



Absaroka
Max Dahlgren
112 High St.

February 20, 2025

Buffalo WY 82834

Project Name - KMG - Leppla 16-2 Facility

Project Number - [none]

Attached are your analytical results for KMG - Leppla 16-2 Facility received by Origins Laboratory January 23, 2025. This project is associated with Origins project number E5A0464-01.

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 - Leppla 16-2 Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PW1-B01@3'	E5A0464-01	Soil	January 23, 2025 9:00	01/23/2025 15:31
PW2-B01@3'	E5A0464-02	Soil	January 23, 2025 9:10	01/23/2025 15:31
PW1-S01@1.5'	E5A0464-03	Soil	January 23, 2025 9:05	01/23/2025 15:31
PW2-N01@1.5'	E5A0464-04	Soil	January 23, 2025 9:15	01/23/2025 15:31
AST1-B01@3"	E5A0464-05	Soil	January 23, 2025 9:45	01/23/2025 15:31
AST2-B01@3"	E5A0464-06	Soil	January 23, 2025 9:50	01/23/2025 15:31
AST3-B01@3"	E5A0464-07	Soil	January 23, 2025 9:55	01/23/2025 15:31
AST4-B01@3"	E5A0464-08	Soil	January 23, 2025 10:00	01/23/2025 15:31
AST5-B01@3"	E5A0464-09	Soil	January 23, 2025 10:20	01/23/2025 15:31
AST6-B01@3"	E5A0464-10	Soil	January 23, 2025 10:25	01/23/2025 15:31
AST7-B01@3"	E5A0464-11	Soil	January 23, 2025 10:30	01/23/2025 15:31
AST8-B01@3"	E5A0464-12	Soil	January 23, 2025 10:35	01/23/2025 15:31
SEP1-B01@5'	E5A0464-13	Soil	January 23, 2025 11:50	01/23/2025 15:31
SEP1-B02@5'	E5A0464-14	Soil	January 23, 2025 11:52	01/23/2025 15:31

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 - Leppla 16-2 Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP2-B01@5'	E5A0464-15	Soil	January 23, 2025 11:55	01/23/2025 15:31
SEP2-B02@5'	E5A0464-16	Soil	January 23, 2025 11:57	01/23/2025 15:31
SEP3-B01@5'	E5A0464-17	Soil	January 23, 2025 12:00	01/23/2025 15:31
SEP3-B02@5'	E5A0464-18	Soil	January 23, 2025 12:05	01/23/2025 15:31

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 - Leppla 16-2 Facility

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: EC10409 Client: Absaroka
 Checklist Completed by: WS / JEM Client Project ID: Leppla 16-2
 Date/time completed: 1/23/25 Shipped Via: HO
 (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, 4.8 c (Describe)
 Thermometer ID: 10007

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"/>			
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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+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) WS Date/Time Reviewed 1/23/25

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 - Leppla 16-2 Facility

PW1-B01@3'

1/23/2025 9:00:00AM

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

**Origins Laboratory
E5A0464-01 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.102	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	--	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/23/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	79.5 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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	100 %		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 - Leppla 16-2 Facility

PW1-B01@3'

1/23/2025 9:00:00AM

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

**Origins Laboratory
E5A0464-01 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	101 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	102 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	ND		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	0.485		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00296	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00740	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0411	0.0833	"	"	"	"	"	
Anthracene	ND	0.0411	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00543	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0411	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0411	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0411	0.0833	"	"	"	"	"	
Chrysene	ND	0.0411	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0411	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0411	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

PW1-B01@3'

1/23/2025 9:00:00AM

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

Enthalpy Analytical
E5A0464-01 (Soil)

PAH by SW8270

Fluorene	ND	0.0411	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0411	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00188	0.00380	"	"	"	"	"	
Pyrene	ND	0.0411	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	43.3 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	45.2 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	25.1 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	47.7 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	44.7 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	65.4 %		25-125			"	"	"	

pH in Soil by 9045D

pH	7.73			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	1.38		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.0966		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	--------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

PW1-B01@3'

1/23/2025 9:00:00AM

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

**Origins Laboratory
E5A0464-01 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	1.18		0.263	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	16.4		9.08	"	"	"	"	"	
Cadmium	ND		0.0908	"	"	"	"	"	
Copper	ND		9.08	"	"	"	"	"	
Lead	2.39		0.908	"	"	"	"	"	
Nickel	2.54		0.908	"	"	"	"	"	
Selenium	ND		0.236	"	"	"	"	"	
Silver	ND		0.0908	"	"	"	"	"	
Zinc	ND		33.6	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

PW2-B01@3'

1/23/2025 9:10:00AM

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

**Origins Laboratory
E5A0464-02 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.101	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	--	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/23/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	83.3 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	0.00328		0.00200	"	"	"	"	"	
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.7 %		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 - Leppla 16-2 Facility

PW2-B01@3'

1/23/2025 9:10:00AM

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

**Origins Laboratory
E5A0464-02 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	102 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	99.4 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	ND		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00291	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00728	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0404	0.0833	"	"	"	"	"	
Anthracene	ND	0.0404	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00534	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0404	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0404	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0404	0.0833	"	"	"	"	"	
Chrysene	ND	0.0404	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0404	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0404	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

PW2-B01@3'

1/23/2025 9:10:00AM

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

Enthalpy Analytical
E5A0464-02 (Soil)

PAH by SW8270

Fluorene	ND	0.0404	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0404	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00184	0.00380	"	"	"	"	"	
Pyrene	ND	0.0404	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	63.1 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	58.0 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	36.3 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	59.9 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	57.7 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	81.5 %		25-125			"	"	"	

pH in Soil by 9045D

pH	7.86			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.315		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.127		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

PW2-B01@3'

1/23/2025 9:10:00AM

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

**Origins Laboratory
E5A0464-02 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	1.59		0.244	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	18.5		8.42	"	"	"	"	"	
Cadmium	ND		0.0842	"	"	"	"	"	
Copper	ND		8.42	"	"	"	"	"	
Lead	2.05		0.842	"	"	"	"	"	
Nickel	2.80		0.842	"	"	"	"	"	
Selenium	ND		0.219	"	"	"	"	"	
Silver	ND		0.0842	"	"	"	"	"	
Zinc	ND		31.2	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

PW1-S01@1.5'

1/23/2025 9:05:00AM

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

Origins Laboratory
E5A0464-03 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.101	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B5A2325	01/23/2025	01/23/2025	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	86.9 %	50-150			"	"	"
--------------------------------	--------	--------	--	--	---	---	---

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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	0.454	0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	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 - Leppla 16-2 Facility

PW1-S01@1.5'

1/23/2025 9:05:00AM

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

**Origins Laboratory
E5A0464-03 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	101 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.25		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00286	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00714	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0397	0.0833	"	"	"	"	"	
Anthracene	ND	0.0397	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00524	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0397	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0397	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0397	0.0833	"	"	"	"	"	
Chrysene	ND	0.0397	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0397	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0397	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

PW1-S01@1.5'

1/23/2025 9:05:00AM

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

Enthalpy Analytical
E5A0464-03 (Soil)

PAH by SW8270

Fluorene	ND	0.0397	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0397	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00181	0.00380	"	"	"	"	"	
Pyrene	ND	0.0397	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	50.7 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	48.9 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	26.8 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	54.5 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	50.6 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	70.1 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.27			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.103		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.220		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

PW1-S01@1.5'

1/23/2025 9:05:00AM

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

**Origins Laboratory
E5A0464-03 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	0.986		0.260	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	17.1		8.96	"	"	"	"	"	
Cadmium	ND		0.0896	"	"	"	"	"	
Copper	ND		8.96	"	"	"	"	"	
Lead	2.57		0.896	"	"	"	"	"	
Nickel	2.28		0.896	"	"	"	"	"	
Selenium	ND		0.233	"	"	"	"	"	
Silver	ND		0.0896	"	"	"	"	"	
Zinc	ND		33.2	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

PW2-N01@1.5'

1/23/2025 9:15:00AM

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

Origins Laboratory
E5A0464-04 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.0997	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	--	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/23/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl 89.3 % 50-150 " " "

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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 103 % 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 - Leppla 16-2 Facility

PW2-N01@1.5'

1/23/2025 9:15:00AM

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

Origins Laboratory
E5A0464-04 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	101 %		70-130			B5A23 20	01/23/2025	01/23/2025
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	0.973		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025
Magnesium	ND		0.823	"	"	"	"	"
Sodium	ND		0.435	"	"	"	"	"

PAH by SW8270

1-Methylnaphthalene	ND	0.00299	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025
2-Methylnaphthalene	ND	0.00748	0.0150	"	"	"	"	"
Acenaphthene	ND	0.0415	0.0833	"	"	"	"	"
Anthracene	ND	0.0415	0.0833	"	"	"	"	"
Benzo (a) anthracene	ND	0.00548	0.0110	"	"	"	"	"
Benzo (a) pyrene	ND	0.0415	0.0833	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.0415	0.0833	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.0415	0.0833	"	"	"	"	"
Chrysene	ND	0.0415	0.0833	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.0415	0.0833	"	"	"	"	"
Fluoranthene	ND	0.0415	0.0833	"	"	"	"	"

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 - Leppla 16-2 Facility

PW2-N01@1.5'

1/23/2025 9:15:00AM

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

Enthalpy Analytical
E5A0464-04 (Soil)

PAH by SW8270

Fluorene	ND	0.0415	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0415	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00189	0.00380	"	"	"	"	"	
Pyrene	ND	0.0415	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	47.8 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	48.1 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	28.4 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	53.3 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	48.3 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	65.3 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.23			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.149		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.185		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

PW2-N01@1.5'

1/23/2025 9:15:00AM

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

Origins Laboratory
E5A0464-04 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.07		0.264	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	20.3		9.11	"	"	"	"	"	
Cadmium	ND		0.0911	"	"	"	"	"	
Copper	ND		9.11	"	"	"	"	"	
Lead	2.68		0.911	"	"	"	"	"	
Nickel	4.50		0.911	"	"	"	"	"	
Selenium	ND		0.237	"	"	"	"	"	
Silver	ND		0.0911	"	"	"	"	"	
Zinc	ND		33.7	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST1-B01@3"

1/23/2025 9:45:00AM

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

Origins Laboratory
E5A0464-05 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.100	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	--	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/23/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl 89.4 % 50-150 " " "

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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 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 - Leppla 16-2 Facility

AST1-B01@3"

1/23/2025 9:45:00AM

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

**Origins Laboratory
E5A0464-05 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	100 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	ND		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	1.69		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00297	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00743	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0412	0.0833	"	"	"	"	"	
Anthracene	ND	0.0412	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00545	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0412	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0412	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0412	0.0833	"	"	"	"	"	
Chrysene	ND	0.0412	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0412	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0412	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

AST1-B01@3"

1/23/2025 9:45:00AM

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

Enthalpy Analytical
E5A0464-05 (Soil)

PAH by SW8270

Fluorene	ND	0.0412	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025
Indeno (1,2,3-cd) pyrene	ND	0.0412	0.0833	"	"	"	"	"
Naphthalene	ND	0.00188	0.00380	"	"	"	"	"
Pyrene	ND	0.0412	0.0833	"	"	"	"	"

Surrogate: 2,4,6-Tribromophenol (Surr)	52.8 %		15-96			"	"	"
Surrogate: 2-Fluorobiphenyl (Surr)	54.9 %		19-105			"	"	"
Surrogate: 2-Fluorophenol (Surr)	30.2 %		12-95			"	"	"
Surrogate: Nitrobenzene-d5 (Surr)	60.9 %		21-100			"	"	"
Surrogate: Phenol-d5 (Surr)	55.9 %		13-100			"	"	"
Surrogate: p-Terphenyl-d14 (Surr)	80.8 %		25-125			"	"	"

pH in Soil by 9045D

pH	8.46			pH Units	1	B5A2326	01/23/2025	01/28/2025
----	------	--	--	----------	---	---------	------------	------------

SAR by 20B Saturated Paste

SAR	2.51		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025
-----	------	--	--------	-----	---	---------	------------	------------

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.356		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025
---------------------------	-------	--	---------	----------	---	---------	------------	------------

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 - Leppla 16-2 Facility

AST1-B01@3"

1/23/2025 9:45:00AM

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

**Origins Laboratory
E5A0464-05 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.57		0.250	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	44.1		8.64	"	"	"	"	"	
Cadmium	ND		0.0864	"	"	"	"	"	
Copper	ND		8.64	"	"	"	"	"	
Lead	4.64		0.864	"	"	"	"	"	
Nickel	5.58		0.864	"	"	"	"	"	
Selenium	ND		0.225	"	"	"	"	"	
Silver	ND		0.0864	"	"	"	"	"	
Zinc	ND		32.0	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST2-B01@3"

1/23/2025 9:50:00AM

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

**Origins Laboratory
E5A0464-06 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.100	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	--	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/23/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	84.1 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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	105 %		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 - Leppla 16-2 Facility

AST2-B01@3"

1/23/2025 9:50:00AM

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

**Origins Laboratory
E5A0464-06 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	101 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	102 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.754		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	0.871		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00300	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00750	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0416	0.0833	"	"	"	"	"	
Anthracene	ND	0.0416	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00550	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0416	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0416	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0416	0.0833	"	"	"	"	"	
Chrysene	ND	0.0416	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0416	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0416	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

AST2-B01@3"

1/23/2025 9:50:00AM

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

Enthalpy Analytical
E5A0464-06 (Soil)

PAH by SW8270

Fluorene	ND	0.0416	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0416	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00190	0.00380	"	"	"	"	"	
Pyrene	ND	0.0416	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	60.9 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	62.0 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	37.5 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	62.5 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	59.8 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	87.1 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.36			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.138		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.211		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST2-B01@3"

1/23/2025 9:50:00AM

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

**Origins Laboratory
E5A0464-06 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	5.56		0.262	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	55.1		9.02	"	"	"	"	"	
Cadmium	0.115		0.0902	"	"	"	"	"	
Copper	ND		9.02	"	"	"	"	"	
Lead	5.97		0.902	"	"	"	"	"	
Nickel	5.88		0.902	"	"	"	"	"	
Selenium	ND		0.235	"	"	"	"	"	
Silver	ND		0.0902	"	"	"	"	"	
Zinc	ND		33.4	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST3-B01@3"

1/23/2025 9:55:00AM

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

**Origins Laboratory
E5A0464-07 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.0983	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	--	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/23/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	85.0 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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	106 %		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 - Leppla 16-2 Facility

AST3-B01@3"

1/23/2025 9:55:00AM

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

**Origins Laboratory
E5A0464-07 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	100 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	99.8 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.868		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00298	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00745	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0414	0.0833	"	"	"	"	"	
Anthracene	ND	0.0414	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00546	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0414	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0414	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0414	0.0833	"	"	"	"	"	
Chrysene	ND	0.0414	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0414	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0414	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

AST3-B01@3"

1/23/2025 9:55:00AM

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

Enthalpy Analytical
E5A0464-07 (Soil)

PAH by SW8270

Fluorene	ND	0.0414	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0414	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00189	0.00380	"	"	"	"	"	
Pyrene	ND	0.0414	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	48.6 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	40.6 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	23.9 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	44.5 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	42.1 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	74.0 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.29			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.429		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.247		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST3-B01@3"

1/23/2025 9:55:00AM

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

**Origins Laboratory
E5A0464-07 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	1.88		0.279	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	39.2		9.63	"	"	"	"	"	
Cadmium	ND		0.0963	"	"	"	"	"	
Copper	ND		9.63	"	"	"	"	"	
Lead	3.95		0.963	"	"	"	"	"	
Nickel	5.33		0.963	"	"	"	"	"	
Selenium	ND		0.250	"	"	"	"	"	
Silver	ND		0.0963	"	"	"	"	"	
Zinc	ND		35.6	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.19	0.19	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST4-B01@3"

1/23/2025 10:00:00AM

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

**Origins Laboratory
E5A0464-08 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.0985	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	--	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/23/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	84.6 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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	106 %		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 - Leppla 16-2 Facility

AST4-B01@3"

1/23/2025 10:00:00AM

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

Origins Laboratory
E5A0464-08 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	101 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.632		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	1.64		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	0.00768	0.00294	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	0.0142	0.00735	0.0150	"	"	"	"	"	J
Acenaphthene	ND	0.0408	0.0833	"	"	"	"	"	
Anthracene	ND	0.0408	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00539	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0408	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"	
Chrysene	ND	0.0408	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0408	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0408	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

AST4-B01@3"

1/23/2025 10:00:00AM

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

Enthalpy Analytical
E5A0464-08 (Soil)

PAH by SW8270

Fluorene	ND	0.0408	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0408	0.0833	"	"	"	"	"	
Naphthalene	0.00327	0.00186	0.00380	"	"	"	"	"	J
Pyrene	ND	0.0408	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	47.2 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	41.4 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	20.8 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	40.5 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	36.2 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	68.0 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.32			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	-------------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	2.20		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	-------------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.393		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	--------------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST4-B01@3"

1/23/2025 10:00:00AM

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

**Origins Laboratory
E5A0464-08 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.94		0.263	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	58.8		9.08	"	"	"	"	"	
Cadmium	ND		0.0908	"	"	"	"	"	
Copper	ND		9.08	"	"	"	"	"	
Lead	5.00		0.908	"	"	"	"	"	
Nickel	6.78		0.908	"	"	"	"	"	
Selenium	ND		0.236	"	"	"	"	"	
Silver	ND		0.0908	"	"	"	"	"	
Zinc	ND		33.6	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.21	0.21	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST5-B01@3"

1/23/2025 10:20:00AM

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

Origins Laboratory
E5A0464-09 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.100	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

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

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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	106 %	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 - Leppla 16-2 Facility

AST5-B01@3"

1/23/2025 10:20:00AM

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

**Origins Laboratory
E5A0464-09 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	100 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.731		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00292	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00731	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0406	0.0833	"	"	"	"	"	
Anthracene	ND	0.0406	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00536	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0406	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0406	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0406	0.0833	"	"	"	"	"	
Chrysene	ND	0.0406	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0406	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0406	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

AST5-B01@3"

1/23/2025 10:20:00AM

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

Enthalpy Analytical
E5A0464-09 (Soil)

PAH by SW8270

Fluorene	ND	0.0406	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0406	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00185	0.00380	"	"	"	"	"	
Pyrene	ND	0.0406	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	51.8 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	50.5 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	54.1 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	55.2 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	54.4 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	69.6 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.27			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.158		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.209		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST5-B01@3"

1/23/2025 10:20:00AM

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

Origins Laboratory
E5A0464-09 (Soil)

Table 915 metals by EPA 6020B

Arsenic	2.15		0.281	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	46.5		9.69	"	"	"	"	"	
Cadmium	ND		0.0969	"	"	"	"	"	
Copper	ND		9.69	"	"	"	"	"	
Lead	4.45		0.969	"	"	"	"	"	
Nickel	5.88		0.969	"	"	"	"	"	
Selenium	ND		0.252	"	"	"	"	"	
Silver	ND		0.0969	"	"	"	"	"	
Zinc	ND		35.8	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	0.20	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	------	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST6-B01@3"

1/23/2025 10:25:00AM

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

Origins Laboratory
E5A0464-10 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.101	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	85.0 %	50-150			"	"	"
--------------------------------	--------	--------	--	--	---	---	---

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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	106 %	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 - Leppla 16-2 Facility

AST6-B01@3"

1/23/2025 10:25:00AM

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

Origins Laboratory
E5A0464-10 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	101 %		70-130			B5A23 20	01/23/2025	01/23/2025
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	0.956		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025
Magnesium	0.912		0.823	"	"	"	"	"
Sodium	0.599		0.435	"	"	"	"	"

PAH by SW8270

1-Methylnaphthalene	ND	0.00294	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025
2-Methylnaphthalene	ND	0.00735	0.0150	"	"	"	"	"
Acenaphthene	ND	0.0408	0.0833	"	"	"	"	"
Anthracene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (a) anthracene	ND	0.00539	0.0110	"	"	"	"	"
Benzo (a) pyrene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"
Chrysene	ND	0.0408	0.0833	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.0408	0.0833	"	"	"	"	"
Fluoranthene	ND	0.0408	0.0833	"	"	"	"	"

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 - Leppla 16-2 Facility

AST6-B01@3"

1/23/2025 10:25:00AM

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

Enthalpy Analytical
E5A0464-10 (Soil)

PAH by SW8270

Fluorene	ND	0.0408	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0408	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00186	0.00380	"	"	"	"	"	
Pyrene	ND	0.0408	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	54.1 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	49.1 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	58.1 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	61.9 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	57.6 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	55.1 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.28			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.619		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.244		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST6-B01@3"

1/23/2025 10:25:00AM

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

**Origins Laboratory
E5A0464-10 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.04		0.266	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	41.0		9.18	"	"	"	"	"	
Cadmium	ND		0.0918	"	"	"	"	"	
Copper	ND		9.18	"	"	"	"	"	
Lead	4.11		0.918	"	"	"	"	"	
Nickel	5.91		0.918	"	"	"	"	"	
Selenium	ND		0.239	"	"	"	"	"	
Silver	ND		0.0918	"	"	"	"	"	
Zinc	ND		34.0	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST7-B01@3"

1/23/2025 10:30:00AM

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

**Origins Laboratory
E5A0464-11 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.0998	mg/L	1	B5A2319	01/23/2025	01/27/2025	
-------	----	--	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	84.1 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/23/2025	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	107 %		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 - Leppla 16-2 Facility

AST7-B01@3"

1/23/2025 10:30:00AM

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

**Origins Laboratory
E5A0464-11 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	99.9 %		70-130			B5A23 20	01/23/2025	01/23/2025	
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.718		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	1.23		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00294	0.00600	mg/kg	1	BIA1074	01/29/2025	01/31/2025	
2-Methylnaphthalene	ND	0.00735	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0408	0.0833	"	"	"	"	"	
Anthracene	ND	0.0408	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00539	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0408	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"	
Chrysene	ND	0.0408	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0408	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0408	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

AST7-B01@3"

1/23/2025 10:30:00AM

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

Enthalpy Analytical
E5A0464-11 (Soil)

PAH by SW8270

Fluorene	ND	0.0408	0.0833	mg/kg	1	BIA1074	01/29/2025	01/31/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0408	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00186	0.00380	"	"	"	"	"	
Pyrene	ND	0.0408	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	57.4 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	43.6 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	30.1 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	47.1 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	43.2 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	71.6 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.41			pH Units	1	B5A2326	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	1.50		0.0100	SAR	1	B5A2322	01/23/2025	01/28/2025	
-----	------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.250		0.00500	mmhos/cm	1	B5A2326	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST7-B01@3"

1/23/2025 10:30:00AM

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

**Origins Laboratory
E5A0464-11 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	2.79		0.274	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	56.9		9.44	"	"	"	"	"	
Cadmium	0.100		0.0944	"	"	"	"	"	
Copper	ND		9.44	"	"	"	"	"	
Lead	4.40		0.944	"	"	"	"	"	
Nickel	6.46		0.944	"	"	"	"	"	
Selenium	ND		0.245	"	"	"	"	"	
Silver	ND		0.0944	"	"	"	"	"	
Zinc	ND		34.9	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	0.24	0.20	0.20	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	------	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST8-B01@3"

1/23/2025 10:35:00AM

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

Origins Laboratory
E5A0464-12 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.0989	mg/L	1	B5A2321	01/23/2025	01/27/2025	
-------	----	--	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl 82.4 % 50-150 " " "

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/24/2025	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 108 % 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 - Leppla 16-2 Facility

AST8-B01@3"

1/23/2025 10:35:00AM

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

**Origins Laboratory
E5A0464-12 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	100 %		70-130			B5A23 20	01/23/2025	01/24/2025	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.05		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	0.981		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00584	0.00584	mg/kg	4	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.0146	0.0146	"	"	"	"	"	
Acenaphthene	ND	0.0779	0.0779	"	"	"	"	"	
Anthracene	ND	0.0779	0.0779	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00974	0.00974	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0779	0.0779	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0779	0.0779	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0779	0.0779	"	"	"	"	"	
Chrysene	ND	0.0779	0.0779	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0779	0.0779	"	"	"	"	"	
Fluoranthene	ND	0.0779	0.0779	"	"	"	"	"	

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 - Leppla 16-2 Facility

AST8-B01@3"

1/23/2025 10:35:00AM

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

Enthalpy Analytical
E5A0464-12 (Soil)

PAH by SW8270

Fluorene	ND	0.0779	0.0779	mg/kg	4	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0779	0.0779	"	"	"	"	"	
Naphthalene	ND	0.00370	0.00370	"	"	"	"	"	
Pyrene	ND	0.0779	0.0779	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	54.5 %		15-96			"	"	"	DS
Surrogate: 2-Fluorobiphenyl (Surr)	49.2 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	48.6 %		12-95			"	"	"	DS
Surrogate: Nitrobenzene-d5 (Surr)	52.2 %		21-100			"	"	"	DS
Surrogate: Phenol-d5 (Surr)	58.0 %		13-100			"	"	"	DS
Surrogate: p-Terphenyl-d14 (Surr)	48.8 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.09			pH Units	1	B5A2327	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.343		0.0100	SAR	1	B5A2323	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.257		0.00500	mmhos/cm	1	B5A2327	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

AST8-B01@3"

1/23/2025 10:35:00AM

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

**Origins Laboratory
E5A0464-12 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	1.89		0.278	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	37.3		9.60	"	"	"	"	"	
Cadmium	ND		0.0960	"	"	"	"	"	
Copper	ND		9.60	"	"	"	"	"	
Lead	3.78		0.960	"	"	"	"	"	
Nickel	4.75		0.960	"	"	"	"	"	
Selenium	ND		0.250	"	"	"	"	"	
Silver	ND		0.0960	"	"	"	"	"	
Zinc	ND		35.5	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	0.23	0.19	0.19	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	------	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP1-B01@5'
1/23/2025 11:50:00AM

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

Origins Laboratory
E5A0464-13 (Soil)

Boron (DTPA Sorbitol)

Boron	0.212		0.0994	mg/L	1	B5A2321	01/23/2025	01/27/2025	
-------	-------	--	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	81.9 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/24/2025	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	108 %		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 - Leppla 16-2 Facility

SEP1-B01@5'

1/23/2025 11:50:00AM

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

Origins Laboratory
E5A0464-13 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	99.6 %		70-130			B5A23 20	01/23/2025	01/24/2025
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	1.76		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025
Magnesium	ND		0.823	"	"	"	"	"
Sodium	ND		0.435	"	"	"	"	"

PAH by SW8270

1-Methylnaphthalene	ND	0.00294	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025
2-Methylnaphthalene	ND	0.00735	0.0150	"	"	"	"	"
Acenaphthene	ND	0.0408	0.0833	"	"	"	"	"
Anthracene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (a) anthracene	ND	0.00539	0.0110	"	"	"	"	"
Benzo (a) pyrene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"
Chrysene	ND	0.0408	0.0833	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.0408	0.0833	"	"	"	"	"
Fluoranthene	ND	0.0408	0.0833	"	"	"	"	"

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 - Leppla 16-2 Facility

SEP1-B01@5'
 1/23/2025 11:50:00AM

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

Enthalpy Analytical
E5A0464-13 (Soil)

PAH by SW8270

Fluorene	ND	0.0408	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0408	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00186	0.00380	"	"	"	"	"	
Pyrene	ND	0.0408	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	56.4 %		15-96			"	"	"	S
Surrogate: 2-Fluorobiphenyl (Surr)	30.6 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	34.1 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	36.1 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	40.1 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	53.3 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.31			pH Units	1	B5A2327	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.273		0.0100	SAR	1	B5A2323	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.262		0.00500	mmhos/cm	1	B5A2327	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP1-B01@5'

1/23/2025 11:50:00AM

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

Origins Laboratory
E5A0464-13 (Soil)

Table 915 metals by EPA 6020B

Arsenic	3.44		0.274	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	118		9.46	"	"	"	"	"	
Cadmium	0.185		0.0946	"	"	"	"	"	
Copper	11.9		9.46	"	"	"	"	"	
Lead	9.94		0.946	"	"	"	"	"	
Nickel	10.6		0.946	"	"	"	"	"	
Selenium	0.290		0.246	"	"	"	"	"	
Silver	ND		0.0946	"	"	"	"	"	
Zinc	45.6		35.0	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	0.27	0.19	0.19	mg/kg	1	BIB0531	02/13/2025	02/13/2025	
----------------------	------	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP1-B02@5'
 1/23/2025 11:52:00AM

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

Origins Laboratory
 E5A0464-14 (Soil)

Boron (DTPA Sorbitol)

Boron	ND		0.100	mg/L	1	B5A2321	01/23/2025	01/27/2025	
-------	----	--	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl 84.8 % 50-150 " " "

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/24/2025	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 108 % 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 - Leppla 16-2 Facility

SEP1-B02@5'

1/23/2025 11:52:00AM

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

Origins Laboratory
E5A0464-14 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	99.4 %		70-130			B5A23 20	01/23/2025	01/24/2025	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.54		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00297	0.00600	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00743	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0413	0.0833	"	"	"	"	"	
Anthracene	ND	0.0413	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00545	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0413	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0413	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0413	0.0833	"	"	"	"	"	
Chrysene	ND	0.0413	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0413	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0413	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

SEP1-B02@5'

1/23/2025 11:52:00AM

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

Enthalpy Analytical
 E5A0464-14 (Soil)

PAH by SW8270

Fluorene	ND	0.0413	0.0833	mg/kg	1	BIA1074	01/29/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0413	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00188	0.00380	"	"	"	"	"	
Pyrene	ND	0.0413	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	41.7 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	32.7 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	30.0 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	32.4 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	35.4 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	35.3 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.32			pH Units	1	B5A2327	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.149		0.0100	SAR	1	B5A2323	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.238		0.00500	mmhos/cm	1	B5A2327	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP1-B02@5'

1/23/2025 11:52:00AM

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

Origins Laboratory
E5A0464-14 (Soil)

Table 915 metals by EPA 6020B

Arsenic	2.85		0.243	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	40.9		8.37	"	"	"	"	"	
Cadmium	0.0980		0.0837	"	"	"	"	"	
Copper	ND		8.37	"	"	"	"	"	
Lead	4.39		0.837	"	"	"	"	"	
Nickel	8.13		0.837	"	"	"	"	"	
Selenium	ND		0.218	"	"	"	"	"	
Silver	ND		0.0837	"	"	"	"	"	
Zinc	ND		31.0	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	0.20	0.20	0.20	mg/kg	1	BIB0781	02/14/2025	02/14/2025	
----------------------	------	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP2-B01@5'
1/23/2025 11:55:00AM

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

Origins Laboratory
E5A0464-15 (Soil)

Boron (DTPA Sorbitol)

Boron	0.254		0.101	mg/L	1	B5A2321	01/23/2025	01/27/2025	
-------	-------	--	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	79.7 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/24/2025	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	107 %		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 - Leppla 16-2 Facility

SEP2-B01@5'

1/23/2025 11:55:00AM

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

Origins Laboratory
E5A0464-15 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.8 %		70-130			B5A23 20	01/23/2025	01/24/2025
Surrogate: 4-Bromofluorobenzene	99.8 %		70-130			"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	1.29		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025
Magnesium	ND		0.823	"	"	"	"	"
Sodium	ND		0.435	"	"	"	"	"

PAH by SW8270

1-Methylnaphthalene	ND	0.00294	0.00600	mg/kg	1	BIA1121	01/30/2025	01/30/2025
2-Methylnaphthalene	ND	0.00735	0.0150	"	"	"	"	"
Acenaphthene	ND	0.0408	0.0833	"	"	"	"	"
Anthracene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (a) anthracene	ND	0.00539	0.0110	"	"	"	"	"
Benzo (a) pyrene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.0408	0.0833	"	"	"	"	"
Chrysene	ND	0.0408	0.0833	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.0408	0.0833	"	"	"	"	"
Fluoranthene	ND	0.0408	0.0833	"	"	"	"	"

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 - Leppla 16-2 Facility

SEP2-B01@5'

1/23/2025 11:55:00AM

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

Enthalpy Analytical
 E5A0464-15 (Soil)

PAH by SW8270

Fluorene	ND	0.0408	0.0833	mg/kg	1	BIA1121	01/30/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0408	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00186	0.00380	"	"	"	"	"	
Pyrene	ND	0.0408	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	79.2 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	51.3 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	40.4 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	61.1 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	74.9 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	54.2 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.32			pH Units	1	B5A2327	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.142		0.0100	SAR	1	B5A2323	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.231		0.00500	mmhos/cm	1	B5A2327	01/23/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP2-B01@5'

1/23/2025 11:55:00AM

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

Origins Laboratory
E5A0464-15 (Soil)

Table 915 metals by EPA 6020B

Arsenic	3.54	0.255	mg/kg	10	B5A2317	01/23/2025	01/24/2025
Barium	133	8.80	"	"	"	"	"
Cadmium	0.148	0.0880	"	"	"	"	"
Copper	9.35	8.80	"	"	"	"	"
Lead	8.84	0.880	"	"	"	"	"
Nickel	10.3	0.880	"	"	"	"	"
Selenium	0.280	0.229	"	"	"	"	"
Silver	ND	0.0880	"	"	"	"	"
Zinc	40.9	32.6	"	"	"	"	"

Total Metals by SW7196

Chromium, Hexavalent	ND	0.21	0.21	mg/kg	1	BIB0781	02/14/2025	02/14/2025
----------------------	----	------	------	-------	---	---------	------------	------------

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 - Leppla 16-2 Facility

SEP2-B02@5'

1/23/2025 11:57:00AM

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

**Origins Laboratory
E5A0464-16 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.0987	mg/L	1	B5A2321	01/23/2025	01/27/2025	
-------	----	--	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	83.0 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/24/2025	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	107 %		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 - Leppla 16-2 Facility

SEP2-B02@5'

1/23/2025 11:57:00AM

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

**Origins Laboratory
E5A0464-16 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	100 %		70-130			B5A23 20	01/23/2025	01/24/2025	
Surrogate: 4-Bromofluorobenzene	100 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	ND		0.499	meq/L	10	[CALC]	01/23/2025	01/28/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00292	0.00600	mg/kg	1	BIA1121	01/30/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00731	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0406	0.0833	"	"	"	"	"	
Anthracene	ND	0.0406	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00536	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0406	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0406	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0406	0.0833	"	"	"	"	"	
Chrysene	ND	0.0406	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0406	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0406	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

SEP2-B02@5'

1/23/2025 11:57:00AM

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

Enthalpy Analytical
E5A0464-16 (Soil)

PAH by SW8270

Fluorene	ND	0.0406	0.0833	mg/kg	1	BIA1121	01/30/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0406	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00185	0.00380	"	"	"	"	"	
Pyrene	ND	0.0406	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	63.4 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	46.7 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	56.4 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	51.5 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	61.1 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	52.2 %		25-125			"	"	"	

pH in Soil by 9045D

pH	7.55			pH Units	1	B5A2327	01/23/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.120		0.0100	SAR	1	B5A2323	01/23/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.0799		0.00500	mmhos/cm	1	B5A2327	01/23/2025	01/28/2025	
---------------------------	--------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP2-B02@5'

1/23/2025 11:57:00AM

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

**Origins Laboratory
E5A0464-16 (Soil)**

Table 915 metals by EPA 6020B

Arsenic	8.16		0.243	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	62.2		8.38	"	"	"	"	"	
Cadmium	0.315		0.0838	"	"	"	"	"	
Copper	14.1		8.38	"	"	"	"	"	
Lead	7.85		0.838	"	"	"	"	"	
Nickel	11.0		0.838	"	"	"	"	"	
Selenium	0.225		0.218	"	"	"	"	"	
Silver	ND		0.0838	"	"	"	"	"	
Zinc	32.7		31.0	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	0.19	0.19	0.19	mg/kg	1	BIB0781	02/14/2025	02/14/2025	
----------------------	------	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP3-B01@5'
1/23/2025 12:00:00PM

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

Origins Laboratory
E5A0464-17 (Soil)

Boron (DTPA Sorbitol)

Boron	0.553		0.100	mg/L	1	B5A2407	01/24/2025	01/27/2025	
-------	-------	--	-------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2325	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	85.3 %		50-150			"	"	"	
--------------------------------	--------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/24/2025	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	108 %		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 - Leppla 16-2 Facility

SEP3-B01@5'

1/23/2025 12:00:00PM

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

**Origins Laboratory
E5A0464-17 (Soil)**

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	99.8 %		70-130			B5A23 20	01/23/2025	01/24/2025	
Surrogate: 4-Bromofluorobenzene	101 %		70-130			"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.40		0.499	meq/L	10	[CALC]	01/24/2025	01/28/2025	
Magnesium	1.31		0.823	"	"	"	"	"	
Sodium	0.607		0.435	"	"	"	"	"	

PAH by SW8270

1-Methylnaphthalene	ND	0.00299	0.00600	mg/kg	1	BIA1121	01/30/2025	01/30/2025	
2-Methylnaphthalene	ND	0.00748	0.0150	"	"	"	"	"	
Acenaphthene	ND	0.0415	0.0833	"	"	"	"	"	
Anthracene	ND	0.0415	0.0833	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00548	0.0110	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0415	0.0833	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0415	0.0833	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0415	0.0833	"	"	"	"	"	
Chrysene	ND	0.0415	0.0833	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0415	0.0833	"	"	"	"	"	
Fluoranthene	ND	0.0415	0.0833	"	"	"	"	"	

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 - Leppla 16-2 Facility

SEP3-B01@5'

1/23/2025 12:00:00PM

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

Enthalpy Analytical
E5A0464-17 (Soil)

PAH by SW8270

Fluorene	ND	0.0415	0.0833	mg/kg	1	BIA1121	01/30/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0415	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00189	0.00380	"	"	"	"	"	
Pyrene	ND	0.0415	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	80.4 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	55.6 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	60.6 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	61.9 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	69.6 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	54.5 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.41			pH Units	1	B5A2412	01/24/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.522		0.0100	SAR	1	B5A2409	01/24/2025	01/28/2025	
-----	-------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.370		0.00500	mmhos/cm	1	B5A2412	01/24/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP3-B01@5'

1/23/2025 12:00:00PM

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

Origins Laboratory
E5A0464-17 (Soil)

Table 915 metals by EPA 6020B

Arsenic	4.04		0.256	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	119		8.84	"	"	"	"	"	
Cadmium	0.187		0.0884	"	"	"	"	"	
Copper	11.1		8.84	"	"	"	"	"	
Lead	9.80		0.884	"	"	"	"	"	
Nickel	12.5		0.884	"	"	"	"	"	
Selenium	ND		0.230	"	"	"	"	"	
Silver	ND		0.0884	"	"	"	"	"	
Zinc	46.6		32.7	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.19	0.19	mg/kg	1	BIB0781	02/14/2025	02/14/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP3-B02@5'

1/23/2025 12:05:00PM

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

**Origins Laboratory
E5A0464-18 (Soil)**

Boron (DTPA Sorbitol)

Boron	ND		0.0990	mg/L	1	B5A2407	01/24/2025	01/27/2025	
-------	----	--	--------	------	---	---------	------------	------------	--

DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND		25.0	mg/kg	1	B5A2330	01/23/2025	01/24/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	120 %		50-150			"	"	"	
------------------------	-------	--	--------	--	--	---	---	---	--

GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5A2320	01/23/2025	01/24/2025	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	107 %		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 - Leppla 16-2 Facility

SEP3-B02@5'

1/23/2025 12:05:00PM

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

Origins Laboratory
E5A0464-18 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	100 %		70-130			B5A23 20	01/23/2025	01/24/2025
Surrogate: 4-Bromofluorobenzene	99.8 %		70-130			"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	0.744		0.499	meq/L	10	[CALC]	01/24/2025	01/28/2025
Magnesium	ND		0.823	"	"	"	"	"
Sodium	ND		0.435	"	"	"	"	"

PAH by SW8270

1-Methylnaphthalene	ND	0.00298	0.00600	mg/kg	1	BIA1121	01/30/2025	01/30/2025
2-Methylnaphthalene	ND	0.00745	0.0150	"	"	"	"	"
Acenaphthene	ND	0.0414	0.0833	"	"	"	"	"
Anthracene	ND	0.0414	0.0833	"	"	"	"	"
Benzo (a) anthracene	ND	0.00546	0.0110	"	"	"	"	"
Benzo (a) pyrene	ND	0.0414	0.0833	"	"	"	"	"
Benzo (b) fluoranthene	ND	0.0414	0.0833	"	"	"	"	"
Benzo (k) fluoranthene	ND	0.0414	0.0833	"	"	"	"	"
Chrysene	ND	0.0414	0.0833	"	"	"	"	"
Dibenz (a,h) anthracene	ND	0.0414	0.0833	"	"	"	"	"
Fluoranthene	ND	0.0414	0.0833	"	"	"	"	"

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 - Leppla 16-2 Facility

SEP3-B02@5'

1/23/2025 12:05:00PM

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

Enthalpy Analytical
E5A0464-18 (Soil)

PAH by SW8270

Fluorene	ND	0.0414	0.0833	mg/kg	1	BIA1121	01/30/2025	01/30/2025	
Indeno (1,2,3-cd) pyrene	ND	0.0414	0.0833	"	"	"	"	"	
Naphthalene	ND	0.00189	0.00380	"	"	"	"	"	
Pyrene	ND	0.0414	0.0833	"	"	"	"	"	

Surrogate: 2,4,6-Tribromophenol (Surr)	78.2 %		15-96			"	"	"	
Surrogate: 2-Fluorobiphenyl (Surr)	51.1 %		19-105			"	"	"	
Surrogate: 2-Fluorophenol (Surr)	57.3 %		12-95			"	"	"	
Surrogate: Nitrobenzene-d5 (Surr)	57.9 %		21-100			"	"	"	
Surrogate: Phenol-d5 (Surr)	66.1 %		13-100			"	"	"	
Surrogate: p-Terphenyl-d14 (Surr)	59.2 %		25-125			"	"	"	

pH in Soil by 9045D

pH	8.15			pH Units	1	B5A2412	01/24/2025	01/28/2025	
----	------	--	--	----------	---	---------	------------	------------	--

SAR by 20B Saturated Paste

SAR	0.0761		0.0100	SAR	1	B5A2409	01/24/2025	01/28/2025	
-----	--------	--	--------	-----	---	---------	------------	------------	--

Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.132		0.00500	mmhos/cm	1	B5A2412	01/24/2025	01/28/2025	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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 - Leppla 16-2 Facility

SEP3-B02@5'

1/23/2025 12:05:00PM

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

Origins Laboratory
E5A0464-18 (Soil)

Table 915 metals by EPA 6020B

Arsenic	2.29		0.255	mg/kg	10	B5A2317	01/23/2025	01/24/2025	
Barium	37.7		8.78	"	"	"	"	"	
Cadmium	ND		0.0878	"	"	"	"	"	
Copper	ND		8.78	"	"	"	"	"	
Lead	3.84		0.878	"	"	"	"	"	
Nickel	5.43		0.878	"	"	"	"	"	
Selenium	ND		0.228	"	"	"	"	"	
Silver	ND		0.0878	"	"	"	"	"	
Zinc	ND		32.5	"	"	"	"	"	

Total Metals by SW7196

Chromium, Hexavalent	ND	0.20	0.20	mg/kg	1	BIB0781	02/14/2025	02/14/2025	
----------------------	----	------	------	-------	---	---------	------------	------------	--

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 - Leppla 16-2 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 B5A2320 - EPA 5030 (soil)

Blank (B5A2320-BLK1)

Prepared: 01/23/2025 Analyzed: 01/23/2025

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		96.6	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.1	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 - Leppla 16-2 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 B5A2320 - EPA 5030 (soil)

LCS (B5A2320-BS1)

Prepared: 01/23/2025 Analyzed: 01/23/2025

1,2,4-Trimethylbenzene	0.105	0.00200	mg/kg	0.100		105	70-130			
1,3,5-Trimethylbenzene	0.106	0.00200	"	0.100		106	70-130			
Benzene	0.0973	0.00200	"	0.100		97.3	70-130			
Ethylbenzene	0.103	0.00200	"	0.100		103	70-130			
Naphthalene	0.0942	0.00380	"	0.100		94.2	70-130			
Toluene	0.100	0.00200	"	0.100		100	70-130			
o-Xylene	0.113	0.00200	"	0.100		113	70-130			
m,p-Xylene	0.228	0.00400	"	0.200		114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	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 - Leppla 16-2 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 B5A2320 - EPA 5030 (soil)

Matrix Spike (B5A2320-MS1)	Source: E5A0465-21			Prepared: 01/23/2025 Analyzed: 01/23/2025						
1,2,4-Trimethylbenzene	0.0997	0.00200	mg/kg	0.100	ND	99.7	70-130			
1,3,5-Trimethylbenzene	0.100	0.00200	"	0.100	ND	100	70-130			
Benzene	0.0951	0.00200	"	0.100	ND	95.1	70-130			
Ethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130			
Naphthalene	0.0819	0.00380	"	0.100	ND	81.9	70-130			
Toluene	0.0951	0.00200	"	0.100	ND	95.1	70-130			
o-Xylene	0.112	0.00200	"	0.100	ND	112	70-130			
m,p-Xylene	0.224	0.00400	"	0.200	ND	112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.6	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	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 - Leppla 16-2 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 B5A2320 - EPA 5030 (soil)

Matrix Spike Dup (B5A2320-MSD1)	Source: E5A0465-21			Prepared: 01/23/2025 Analyzed: 01/23/2025						
1,2,4-Trimethylbenzene	0.0849	0.00200	mg/kg	0.100	ND	84.9	70-130	16.0	20	
1,3,5-Trimethylbenzene	0.0859	0.00200	"	0.100	ND	85.9	70-130	15.5	20	
Benzene	0.0876	0.00200	"	0.100	ND	87.6	70-130	8.16	20	
Ethylbenzene	0.0891	0.00200	"	0.100	ND	89.1	70-130	13.1	20	
Naphthalene	0.0718	0.00380	"	0.100	ND	71.8	70-130	13.1	20	
Toluene	0.0863	0.00200	"	0.100	ND	86.3	70-130	9.74	20	
o-Xylene	0.0987	0.00200	"	0.100	ND	98.7	70-130	12.6	20	
m,p-Xylene	0.197	0.00400	"	0.200	ND	98.3	70-130	13.2	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.8	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	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 - Leppla 16-2 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 B5A2325 - EPA 3550B										
Blank (B5A2325-BLK1)										
					Prepared: 01/23/2025 Analyzed: 01/23/2025					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	22		"	24.9		87.7	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.

Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Leppla 16-2 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 B5A2325 - EPA 3550B										
LCS (B5A2325-BS1)										
					Prepared: 01/23/2025 Analyzed: 01/23/2025					
Diesel (C10-C28)	985	50.0	mg/kg	1000		98.5	70-130			
Residual Range Organics (C28-C40)	934	200	"	1000		93.4	70-130			
Surrogate: o-Terphenyl	49		"	49.8		98.6	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.

Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Leppla 16-2 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 B5A2325 - EPA 3550B

Matrix Spike (B5A2325-MS1)	Source: E5A0463-01		Prepared: 01/23/2025 Analyzed: 01/23/2025							
Diesel (C10-C28)	935	50.0	mg/kg	1000	ND	93.5	70-130			
Residual Range Organics (C28-C40)	893	200	"	1000	ND	89.3	70-130			
Surrogate: o-Terphenyl	45		"	49.8		90.3	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.

Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Leppla 16-2 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 B5A2325 - EPA 3550B

Matrix Spike Dup (B5A2325-MSD1)	Source: E5A0463-01		Prepared: 01/23/2025 Analyzed: 01/23/2025							
Diesel (C10-C28)	855	50.0	mg/kg	1000	ND	85.5	70-130	8.97	35	
Residual Range Organics (C28-C40)	831	200	"	1000	ND	83.1	70-130	7.14	35	
Surrogate: o-Terphenyl	41		"	49.8		83.1	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.

Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Leppla 16-2 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 B5A2330 - EPA 3550B										
Blank (B5A2330-BLK1)										
					Prepared: 01/23/2025 Analyzed: 01/24/2025					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	24		"	24.9		97.8	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.



Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Leppla 16-2 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 B5A2330 - EPA 3550B

LCS (B5A2330-BS1)

Prepared: 01/23/2025 Analyzed: 01/24/2025

Diesel (C10-C28)	1050	50.0	mg/kg	1000		105	70-130			
Residual Range Organics (C28-C40)	1120	200	"	1000		112	70-130			
Surrogate: o-Terphenyl	49		"	49.8		97.6	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 - Leppla 16-2 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 B5A2330 - EPA 3550B

Matrix Spike (B5A2330-MS1)	Source: E5A0466-01		Prepared: 01/23/2025 Analyzed: 01/24/2025							
Diesel (C10-C28)	1080	50.0	mg/kg	1000	ND	108	70-130			
Residual Range Organics (C28-C40)	1180	200	"	1000	ND	118	70-130			
Surrogate: o-Terphenyl	50		"	49.8		99.5	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.

Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Leppla 16-2 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 B5A2330 - EPA 3550B

Matrix Spike Dup (B5A2330-MSD1)	Source: E5A0466-01		Prepared: 01/23/2025 Analyzed: 01/24/2025							
Diesel (C10-C28)	1040	50.0	mg/kg	1000	ND	104	70-130	4.10	35	
Residual Range Organics (C28-C40)	1120	200	"	1000	ND	112	70-130	4.78	35	
Surrogate: o-Terphenyl	50		"	49.8		99.7	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.

Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Leppla 16-2 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 B5A2317 - EPA 3050B

Blank (B5A2317-BLK1)

Prepared: 01/23/2025 Analyzed: 01/24/2025

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 (B5A2317-BS1)

Prepared: 01/23/2025 Analyzed: 01/24/2025

Arsenic	4.77	0.290	mg/kg	5.00	95.3	80-120
Barium	449	10.0	"	500	89.9	80-120
Cadmium	4.86	0.100	"	5.00	97.1	80-120
Copper	48.0	10.0	"	50.0	95.9	80-120
Lead	4.76	1.00	"	5.00	95.1	80-120
Nickel	5.10	1.00	"	5.00	102	80-120
Selenium	4.75	0.260	"	5.00	95.0	80-120
Silver	4.90	0.100	"	5.00	98.1	80-120
Zinc	49.2	37.0	"	50.0	98.3	80-120

Matrix Spike (B5A2317-MS1)

Source: E5A0464-01

Prepared: 01/23/2025 Analyzed: 01/24/2025

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 - Leppla 16-2 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 B5A2317 - EPA 3050B

Matrix Spike (B5A2317-MS1)	Source: E5A0464-01				Prepared: 01/23/2025 Analyzed: 01/24/2025					
Arsenic	5.91	0.253	mg/kg	4.37	1.18	108	75-125			
Barium	443	8.74	"	437	16.4	97.6	75-125			
Cadmium	4.56	0.0874	"	4.37	0.0554	103	75-125			
Copper	47.1	8.74	"	43.7	2.19	103	75-125			
Lead	13.5	0.874	"	4.37	2.39	254	75-125			QM-07
Nickel	7.57	0.874	"	4.37	2.54	115	75-125			
Selenium	4.53	0.227	"	4.37	0.0826	102	75-125			
Silver	4.45	0.0874	"	4.37	ND	102	75-125			
Zinc	53.4	32.3	"	43.7	10.9	97.4	75-125			

Matrix Spike Dup (B5A2317-MSD1)	Source: E5A0464-01				Prepared: 01/23/2025 Analyzed: 01/24/2025					
Arsenic	6.30	0.289	mg/kg	4.99	1.18	103	75-125	6.39	20	
Barium	492	9.97	"	499	16.4	95.4	75-125	10.5	20	
Cadmium	5.12	0.0997	"	4.99	0.0554	102	75-125	11.5	20	
Copper	50.7	9.97	"	49.9	2.19	97.2	75-125	7.34	20	
Lead	8.04	0.997	"	4.99	2.39	113	75-125	50.7	20	QR-DUP
Nickel	8.58	0.997	"	4.99	2.54	121	75-125	12.5	20	
Selenium	4.82	0.259	"	4.99	0.0826	95.0	75-125	6.10	20	
Silver	4.95	0.0997	"	4.99	ND	99.3	75-125	10.7	20	
Zinc	62.1	36.9	"	49.9	10.9	103	75-125	15.0	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 - Leppla 16-2 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 B5A2319 - DTPA Sorbitol Preparation

Blank (B5A2319-BLK1)

Prepared: 01/23/2025 Analyzed: 01/27/2025

Boron ND 0.100 mg/L

Duplicate (B5A2319-DUP1)

Source: E5A0460-01

Prepared: 01/23/2025 Analyzed: 01/27/2025

Boron 1.02 0.102 mg/L 0.707 36.1 50

Batch B5A2321 - DTPA Sorbitol Preparation

Blank (B5A2321-BLK1)

Prepared: 01/23/2025 Analyzed: 01/27/2025

Boron ND 0.100 mg/L

Duplicate (B5A2321-DUP1)

Source: E5A0451-01

Prepared: 01/23/2025 Analyzed: 01/27/2025

Boron 0.361 0.100 mg/L 0.385 6.24 50

Batch B5A2322 - Saturated Paste Metals

Blank (B5A2322-BLK1)

Prepared: 01/23/2025 Analyzed: 01/28/2025

SAR ND 0.0100 SAR

Calcium PPM ND 10.0 mg/L

Magnesium PPM ND 10.0 "

Sodium PPM ND 10.0 "

Duplicate (B5A2322-DUP1)

Source: E5A0460-01

Prepared: 01/23/2025 Analyzed: 01/28/2025

SAR ND 0.0100 SAR 13.5 200

Calcium PPM 567 10.0 mg/L 512 10.2 50

Magnesium PPM 105 10.0 " 206 65.4 50 QR-DUP

Sodium PPM 922 10.0 " 1430 43.0 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.

Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Leppla 16-2 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 B5A2323 - Saturated Paste Metals

Blank (B5A2323-BLK1)

Prepared: 01/23/2025 Analyzed: 01/28/2025

Calcium PPM	ND	10.0	mg/L						
SAR	ND	0.0100	SAR						
Magnesium PPM	ND	10.0	mg/L						
Sodium PPM	ND	10.0	"						

Duplicate (B5A2323-DUP1)

Source: E5A0451-01

Prepared: 01/23/2025 Analyzed: 01/28/2025

Calcium PPM	33.9	10.0	mg/L		36.7			7.96	50
SAR	ND	0.0100	SAR		0.443				200
Magnesium PPM	5.36	10.0	mg/L		6.04			11.9	50
Sodium PPM	10.2	10.0	"		11.0			7.94	50

Batch B5A2407 - DTPA Sorbitol Preparation

Blank (B5A2407-BLK1)

Prepared: 01/24/2025 Analyzed: 01/27/2025

Boron	ND	0.100	mg/L						
-------	----	-------	------	--	--	--	--	--	--

Duplicate (B5A2407-DUP1)

Source: E5A0464-17

Prepared: 01/24/2025 Analyzed: 01/27/2025

Boron	0.424	0.100	mg/L		0.553			26.4	50
-------	-------	-------	------	--	-------	--	--	------	----

Batch B5A2409 - Saturated Paste Metals

Blank (B5A2409-BLK1)

Prepared: 01/24/2025 Analyzed: 01/28/2025

SAR	ND	0.0100	SAR						
Calcium PPM	ND	10.0	mg/L						
Magnesium PPM	ND	10.0	"						
Sodium PPM	ND	10.0	"						

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 - Leppla 16-2 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 B5A2409 - Saturated Paste Metals

Duplicate (B5A2409-DUP1)	Source: E5A0464-17			Prepared: 01/24/2025 Analyzed: 01/28/2025						
SAR	ND	0.0100	SAR		0.522					200
Calcium PPM	29.0	10.0	mg/L		28.1			3.33		50
Magnesium PPM	14.7	10.0	"		15.9			7.59		50
Sodium PPM	10.8	10.0	"		14.0			25.3		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.

Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Leppla 16-2 Facility

Saturated Paste - Quality Control
Origins Laboratory

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

Batch B5A2326 - Saturated Paste pH/EC

Blank (B5A2326-BLK1)

Prepared: 01/23/2025 Analyzed: 01/28/2025

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B5A2326-DUP1)

Source: E5A0460-01

Prepared: 01/23/2025 Analyzed: 01/28/2025

pH 8.06 pH Units 8.09 0.372 25
Specific Conductance (EC) 4.56 0.00500 mmhos/cm 7.67 50.9 25 QR-DUP

Batch B5A2327 - Saturated Paste pH/EC

Blank (B5A2327-BLK1)

Prepared: 01/23/2025 Analyzed: 01/28/2025

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B5A2327-DUP1)

Source: E5A0451-01

Prepared: 01/23/2025 Analyzed: 01/28/2025

Specific Conductance (EC) 0.327 0.00500 mmhos/cm 0.328 0.428 25
pH 8.37 pH Units 8.39 0.239 25

Batch B5A2412 - Saturated Paste pH/EC

Blank (B5A2412-BLK1)

Prepared: 01/24/2025 Analyzed: 01/28/2025

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B5A2412-DUP1)

Source: E5A0464-17

Prepared: 01/24/2025 Analyzed: 01/28/2025

Specific Conductance (EC) 0.364 0.00500 mmhos/cm 0.370 1.72 25
pH 8.39 pH Units 8.41 0.238 25

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 - Leppla 16-2 Facility

PAH by SW8270 - Quality Control
Enthalpy Analytical

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

Batch BIA1121 - SW3550C/EPA600-MS

Blank (BIA1121-BLK1)

Prepared: 01/30/2025 Analyzed: 01/30/2025

1-Methylnaphthalene	ND	0.00600	mg/kg				-			
2-Methylnaphthalene	ND	0.0150	"				-			
Acenaphthene	ND	0.0833	"				-			
Anthracene	ND	0.0833	"				-			
Benzo (a) anthracene	ND	0.0110	"				-			
Benzo (a) pyrene	ND	0.0833	"				-			
Benzo (b) fluoranthene	ND	0.0833	"				-			
Benzo (k) fluoranthene	ND	0.0833	"				-			
Chrysene	ND	0.0833	"				-			
Dibenz (a,h) anthracene	ND	0.0833	"				-			
Fluoranthene	ND	0.0833	"				-			
Fluorene	ND	0.0833	"				-			
Indeno (1,2,3-cd) pyrene	ND	0.0833	"				-			
Naphthalene	ND	0.00380	"				-			
Pyrene	ND	0.0833	"				-			

Surrogate: 2,4,6-Tribromophenol (Surr)	2.45		"	3.33		73.6	15-96			
Surrogate: 2-Fluorobiphenyl (Surr)	1.09		"	1.67		65.6	19-105			
Surrogate: 2-Fluorophenol (Surr)	1.51		"	3.33		45.4	12-95			
Surrogate: Nitrobenzene-d5 (Surr)	1.11		"	1.67		66.6	21-100			
Surrogate: Phenol-d5 (Surr)	2.56		"	3.33		76.8	13-100			
Surrogate: p-Terphenyl-d14 (Surr)	0.890		"	1.67		53.4	25-125			

LCS (BIA1121-BS1)

Prepared: 01/30/2025 Analyzed: 01/30/2025

1-Methylnaphthalene	ND	0.0833	mg/kg				0-200			
2-Methylnaphthalene	ND	0.0833	"				70-130			
Acenaphthene	1.29	0.0833	"	1.67		77.6	24-110			
Anthracene	1.18	0.0833	"	1.67		70.6	25-117			

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 - Leppla 16-2 Facility

PAH by SW8270 - Quality Control
Enthalpy Analytical

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

Batch BIA1121 - SW3550C/EPA600-MS

LCS (BIA1121-BS1)

Prepared: 01/30/2025 Analyzed: 01/30/2025

Benzo (a) anthracene	1.19	0.0833	mg/kg	1.67		71.2	25-127			
Benzo (a) pyrene	1.24	0.0833	"	1.67		74.2	18-127			
Benzo (b) fluoranthene	1.38	0.0833	"	1.67		82.6	20-132			
Benzo (k) fluoranthene	1.09	0.0833	"	1.67		65.3	14-136			
Chrysene	1.23	0.0833	"	1.67		73.9	21-141			
Dibenz (a,h) anthracene	1.58	0.0833	"	1.67		94.6	10-142			
Fluoranthene	1.35	0.0833	"	1.67		81.3	19-138			
Fluorene	1.29	0.0833	"	1.67		77.2	25-114			
Indeno (1,2,3-cd) pyrene	1.45	0.0833	"	1.67		86.8	10-136			
Naphthalene	1.22	0.0833	"	1.67		73.0	18-109			
Pyrene	0.963	0.0833	"	1.67		57.8	17-159			
<hr/>										
Surrogate: 2,4,6-Tribromophenol (Surr)	2.62		"	3.33		78.7	15-96			
Surrogate: 2-Fluorobiphenyl (Surr)	1.16		"	1.67		69.4	19-105			
Surrogate: 2-Fluorophenol (Surr)	2.36		"	3.33		70.9	12-95			
Surrogate: Nitrobenzene-d5 (Surr)	1.20		"	1.67		71.9	21-100			
Surrogate: Phenol-d5 (Surr)	2.83		"	3.33		85.0	13-100			
Surrogate: p-Terphenyl-d14 (Surr)	1.10		"	1.67		66.1	25-125			

Matrix Spike (BIA1121-MS1)

Source: E5A0464-16

Prepared: 01/30/2025 Analyzed: 01/30/2025

1-Methylnaphthalene	ND	0.0833	mg/kg		ND		0-200			
2-Methylnaphthalene	ND	0.0833	"		ND		70-130			
Acenaphthene	1.10	0.0833	"	1.66	ND	66.2	10-124			
Anthracene	0.959	0.0833	"	1.66	ND	57.7	10-143			
Benzo (a) anthracene	1.02	0.0833	"	1.66	ND	61.1	10-169			
Benzo (a) pyrene	1.03	0.0833	"	1.66	ND	61.9	10-149			
Benzo (b) fluoranthene	0.979	0.0833	"	1.66	ND	58.9	10-150			
Benzo (k) fluoranthene	0.872	0.0833	"	1.66	ND	52.5	10-211			

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 - Leppla 16-2 Facility

PAH by SW8270 - Quality Control
Enthalpy Analytical

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

Batch BIA1121 - SW3550C/EPA600-MS

Matrix Spike (BIA1121-MS1)	Source: E5A0464-16			Prepared: 01/30/2025 Analyzed: 01/30/2025						
Chrysene	1.03	0.0833	mg/kg	1.66	ND	62.3	10-172			
Dibenz (a,h) anthracene	1.17	0.0833	"	1.66	ND	70.6	10-128			
Fluoranthene	1.07	0.0833	"	1.66	ND	64.2	10-271			
Fluorene	1.10	0.0833	"	1.66	ND	66.1	10-124			
Indeno (1,2,3-cd) pyrene	1.07	0.0833	"	1.66	ND	64.5	10-127			
Naphthalene	0.917	0.0833	"	1.66	ND	55.2	10-118			
Pyrene	0.877	0.0833	"	1.66	ND	52.8	10-212			
<i>Surrogate: 2,4,6-Tribromophenol (Surr)</i>	2.23		"	3.32		67.1	15-96			
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>	0.975		"	1.66		58.7	19-105			
<i>Surrogate: 2-Fluorophenol (Surr)</i>	1.29		"	3.32		38.9	12-95			
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>	1.02		"	1.66		61.2	21-100			
<i>Surrogate: Phenol-d5 (Surr)</i>	2.38		"	3.32		71.6	13-100			
<i>Surrogate: p-Terphenyl-d14 (Surr)</i>	0.842		"	1.66		50.7	25-125			

Matrix Spike Dup (BIA1121-MSD1)	Source: E5A0464-16			Prepared: 01/30/2025 Analyzed: 01/30/2025						
1-Methylnaphthalene	ND	0.0833	mg/kg		ND		0-200			20
2-Methylnaphthalene	ND	0.0833	"		ND		70-130			20
Acenaphthene	1.01	0.0833	"	1.63	ND	62.0	10-124	8.49		20
Anthracene	0.970	0.0833	"	1.63	ND	59.5	10-143	1.15		20
Benzo (a) anthracene	0.936	0.0833	"	1.63	ND	57.5	10-169	8.11		20
Benzo (a) pyrene	1.03	0.0833	"	1.63	ND	63.0	10-149	0.211		20
Benzo (b) fluoranthene	1.14	0.0833	"	1.63	ND	69.8	10-150	15.0		20
Benzo (k) fluoranthene	0.876	0.0833	"	1.63	ND	53.8	10-211	0.360		20
Chrysene	1.00	0.0833	"	1.63	ND	61.4	10-172	3.43		20
Dibenz (a,h) anthracene	1.23	0.0833	"	1.63	ND	75.6	10-128	4.92		20
Fluoranthene	1.02	0.0833	"	1.63	ND	62.4	10-271	4.93		20
Fluorene	0.938	0.0833	"	1.63	ND	57.6	10-124	15.7		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 - Leppla 16-2 Facility

PAH by SW8270 - Quality Control
Enthalpy Analytical

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

Batch BIA1121 - SW3550C/EPA600-MS

Matrix Spike Dup (BIA1121-MSD1)	Source: E5A0464-16			Prepared: 01/30/2025 Analyzed: 01/30/2025						
Indeno (1,2,3-cd) pyrene	1.13	0.0833	mg/kg	1.63	ND	69.1	10-127	4.90	20	
Naphthalene	0.866	0.0833	"	1.63	ND	53.2	10-118	5.79	20	
Pyrene	0.794	0.0833	"	1.63	ND	48.8	10-212	9.87	20	
Surrogate: 2,4,6-Tribromophenol (Surr)	2.18		"	3.26		66.9	15-96			
Surrogate: 2-Fluorobiphenyl (Surr)	0.904		"	1.63		55.5	19-105			
Surrogate: 2-Fluorophenol (Surr)	1.14		"	3.26		35.0	12-95			
Surrogate: Nitrobenzene-d5 (Surr)	0.888		"	1.63		54.5	21-100			
Surrogate: Phenol-d5 (Surr)	2.21		"	3.26		67.9	13-100			
Surrogate: p-Terphenyl-d14 (Surr)	0.840		"	1.63		51.6	25-125			

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 - Leppla 16-2 Facility

PAH by SW8270 - Quality Control
Enthalpy Analytical

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

Batch BIA1074 - SW3550C/EPA600-MS

Blank (BIA1074-BLK1)

Prepared: 01/29/2025 Analyzed: 01/30/2025

1-Methylnaphthalene	ND	0.00600	mg/kg				-			
2-Methylnaphthalene	ND	0.0150	"				-			
Acenaphthene	ND	0.0833	"				-			
Anthracene	ND	0.0833	"				-			
Benzo (a) anthracene	ND	0.0110	"				-			
Benzo (a) pyrene	ND	0.0833	"				-			
Benzo (b) fluoranthene	ND	0.0833	"				-			
Benzo (k) fluoranthene	ND	0.0833	"				-			
Chrysene	ND	0.0833	"				-			
Dibenz (a,h) anthracene	ND	0.0833	"				-			
Fluoranthene	ND	0.0833	"				-			
Fluorene	ND	0.0833	"				-			
Indeno (1,2,3-cd) pyrene	ND	0.0833	"				-			
Naphthalene	ND	0.00380	"				-			
Pyrene	ND	0.0833	"				-			

Surrogate: 2,4,6-Tribromophenol (Surr)	0.904		"	3.33		27.1	15-96
Surrogate: 2-Fluorobiphenyl (Surr)	0.556		"	1.67		33.4	19-105
Surrogate: 2-Fluorophenol (Surr)	0.653		"	3.33		19.6	12-95
Surrogate: Nitrobenzene-d5 (Surr)	0.586		"	1.67		35.2	21-100
Surrogate: Phenol-d5 (Surr)	1.12		"	3.33		33.6	13-100
Surrogate: p-Terphenyl-d14 (Surr)	0.596		"	1.67		35.8	25-125

LCS (BIA1074-BS1)

Prepared: 01/29/2025 Analyzed: 01/30/2025

1-Methylnaphthalene	ND	0.0833	mg/kg				0-200
2-Methylnaphthalene	ND	0.0833	"				70-130
Acenaphthene	0.422	0.0833	"	1.67		25.3	24-110
Anthracene	0.427	0.0833	"	1.67		25.6	25-117

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 - Leppla 16-2 Facility

**PAH by SW8270 - Quality Control
Enthalpy Analytical**

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

Batch BIA1074 - SW3550C/EPA600-MS

LCS (BIA1074-BS1)

Prepared: 01/29/2025 Analyzed: 01/30/2025

Benzo (a) anthracene	0.489	0.0833	mg/kg	1.67		29.3	25-127			
Benzo (a) pyrene	0.473	0.0833	"	1.67		28.4	18-127			
Benzo (b) fluoranthene	0.565	0.0833	"	1.67		33.9	20-132			
Benzo (k) fluoranthene	0.481	0.0833	"	1.67		28.8	14-136			
Chrysene	0.507	0.0833	"	1.67		30.4	21-141			
Dibenz (a,h) anthracene	0.376	0.0833	"	1.67		22.6	10-142			
Fluoranthene	0.498	0.0833	"	1.67		29.8	19-138			
Fluorene	0.433	0.0833	"	1.67		26.0	25-114			
Indeno (1,2,3-cd) pyrene	0.340	0.0833	"	1.67		20.4	10-136			
Naphthalene	0.421	0.0833	"	1.67		25.3	18-109			
Pyrene	0.486	0.0833	"	1.67		29.2	17-159			
Surrogate: 2,4,6-Tribromophenol (Surr)	0.790		"	3.33		23.7	15-96			
Surrogate: 2-Fluorobiphenyl (Surr)	0.394		"	1.67		23.7	19-105			
Surrogate: 2-Fluorophenol (Surr)	0.650		"	3.33		19.5	12-95			
Surrogate: Nitrobenzene-d5 (Surr)	0.494		"	1.67		29.7	21-100			
Surrogate: Phenol-d5 (Surr)	0.929		"	3.33		27.9	13-100			
Surrogate: p-Terphenyl-d14 (Surr)	0.487		"	1.67		29.2	25-125			

Matrix Spike (BIA1074-MS1)

Source: E5A0464-05

Prepared: 01/29/2025 Analyzed: 01/30/2025

1-Methylnaphthalene	ND	0.0833	mg/kg		ND		0-200			
2-Methylnaphthalene	ND	0.0833	"		ND		70-130			
Acenaphthene	0.983	0.0833	"	1.65	ND	59.6	10-124			
Anthracene	1.00	0.0833	"	1.65	ND	60.9	10-143			
Benzo (a) anthracene	1.13	0.0833	"	1.65	ND	68.5	10-169			
Benzo (a) pyrene	1.24	0.0833	"	1.65	ND	75.2	10-149			
Benzo (b) fluoranthene	1.39	0.0833	"	1.65	ND	84.1	10-150			
Benzo (k) fluoranthene	1.24	0.0833	"	1.65	ND	74.9	10-211			

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 - Leppla 16-2 Facility

PAH by SW8270 - Quality Control
Enthalpy Analytical

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

Batch BIA1074 - SW3550C/EPA600-MS

Matrix Spike (BIA1074-MS1)	Source: E5A0464-05			Prepared: 01/29/2025 Analyzed: 01/30/2025						
Chrysene	1.08	0.0833	mg/kg	1.65	ND	65.6	10-172			
Dibenz (a,h) anthracene	0.760	0.0833	"	1.65	ND	46.1	10-128			
Fluoranthene	1.12	0.0833	"	1.65	ND	67.9	10-271			
Fluorene	1.01	0.0833	"	1.65	ND	61.2	10-124			
Indeno (1,2,3-cd) pyrene	0.685	0.0833	"	1.65	ND	41.5	10-127			
Naphthalene	0.881	0.0833	"	1.65	ND	53.4	10-118			
Pyrene	1.13	0.0833	"	1.65	ND	68.4	10-212			
<i>Surrogate: 2,4,6-Tribromophenol (Surr)</i>	1.81		"	3.30		55.0	15-96			
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>	0.924		"	1.65		56.0	19-105			
<i>Surrogate: 2-Fluorophenol (Surr)</i>	1.90		"	3.30		57.5	12-95			
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>	0.996		"	1.65		60.4	21-100			
<i>Surrogate: Phenol-d5 (Surr)</i>	1.86		"	3.30		56.2	13-100			
<i>Surrogate: p-Terphenyl-d14 (Surr)</i>	1.20		"	1.65		72.4	25-125			

Matrix Spike Dup (BIA1074-MSD1)	Source: E5A0464-05			Prepared: 01/29/2025 Analyzed: 01/30/2025						
1-Methylnaphthalene	ND	0.0833	mg/kg		ND		0-200			20
2-Methylnaphthalene	ND	0.0833	"		ND		70-130			20
Acenaphthene	0.916	0.0833	"	1.64	ND	55.9	10-124	7.01		20
Anthracene	0.906	0.0833	"	1.64	ND	55.3	10-143	10.4		20
Benzo (a) anthracene	1.06	0.0833	"	1.64	ND	64.4	10-169	6.74		20
Benzo (a) pyrene	1.19	0.0833	"	1.64	ND	72.5	10-149	4.39		20
Benzo (b) fluoranthene	1.39	0.0833	"	1.64	ND	84.6	10-150	0.0886		20
Benzo (k) fluoranthene	1.14	0.0833	"	1.64	ND	69.6	10-211	7.97		20
Chrysene	1.04	0.0833	"	1.64	ND	63.6	10-172	3.77		20
Dibenz (a,h) anthracene	0.863	0.0833	"	1.64	ND	52.6	10-128	12.6		20
Fluoranthene	1.01	0.0833	"	1.64	ND	61.5	10-271	10.6		20
Fluorene	0.915	0.0833	"	1.64	ND	55.8	10-124	9.87		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 - Leppla 16-2 Facility

**PAH by SW8270 - Quality Control
Enthalpy Analytical**

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

Batch BIA1074 - SW3550C/EPA600-MS

Matrix Spike Dup (BIA1074-MSD1)	Source: E5A0464-05			Prepared: 01/29/2025 Analyzed: 01/30/2025						
Indeno (1,2,3-cd) pyrene	0.769	0.0833	mg/kg	1.64	ND	46.9	10-127	11.5	20	
Naphthalene	0.848	0.0833	"	1.64	ND	51.7	10-118	3.82	20	
Pyrene	1.09	0.0833	"	1.64	ND	66.6	10-212	3.35	20	
Surrogate: 2,4,6-Tribromophenol (Surr)	1.68		"	3.28		51.2	15-96			
Surrogate: 2-Fluorobiphenyl (Surr)	0.820		"	1.64		50.0	19-105			
Surrogate: 2-Fluorophenol (Surr)	1.08		"	3.28		33.1	12-95			
Surrogate: Nitrobenzene-d5 (Surr)	0.927		"	1.64		56.5	21-100			
Surrogate: Phenol-d5 (Surr)	1.73		"	3.28		52.7	13-100			
Surrogate: p-Terphenyl-d14 (Surr)	1.15		"	1.64		70.2	25-125			

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 - Leppla 16-2 Facility

**Total Metals by SW7196 - Quality Control
Enthalpy Analytical**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BIB0781 - No Prep Wet Chem										
Blank (BIB0781-BLK1)					Prepared: 02/14/2025 Analyzed: 02/14/2025					
Chromium, Hexavalent	ND	0.005	mg/kg				-			
LCS (BIB0781-BS1)					Prepared: 02/14/2025 Analyzed: 02/14/2025					
Chromium, Hexavalent	0.05	0.005	mg/kg	0.0500		92.0	80-120			
LCS (BIB0781-BS2)					Prepared: 02/14/2025 Analyzed: 02/14/2025					
Chromium, Hexavalent	9.60	1.00	mg/kg	10.4		92.3	80-120			
Matrix Spike (BIB0781-MS1)					Source: 25A1525-05 Prepared: 02/14/2025 Analyzed: 02/14/2025					
Chromium, Hexavalent	2.08	0.20	mg/kg	2.00	ND	104	75-125			
Matrix Spike Dup (BIB0781-MSD1)					Source: 25A1525-05 Prepared: 02/14/2025 Analyzed: 02/14/2025					
Chromium, Hexavalent	2.03	0.20	mg/kg	1.99	ND	102	75-125	2.23	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 - Leppla 16-2 Facility

Total Metals by SW7196 - Quality Control
Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BIB0531 - No Prep Wet Chem										
Blank (BIB0531-BLK1)					Prepared: 02/13/2025 Analyzed: 02/13/2025					
Chromium, Hexavalent	ND	0.005	mg/kg				-			
LCS (BIB0531-BS1)					Prepared: 02/13/2025 Analyzed: 02/13/2025					
Chromium, Hexavalent	0.05		mg/kg	0.0500		100	80-120			
LCS (BIB0531-BS2)					Prepared: 02/13/2025 Analyzed: 02/13/2025					
Chromium, Hexavalent	7.80	1.00	mg/kg	8.38		93.1	80-120			
Matrix Spike (BIB0531-MS1)					Source: E5A0464-01 Prepared: 02/13/2025 Analyzed: 02/13/2025					
Chromium, Hexavalent	1.81	0.21	mg/kg	2.05	ND	88.0	75-125			
Matrix Spike Dup (BIB0531-MSD1)					Source: E5A0464-01 Prepared: 02/13/2025 Analyzed: 02/13/2025					
Chromium, Hexavalent	1.69	0.20	mg/kg	1.96	ND	86.0	75-125	6.69	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 - Leppla 16-2 Facility

Notes and Definitions

- U Sample is Non-Detect.
- S Surrogate recovery was outside acceptance criteria
- QR-DUP RPD exceeds QC acceptance criteria, this indicates source sample is not homogenous.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- P Duplicate analysis does not meet the acceptance criteria for precision
- M Matrix spike recovery is outside established acceptance limits
- L LCS recovery is outside of established acceptance limits
- J The reported result is an estimated value.
- DS Surrogate concentration reflects a dilution factor.
- 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.