "

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4L1246	12/12/2024	12/13/2024	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 97.8 % 70-130 " " "

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-N02@2'

12/12/2024 2:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
E4L0483-04 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	95.5 %		70-130			B4L12 46	12/12/2024	12/13/2024	
Surrogate: 4-Bromofluorobenzene	98.7 %		70-130			"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4L1244	12/12/2024	12/13/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	101 %		60-130			"	"	"	
Surrogate: Anthracene-d10	105 %		60-130			"	"	"	
Surrogate: Pyrene-d10	105 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	101 %		60-130			"	"	"	

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-N02@2'

12/12/2024 2:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-04 (Soil)

Table 915 metals by EPA 6020B

Arsenic	0.983	0.252	mg/kg	10	B4L1243	12/12/2024	12/13/2024
Barium	25.0	8.70	"	"	"	"	"
Cadmium	ND	0.0870	"	"	"	"	"
Copper	ND	8.70	"	"	"	"	"
Lead	3.28	0.870	"	"	"	"	"
Nickel	2.24	0.870	"	"	"	"	"

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-E01@2'

12/12/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-05 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.0990	mg/L	1	B4L1334	12/13/2024	12/16/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	47.5		25.0	mg/kg	1	B4L1245	12/12/2024	12/13/2024	
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	86.8 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	0.0331		0.00200	mg/kg	1	B4L1246	12/12/2024	12/13/2024	
1,3,5-Trimethylbenzene	0.0128		0.00200	"	"	"	"	"	
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	0.0215		0.00200	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.40		0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	107 %		70-130			"	"	"	
Surrogate: Toluene-d8	95.0 %		70-130			"	"	"	

Origins Laboratory



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Absaroka
 112 High St.
 Buffalo WY 82834

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

REL-E01@2'

12/12/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
 E4L0483-05 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	113 %	70-130			B4L12 46	12/12/2024	12/13/2024
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PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	0.140	0.002	mg/kg	1	B4L1244	12/12/2024	12/13/2024
2-Methylnaphthalene	0.195	0.002	"	"	"	"	"
Acenaphthene	ND	0.020	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	U
Fluorene	0.031	0.020	"	"	"	"	
Naphthalene	0.035	0.002	"	"	"	"	
Pyrene	ND	0.020	"	"	"	"	U

Surrogate: Fluorene-d10	104 %	60-130			"	"	"
Surrogate: Anthracene-d10	100 %	60-130			"	"	"
Surrogate: Pyrene-d10	106 %	60-130			"	"	"
Surrogate: Benzo (a) pyrene-d12	105 %	60-130			"	"	"

Table 915 metals by EPA 6020B

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-E01@2'

12/12/2024 2:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-05 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.49		0.273	mg/kg	10	B4L1243	12/12/2024	12/13/2024	
Barium	51.4		9.40	"	"	"	"	"	
Cadmium	ND		0.0940	"	"	"	"	"	
Copper	ND		9.40	"	"	"	"	"	
Lead	4.49		0.940	"	"	"	"	"	
Nickel	3.69		0.940	"	"	"	"	"	

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-E02@2'

12/12/2024 2:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-06 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.101	mg/L	1	B4L1334	12/13/2024	12/16/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4L1245	12/12/2024	12/13/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	85.1 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4L1246	12/12/2024	12/13/2024	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	99.8 %		70-130			"	"	"	
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Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-E02@2'

12/12/2024 2:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-06 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.8 %		70-130			B4L12 46	12/12/2024	12/13/2024	
Surrogate: 4-Bromofluorobenzene	115 %		70-130			"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4L1244	12/12/2024	12/13/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	101 %		60-130			"	"	"	
Surrogate: Anthracene-d10	103 %		60-130			"	"	"	
Surrogate: Pyrene-d10	106 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	103 %		60-130			"	"	"	

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-E02@2'

12/12/2024 2:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-06 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.11		0.245	mg/kg	10	B4L1243	12/12/2024	12/13/2024	
Barium	24.3		8.43	"	"	"	"	"	
Cadmium	ND		0.0843	"	"	"	"	"	
Copper	ND		8.43	"	"	"	"	"	
Lead	3.65		0.843	"	"	"	"	"	
Nickel	2.26		0.843	"	"	"	"	"	

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Absaroka
112 High St.
Buffalo WY 82834

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

REL-S01@2'

12/12/2024 2:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
E4L0483-07 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.102	mg/L	1	B4L1334	12/13/2024	12/16/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4L1245	12/12/2024	12/13/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	82.4 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4L1246	12/12/2024	12/13/2024	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	"	"	"	"	12/13/2024	U

Surrogate: 1,2-Dichloroethane-d4	101 %		70-130			"	"	12/13/2024	
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Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-S01@2'

12/12/2024 2:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory
E4L0483-07 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	99.7 %		70-130			B4L12 46	12/12/2024	12/13/2024	
Surrogate: 4-Bromofluorobenzene	115 %		70-130			"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4L1244	12/12/2024	12/13/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	100 %		60-130			"	"	"	
Surrogate: Anthracene-d10	102 %		60-130			"	"	"	
Surrogate: Pyrene-d10	104 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	106 %		60-130			"	"	"	

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Absaroka
112 High St.
Buffalo WY 82834

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

REL-S01@2'

12/12/2024 2:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-07 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.00	0.246	mg/kg	10	B4L1243	12/12/2024	12/13/2024
Barium	25.5	8.48	"	"	"	"	"
Cadmium	ND	0.0848	"	"	"	"	"
Copper	ND	8.48	"	"	"	"	"
Lead	3.98	0.848	"	"	"	"	"
Nickel	2.31	0.848	"	"	"	"	"

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

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

REL-W01@2'

12/12/2024 2:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-08 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.101	mg/L	1	B4L1334	12/13/2024	12/16/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4L1245	12/12/2024	12/13/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	83.0 %		50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4L1246	12/12/2024	12/13/2024	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	102 %		70-130			"	"	"	
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Origins Laboratory



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Absaroka
 112 High St.
 Buffalo WY 82834

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

REL-W01@2'

12/12/2024 2:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
 E4L0483-08 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	97.8 %		70-130			B4L12 46	12/12/2024	12/13/2024	
Surrogate: 4-Bromofluorobenzene	113 %		70-130			"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4L1244	12/12/2024	12/13/2024	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	102 %		60-130			"	"	"	
Surrogate: Anthracene-d10	99.7 %		60-130			"	"	"	
Surrogate: Pyrene-d10	106 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	101 %		60-130			"	"	"	

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Absaroka
112 High St.
Buffalo WY 82834

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

REL-W01@2'

12/12/2024 2:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E4L0483-08 (Soil)

Table 915 metals by EPA 6020B

Arsenic	0.946	0.252	mg/kg	10	B4L1243	12/12/2024	12/13/2024
Barium	28.6	8.70	"	"	"	"	"
Cadmium	ND	0.0870	"	"	"	"	"
Copper	ND	8.70	"	"	"	"	"
Lead	2.81	0.870	"	"	"	"	"
Nickel	2.23	0.870	"	"	"	"	"

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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 B4L1245 - EPA 3550B										
Blank (B4L1245-BLK1)										
					Prepared: 12/12/2024 Analyzed: 12/13/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	21		"	24.9		85.7	50-150			

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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 B4L1245 - EPA 3550B										
LCS (B4L1245-BS1)										
					Prepared: 12/12/2024 Analyzed: 12/13/2024					
Diesel (C10-C28)	932	50.0	mg/kg	1000		93.2	70-130			
Residual Range Organics (C28-C40)	1030	200	"	1000		103	70-130			
Surrogate: o-Terphenyl	40		"	49.8		80.7	50-150			

Origins Laboratory



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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
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Batch B4L1245 - EPA 3550B

Matrix Spike (B4L1245-MS1)	Source: E4L0483-01			Prepared: 12/12/2024 Analyzed: 12/13/2024						
Diesel (C10-C28)	932	50.0	mg/kg	1000	ND	93.2	70-130			
Residual Range Organics (C28-C40)	1050	200	"	1000	ND	105	70-130			
Surrogate: o-Terphenyl	54		"	49.8		108	50-150			

Origins Laboratory



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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
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Batch B4L1245 - EPA 3550B

Matrix Spike Dup (B4L1245-MSD1)	Source: E4L0483-01				Prepared: 12/12/2024 Analyzed: 12/13/2024					
Diesel (C10-C28)	924	50.0	mg/kg	1000	ND	92.4	70-130	0.872	35	
Residual Range Organics (C28-C40)	1030	200	"	1000	ND	103	70-130	1.59	35	
Surrogate: o-Terphenyl	39		"	49.8		78.7	50-150			

Origins Laboratory



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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
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Batch B4L1246 - EPA 5030 (soil)

Blank (B4L1246-BLK1)

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

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	0.12		"	0.125		99.5	70-130			
Surrogate: Toluene-d8	0.14		"	0.125		110	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.5	70-130			

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Absaroka
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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
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Batch B4L1246 - EPA 5030 (soil)

LCS (B4L1246-BS1)

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

1,2,4-Trimethylbenzene	0.111	0.00200	mg/kg	0.100		111	70-130			
1,3,5-Trimethylbenzene	0.107	0.00200	"	0.100		107	70-130			
Benzene	0.0970	0.00200	"	0.100		97.0	70-130			
Ethylbenzene	0.0984	0.00200	"	0.100		98.4	70-130			
Naphthalene	0.106	0.00380	"	0.100		106	70-130			
Toluene	0.0945	0.00200	"	0.100		94.5	70-130			
o-Xylene	0.113	0.00200	"	0.100		113	70-130			
m,p-Xylene	0.207	0.00400	"	0.200		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.5	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		90.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.2	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 B4L1246 - EPA 5030 (soil)

Matrix Spike (B4L1246-MS1)	Source: E4L0483-01			Prepared: 12/12/2024 Analyzed: 12/13/2024						
1,2,4-Trimethylbenzene	0.120	0.00200	mg/kg	0.100	ND	120	70-130			
1,3,5-Trimethylbenzene	0.120	0.00200	"	0.100	ND	120	70-130			
Benzene	0.0938	0.00200	"	0.100	ND	93.8	70-130			
Ethylbenzene	0.123	0.00200	"	0.100	ND	123	70-130			
Naphthalene	0.112	0.00380	"	0.100	0.00168	110	70-130			
Toluene	0.106	0.00200	"	0.100	ND	106	70-130			
o-Xylene	0.121	0.00200	"	0.100	ND	121	70-130			
m,p-Xylene	0.241	0.00400	"	0.200	ND	121	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		109	70-130			

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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
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Batch B4L1246 - EPA 5030 (soil)

Matrix Spike Dup (B4L1246-MSD1)	Source: E4L0483-01			Prepared: 12/12/2024 Analyzed: 12/12/2024						
1,2,4-Trimethylbenzene	0.0955	0.00200	mg/kg	0.100	ND	95.5	70-130	22.5	20	QR-02
1,3,5-Trimethylbenzene	0.0928	0.00200	"	0.100	ND	92.8	70-130	25.5	20	QR-02
Benzene	0.0837	0.00200	"	0.100	ND	83.7	70-130	11.3	20	
Ethylbenzene	0.0846	0.00200	"	0.100	ND	84.6	70-130	36.6	20	QR-02
Naphthalene	0.105	0.00380	"	0.100	0.00168	103	70-130	6.27	20	
Toluene	0.0871	0.00200	"	0.100	ND	87.1	70-130	19.4	20	
o-Xylene	0.0981	0.00200	"	0.100	ND	98.1	70-130	20.5	20	QR-02
m,p-Xylene	0.180	0.00400	"	0.200	ND	90.2	70-130	29.0	20	QR-02
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.5	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.6	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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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 B4L1243 - EPA 3050B

Blank (B4L1243-BLK1)

Prepared: 12/12/2024 Analyzed: 12/13/2024

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 (B4L1243-BS1)

Prepared: 12/12/2024 Analyzed: 12/13/2024

Arsenic	5.07	0.290	mg/kg	5.00	101	80-120
Barium	503	10.0	"	500	101	80-120
Cadmium	5.17	0.100	"	5.00	103	80-120
Copper	50.4	10.0	"	50.0	101	80-120
Lead	5.01	1.00	"	5.00	100	80-120
Nickel	5.14	1.00	"	5.00	103	80-120
Selenium	5.23	0.260	"	5.00	105	80-120
Silver	5.27	0.100	"	5.00	105	80-120
Zinc	51.4	37.0	"	50.0	103	80-120

Matrix Spike (B4L1243-MS1)

Source: E4L0483-01

Prepared: 12/12/2024 Analyzed: 12/13/2024

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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
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Batch B4L1243 - EPA 3050B

Matrix Spike (B4L1243-MS1)		Source: E4L0483-01			Prepared: 12/12/2024 Analyzed: 12/13/2024					
Arsenic	5.59	0.261	mg/kg	4.50	1.12	99.3	75-125			
Barium	485	9.00	"	450	30.4	101	75-125			
Cadmium	4.70	0.0900	"	4.50	0.0467	103	75-125			
Copper	46.9	9.00	"	45.0	2.05	99.7	75-125			
Lead	8.10	0.900	"	4.50	3.20	109	75-125			
Nickel	7.28	0.900	"	4.50	2.85	98.5	75-125			
Selenium	4.52	0.234	"	4.50	0.0792	98.6	75-125			
Silver	4.73	0.0900	"	4.50	ND	105	75-125			
Zinc	58.3	33.3	"	45.0	14.2	98.1	75-125			

Matrix Spike Dup (B4L1243-MSD1)		Source: E4L0483-01			Prepared: 12/12/2024 Analyzed: 12/13/2024					
Arsenic	5.85	0.273	mg/kg	4.70	1.12	101	75-125	4.50	20	
Barium	518	9.40	"	470	30.4	104	75-125	6.53	20	
Cadmium	5.15	0.0940	"	4.70	0.0467	109	75-125	9.20	20	
Copper	49.8	9.40	"	47.0	2.05	102	75-125	5.99	20	
Lead	8.27	0.940	"	4.70	3.20	108	75-125	2.09	20	
Nickel	7.76	0.940	"	4.70	2.85	105	75-125	6.37	20	
Selenium	5.06	0.244	"	4.70	0.0792	106	75-125	11.3	20	
Silver	5.16	0.0940	"	4.70	ND	110	75-125	8.67	20	
Zinc	61.6	34.8	"	47.0	14.2	101	75-125	5.50	20	

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

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4L1244 - EPA 3580

Blank (B4L1244-BLK1)

Prepared: 12/12/2024 Analyzed: 12/13/2024

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U

Surrogate: Fluorene-d10	200		ug/kg	200	102	60-130
Surrogate: Anthracene-d10	170		"	200	86.0	60-130
Surrogate: Pyrene-d10	210		"	200	104	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200	98.0	60-130

LCS (B4L1244-BS1)

Prepared: 12/12/2024 Analyzed: 12/13/2024

1-Methylnaphthalene	0.182	0.002	mg/kg	0.200	91.0	70-130
2-Methylnaphthalene	0.178	0.002	"	0.200	89.2	70-130
Acenaphthene	0.185	0.020	"	0.200	92.5	70-130
Anthracene	0.177	0.020	"	0.200	88.5	70-130

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

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4L1244 - EPA 3580

LCS (B4L1244-BS1)

Prepared: 12/12/2024 Analyzed: 12/13/2024

Benzo (a) anthracene	0.175	0.005	mg/kg	0.200		87.7	70-130			
Benzo (a) pyrene	0.200	0.020	"	0.200		100	70-130			
Benzo (b) fluoranthene	0.190	0.020	"	0.200		94.9	70-130			
Benzo (g,h,i) perylene	0.188	0.020	"	0.200		94.1	70-130			
Benzo (k) fluoranthene	0.203	0.020	"	0.200		101	70-130			
Chrysene	0.198	0.020	"	0.200		99.1	70-130			
Dibenz (a,h) anthracene	0.206	0.020	"	0.200		103	70-130			
Fluoranthene	0.187	0.020	"	0.200		93.6	70-130			
Fluorene	0.191	0.020	"	0.200		95.3	70-130			
Indeno (1,2,3-cd) pyrene	0.207	0.020	"	0.200		104	70-130			
Naphthalene	0.184	0.002	"	0.200		91.9	70-130			
Phenanthrene	0.195	0.020	"	0.200		97.7	70-130			
Pyrene	0.191	0.020	"	0.200		95.6	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	180		"	200		92.1	60-130			
Surrogate: Pyrene-d10	210		"	200		103	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.2	60-130			

Matrix Spike (B4L1244-MS1)

Source: E4L0483-01

Prepared: 12/12/2024 Analyzed: 12/13/2024

1-Methylnaphthalene	0.182	0.002	mg/kg	0.200	ND	90.9	70-130			
2-Methylnaphthalene	0.174	0.002	"	0.200	ND	87.1	70-130			
Acenaphthene	0.184	0.020	"	0.200	0.0004	91.7	70-130			
Anthracene	0.174	0.020	"	0.200	ND	86.9	70-130			
Benzo (a) anthracene	0.179	0.005	"	0.200	0.0005	89.1	70-130			
Benzo (a) pyrene	0.197	0.020	"	0.200	0.001	97.5	70-130			
Benzo (b) fluoranthene	0.188	0.020	"	0.200	0.0008	93.5	70-130			
Benzo (g,h,i) perylene	0.190	0.020	"	0.200	0.002	94.0	70-130			

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Project: KMG - Labrisa 11-35 HZ Facility

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4L1244 - EPA 3580

Matrix Spike (B4L1244-MS1)	Source: E4L0483-01			Prepared: 12/12/2024 Analyzed: 12/13/2024						
Benzo (k) fluoranthene	0.196	0.020	mg/kg	0.200	0.001	97.4	70-130			
Chrysene	0.198	0.020	"	0.200	0.0004	98.9	70-130			
Dibenz (a,h) anthracene	0.204	0.020	"	0.200	0.002	101	70-130			
Fluoranthene	0.188	0.020	"	0.200	0.0004	93.8	70-130			
Fluorene	0.190	0.020	"	0.200	ND	94.8	70-130			
Indeno (1,2,3-cd) pyrene	0.193	0.020	"	0.200	0.002	95.4	70-130			
Naphthalene	0.179	0.002	"	0.200	ND	89.6	70-130			
Phenanthrene	0.190	0.020	"	0.200	ND	95.2	70-130			
Pyrene	0.193	0.020	"	0.200	0.001	95.7	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	200		"	200		102	60-130			
Surrogate: Pyrene-d10	210		"	200		103	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			

Matrix Spike Dup (B4L1244-MSD1)	Source: E4L0483-01			Prepared: 12/12/2024 Analyzed: 12/13/2024						
1-Methylnaphthalene	0.188	0.002	mg/kg	0.200	ND	93.8	70-130	3.12	20	
2-Methylnaphthalene	0.179	0.002	"	0.200	ND	89.7	70-130	2.90	20	
Acenaphthene	0.189	0.020	"	0.200	0.0004	94.5	70-130	3.01	20	
Anthracene	0.180	0.020	"	0.200	ND	89.9	70-130	3.37	20	
Benzo (a) anthracene	0.189	0.005	"	0.200	0.0005	94.0	70-130	5.42	20	
Benzo (a) pyrene	0.195	0.020	"	0.200	0.001	96.9	70-130	0.598	20	
Benzo (b) fluoranthene	0.194	0.020	"	0.200	0.0008	96.8	70-130	3.41	20	
Benzo (g,h,i) perylene	0.190	0.020	"	0.200	0.002	93.9	70-130	0.0250	20	
Benzo (k) fluoranthene	0.210	0.020	"	0.200	0.001	104	70-130	6.74	20	
Chrysene	0.190	0.020	"	0.200	0.0004	94.7	70-130	4.31	20	
Dibenz (a,h) anthracene	0.208	0.020	"	0.200	0.002	103	70-130	1.89	20	
Fluoranthene	0.188	0.020	"	0.200	0.0004	93.9	70-130	0.150	20	

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

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B4L1244 - EPA 3580

Matrix Spike Dup (B4L1244-MSD1)	Source: E4L0483-01			Prepared: 12/12/2024 Analyzed: 12/13/2024						
Fluorene	0.195	0.020	mg/kg	0.200	ND	97.3	70-130	2.59	20	
Indeno (1,2,3-cd) pyrene	0.206	0.020	"	0.200	0.002	102	70-130	6.60	20	
Naphthalene	0.184	0.002	"	0.200	ND	92.2	70-130	2.86	20	
Phenanthrene	0.190	0.020	"	0.200	ND	95.1	70-130	0.0608	20	
Pyrene	0.191	0.020	"	0.200	0.001	94.8	70-130	0.998	20	
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		98.3	60-130			
Surrogate: Pyrene-d10	200		"	200		101	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

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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 B4L1334 - DTPA Sorbitol Preparation										
Blank (B4L1334-BLK1)					Prepared: 12/13/2024 Analyzed: 12/16/2024					
Boron	ND	0.100	mg/L							
Duplicate (B4L1334-DUP1)					Source: E4L0481-01 Prepared: 12/13/2024 Analyzed: 12/16/2024					
Boron	0.538	0.0985	mg/L		0.708			27.4	50	

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

Notes and Definitions

U Sample is Non-Detect.

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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