



Absaroka

May 12, 2025

Max Dahlgren

112 High St.

Buffalo

WY

82834

Project Name - KMG - Bright 10-4-5Y/Schan Facility

Project Number - [none]

Attached are your analytical results for KMG - Bright 10-4-5Y/Schan Facility received by Origins Laboratory April 28, 2025. This project is associated with Origins project number E5D0802-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory
303.433.1322
projectmanager@originslab.com



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

Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP1-B01@1.5'	E5D0802-01	Soil	April 28, 2025 13:00	04/28/2025 16:38
SEP1-B02@1.5'	E5D0802-02	Soil	April 28, 2025 13:05	04/28/2025 16:38
SEP2-B01@1.5'	E5D0802-03	Soil	April 28, 2025 13:10	04/28/2025 16:38
SEP2-B02@1.5'	E5D0802-04	Soil	April 28, 2025 13:15	04/28/2025 16:38
AST-B01@3"	E5D0802-05	Soil	April 28, 2025 12:30	04/28/2025 16:38
PW-B01@4'	E5D0802-06	Soil	April 28, 2025 12:40	04/28/2025 16:38
PW-N01@2'	E5D0802-07	Soil	April 28, 2025 12:43	04/28/2025 16:38
AST-B02@3"	E5D0802-08	Soil	April 28, 2025 15:30	04/28/2025 16:38

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

ORIGINS

E5D0802

Page 1 of 1

Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix Preservative	Analysis			Comments
					Full 915	Boron	pH, SAR, EC	
SEP1-001015	4/18/15	13:00	3	S	UNP	X		
SEP1-002015		13:05						
SEP2-001015		13:10						
SEP2-002015		13:15						
AS7-00103"		12:40						
AS7-00104"		12:40						
AS7-00204"		12:45						
AS7-00209"		12:50						

Relinquished By: *[Signature]* Date: 4/18/15 Time: 11:45
 Received By: *[Signature]* Date: 4/18/15 Time: 11:45
 Relinquished By: _____ Date: _____ Time: _____
 Received By: _____ Date: _____ Time: _____

Temp Received: 51 Received On Ice? Yes No
 Standard 48 Hr 72
 SAME DAY 24

Client: OXY Absaroka
 Address: _____
 Project Manager: Max Dahlgren
 Project Name: Bright 10-4-5Y/Schan Facility
 Project Number: _____
 Telephone Number: 970-841-6909
 Collected By: *[Signature]*
 Invoice Billing Info: _____
 On File: Oxy
 Email Address: a2dwyreports@absarokasolutions.com
 915-Surface Water
 915-Metals

Origins Laboratory
[Signature]

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: E5D0802

Client: Absaroka

Client Project ID: Bright 10-4-5Y/Schan Facility

Checklist Completed by: NKM/NKM

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

Date/time completed: 04/28/25

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 5.1 °C

Thermometer ID: T-007

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 HNO ₃ , HCl, H ₂ SO ₄) / (pH > 10 for samples preserved with Na ₂ CO ₃ +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 be taken in the additional comments (above) and the case narrative.

Reviewed by (Project Manager) AI

Date/Time Reviewed 4/30/25

Origins Laboratory

EHO

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

SEP1-B01@1.5'
4/28/2025 1:00:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-01 (Soil)									
Enthalpy Orange									
TOTAL METALS BY EPA 7199									
Hexavalent Chromium	ND		0.30	mg/Kg	1	370604	05/06/2025	05/07/2025	ND
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	0.447		0.100	mg/L	1	B5D2920	04/29/2025	05/02/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5D3042	04/30/2025	05/01/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	106 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	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

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 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

SEP1-B01@1.5'
4/28/2025 1:00:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-01 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND		0.200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	U
Surrogate: 1,2-Dichloroethane-d4	113 %			70-130		"	"	"	
Surrogate: Toluene-d8	98.2 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.896		0.499	meq/L	10	[CALC]	05/01/2025	05/08/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	2.63		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U

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112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

SEP1-B01@1.5'
4/28/2025 1:00:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-01 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Chrysene	ND	0.020	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	102 %			60-130	"	"	"	"
Surrogate: Anthracene-d10	96.2 %			60-130	"	"	"	"
Surrogate: Pyrene-d10	99.2 %			60-130	"	"	"	"
Surrogate: Benzo (a) pyrene-d12	102 %			60-130	"	"	"	"

pH in Soil by 9045D

pH	8.39			pH Units	1	B5E0215	05/02/2025	05/07/2025
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SAR by 20B Saturated Paste

SAR	3.05	0.0100	SAR	1	B5E0165	05/01/2025	05/08/2025
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.467	0.00500	mmhos/cm	1	B5E0215	05/02/2025	05/07/2025
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 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

SEP1-B01@1.5'
4/28/2025 1:00:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-01 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	2.54	0.262	mg/kg	10	B5D2938	04/29/2025	05/01/2025	
Barium	ND	74.2	"	"	"	"	"	
Cadmium	0.399	0.344	"	"	"	"	"	
Copper	ND	41.6	"	"	"	"	"	
Lead	ND	12.7	"	"	"	"	"	
Nickel	ND	23.5	"	"	"	"	"	
Selenium	ND	0.235	"	"	"	"	"	
Silver	ND	0.724	"	"	"	"	"	
Zinc	ND	335	"	"	"	"	"	

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112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

SEP1-B02@1.5'
4/28/2025 1:05:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-02 (Soil)									
Enthalpy Orange									
TOTAL METALS BY EPA 7199									
Hexavalent Chromium	ND		0.30	mg/Kg	1	370604	05/06/2025	05/07/2025	ND
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	0.143		0.0999	mg/L	1	B5D2920	04/29/2025	05/02/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5D3042	04/30/2025	05/01/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	103 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	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

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Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

SEP1-B02@1.5'
4/28/2025 1:05:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-02 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND		0.200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	U
Surrogate: 1,2-Dichloroethane-d4	110 %			70-130		"	"	"	
Surrogate: Toluene-d8	98.9 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	99.6 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.28		0.499	meq/L	10	[CALC]	05/01/2025	05/08/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	0.002		0.002	mg/kg	1	B5E0168	05/01/2025	05/08/2025	
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

SEP1-B02@1.5'
4/28/2025 1:05:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-02 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Chrysene	ND	0.020	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	101 %			60-130	"	"	"	
Surrogate: Anthracene-d10	92.8 %			60-130	"	"	"	
Surrogate: Pyrene-d10	99.3 %			60-130	"	"	"	
Surrogate: Benzo (a) pyrene-d12	101 %			60-130	"	"	"	

pH in Soil by 9045D

pH	8.26			pH Units	1	B5E0215	05/02/2025	05/07/2025
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SAR by 20B Saturated Paste

SAR	0.108	0.0100	SAR	1	B5E0165	05/01/2025	05/08/2025
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.217	0.00500	mmhos/cm	1	B5E0215	05/02/2025	05/07/2025
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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

SEP1-B02@1.5'
4/28/2025 1:05:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-02 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	2.97	0.283	mg/kg	10	B5D2938	04/29/2025	05/01/2025	
Barium	87.1	80.0	"	"	"	"	"	
Cadmium	ND	0.371	"	"	"	"	"	
Copper	ND	44.9	"	"	"	"	"	
Lead	ND	13.7	"	"	"	"	"	
Nickel	ND	25.4	"	"	"	"	"	
Selenium	ND	0.254	"	"	"	"	"	
Silver	ND	0.780	"	"	"	"	"	
Zinc	ND	361	"	"	"	"	"	

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112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

SEP2-B01@1.5'
4/28/2025 1:10:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-03 (Soil)									
Enthalpy Orange									
TOTAL METALS BY EPA 7199									
Hexavalent Chromium	ND		0.29	mg/Kg	1	370604	05/06/2025	05/07/2025	ND
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	0.130		0.101	mg/L	1	B5D2920	04/29/2025	05/02/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5D3042	04/30/2025	05/01/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	107 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E0150	05/01/2025	05/07/2025	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

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

SEP2-B01@1.5'
4/28/2025 1:10:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-03 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND		0.200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	U
Surrogate: 1,2-Dichloroethane-d4	102 %			70-130		"	"	05/07/2025	
Surrogate: Toluene-d8	106 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	97.0 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.24		0.499	meq/L	10	[CALC]	05/01/2025	05/08/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U

Origins Laboratory

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

SEP2-B01@1.5'
4/28/2025 1:10:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-03 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Chrysene	ND	0.020	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	100 %			60-130	"	"	"	
Surrogate: Anthracene-d10	97.4 %			60-130	"	"	"	
Surrogate: Pyrene-d10	101 %			60-130	"	"	"	
Surrogate: Benzo (a) pyrene-d12	103 %			60-130	"	"	"	

pH in Soil by 9045D

pH	8.23			pH Units	1	B5E0215	05/02/2025	05/07/2025
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SAR by 20B Saturated Paste

SAR	0.0592	0.0100	SAR	1	B5E0165	05/01/2025	05/08/2025
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.197	0.00500	mmhos/cm	1	B5E0215	05/02/2025	05/07/2025
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Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

SEP2-B01@1.5'
4/28/2025 1:10:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-03 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	2.29	0.269	mg/kg	10	B5D2938	04/29/2025	05/01/2025	
Barium	ND	75.9	"	"	"	"	"	
Cadmium	ND	0.352	"	"	"	"	"	
Copper	ND	42.6	"	"	"	"	"	
Lead	ND	13.0	"	"	"	"	"	
Nickel	ND	24.1	"	"	"	"	"	
Selenium	ND	0.241	"	"	"	"	"	
Silver	ND	0.741	"	"	"	"	"	
Zinc	ND	343	"	"	"	"	"	

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

SEP2-B02@1.5'
4/28/2025 1:15:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-04 (Soil)									
Enthalpy Orange									
TOTAL METALS BY EPA 7199									
Hexavalent Chromium	ND		0.30	mg/Kg	1	370604	05/06/2025	05/07/2025	ND
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	0.160		0.0989	mg/L	1	B5D2932	04/29/2025	05/02/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5D3042	04/30/2025	05/01/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	106 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	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

Origins Laboratory



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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

SEP2-B02@1.5'
4/28/2025 1:15:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-04 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND		0.200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	U
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Surrogate: 1,2-Dichloroethane-d4	112 %			70-130		"	"	"	
Surrogate: Toluene-d8	97.6 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	99.9 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	1.51		0.499	meq/L	10	[CALC]	05/01/2025	05/08/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U

Origins Laboratory

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

SEP2-B02@1.5'
4/28/2025 1:15:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-04 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Chrysene	ND	0.020	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	99.0 %			60-130	"	"	"	
Surrogate: Anthracene-d10	92.2 %			60-130	"	"	"	
Surrogate: Pyrene-d10	99.3 %			60-130	"	"	"	
Surrogate: Benzo (a) pyrene-d12	99.0 %			60-130	"	"	"	

pH in Soil by 9045D

pH	8.33			pH Units	1	B5E0215	05/02/2025	05/07/2025
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SAR by 20B Saturated Paste

SAR	0.135	0.0100	SAR	1	B5E0165	05/01/2025	05/08/2025
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.254	0.00500	mmhos/cm	1	B5E0215	05/02/2025	05/07/2025
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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

SEP2-B02@1.5'
4/28/2025 1:15:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-04 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	1.74		0.283	mg/kg	10	B5D2938	04/29/2025	05/01/2025	
Barium	ND		80.1	"	"	"	"	"	"
Cadmium	ND		0.371	"	"	"	"	"	"
Copper	ND		44.9	"	"	"	"	"	"
Lead	ND		13.7	"	"	"	"	"	"
Nickel	ND		25.4	"	"	"	"	"	"
Selenium	ND		0.254	"	"	"	"	"	"
Silver	ND		0.781	"	"	"	"	"	"
Zinc	ND		361	"	"	"	"	"	"

Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

AST-B01@3"
4/28/2025 12:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-05 (Soil)									
Enthalpy Orange									
TOTAL METALS BY EPA 7199									
Hexavalent Chromium	ND		0.30	mg/Kg	1	370604	05/06/2025	05/07/2025	ND
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	ND		0.0999	mg/L	1	B5D2932	04/29/2025	05/02/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5D3042	04/30/2025	05/01/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	105 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	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

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

AST-B01@3"
4/28/2025 12:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-05 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Gasoline Range Hydrocarbons	ND		0.200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	U
Surrogate: 1,2-Dichloroethane-d4	117 %			70-130		"	"	"	
Surrogate: Toluene-d8	96.2 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	99.6 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	ND		0.499	meq/L	10	[CALC]	05/01/2025	05/08/2025	
Magnesium	0.894		0.823	"	"	"	"	"	
Sodium	22.9		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND		0.002	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U

Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

AST-B01@3"
4/28/2025 12:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-05 (Soil)									
Origins Laboratory									
PAH by EPA 8270E extracted via 3580A									
Chrysene	ND		0.020	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U
Fluoranthene	ND		0.020	"	"	"	"	"	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	99.5 %				60-130	"	"	"	
Surrogate: Anthracene-d10	97.1 %				60-130	"	"	"	
Surrogate: Pyrene-d10	99.9 %				60-130	"	"	"	
Surrogate: Benzo (a) pyrene-d12	104 %				60-130	"	"	"	
pH in Soil by 9045D									
pH	10.2			pH Units	1	B5E0215	05/02/2025	05/07/2025	
SAR by 20B Saturated Paste									
SAR	34.9		0.0100	SAR	1	B5E0165	05/01/2025	05/08/2025	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	2.27		0.00500	mmhos/cm	1	B5E0215	05/02/2025	05/07/2025	

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

AST-B01@3"
4/28/2025 12:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-05 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	2.82		0.274	mg/kg	10	B5D2938	04/29/2025	05/01/2025	
Barium	ND		77.5	"	"	"	"	"	
Cadmium	ND		0.359	"	"	"	"	"	
Copper	ND		43.5	"	"	"	"	"	
Lead	ND		13.2	"	"	"	"	"	
Nickel	ND		24.6	"	"	"	"	"	
Selenium	ND		0.246	"	"	"	"	"	
Silver	ND		0.756	"	"	"	"	"	
Zinc	ND		350	"	"	"	"	"	

Origins Laboratory

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

PW-B01@4'
4/28/2025 12:40:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-06 (Soil)									
Enthalpy Orange									
TOTAL METALS BY EPA 7199									
Hexavalent Chromium	ND		0.30	mg/Kg	1	370604	05/06/2025	05/07/2025	ND
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	0.962		0.0999	mg/L	1	B5D2932	04/29/2025	05/02/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	190		25.0	mg/kg	1	B5D3042	04/30/2025	05/01/2025	
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: <i>o</i> -Terphenyl	112 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	4.23		0.0500	mg/kg	25	B5E0150	05/01/2025	05/02/2025	
1,3,5-Trimethylbenzene	ND		0.0500	"	"	"	"	"	R-05, U
Benzene	ND		0.0500	"	"	"	"	"	R-05, U
Ethylbenzene	0.248		0.0500	"	"	"	"	"	
Toluene	ND		0.0500	"	"	"	"	"	R-05, U
Xylenes, total	ND		0.0500	"	"	"	"	"	R-05, U
Gasoline Range Hydrocarbons	134		5.00	"	"	"	"	"	

Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

PW-B01@4'
4/28/2025 12:40:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-06 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	107 %			70-130		B5E0150	05/01/2025	05/02/2025	
Surrogate: Toluene-d8	107 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	97.1 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	0.676		0.499	meq/L	10	[CALC]	05/01/2025	05/08/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	7.15		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	0.327		0.002	mg/kg	1	B5E0168	05/01/2025	05/08/2025	
2-Methylnaphthalene	0.800		0.002	"	"	"	"	"	
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U

Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

PW-B01@4'
4/28/2025 12:40:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-06 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Fluoranthene	ND		0.020	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
Fluorene	0.051		0.020	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	0.188		0.002	"	"	"	"	"	
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	104 %			60-130		"	"	"	
Surrogate: Anthracene-d10	94.5 %			60-130		"	"	"	
Surrogate: Pyrene-d10	102 %			60-130		"	"	"	
Surrogate: Benzo (a) pyrene-d12	104 %			60-130		"	"	"	

pH in Soil by 9045D

pH	8.41			pH Units	1	B5E0215	05/02/2025	05/07/2025	
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SAR by 20B Saturated Paste

SAR	9.59		0.0100	SAR	1	B5E0165	05/01/2025	05/08/2025	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.932		0.00500	mmhos/cm	1	B5E0215	05/02/2025	05/07/2025	
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Table 915 metals by EPA 6020B

Origins Laboratory



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

PW-B01@4'
4/28/2025 12:40:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-06 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	2.25		0.254	mg/kg	10	B5D2938	04/29/2025	05/01/2025	
Barium	ND		71.8	"	"	"	"	"	"
Cadmium	ND		0.333	"	"	"	"	"	"
Copper	ND		40.3	"	"	"	"	"	"
Lead	ND		12.3	"	"	"	"	"	"
Nickel	ND		22.8	"	"	"	"	"	"
Selenium	ND		0.228	"	"	"	"	"	"
Silver	ND		0.700	"	"	"	"	"	"
Zinc	ND		324	"	"	"	"	"	"

Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

PW-N01@2'
4/28/2025 12:43:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-07 (Soil)									
Enthalpy Orange									
TOTAL METALS BY EPA 7199									
Hexavalent Chromium	ND		0.30	mg/Kg	1	370604	05/06/2025	05/07/2025	ND
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	0.313		0.101	mg/L	1	B5D2932	04/29/2025	05/02/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5D3042	04/30/2025	05/01/2025	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	103 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	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

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

PW-N01@2'
4/28/2025 12:43:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-07 (Soil)									
Origins Laboratory									
GBTEX+TMBs by 8260D									
Gasoline Range Hydrocarbons	ND		0.200	mg/kg	1	B5E0150	05/01/2025	05/02/2025	U
Surrogate: 1,2-Dichloroethane-d4	107 %			70-130		"	"	"	
Surrogate: Toluene-d8	99.1 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	100 %			70-130		"	"	"	
Metals by Saturated Paste by EPA 6010									
Calcium	1.41		0.499	meq/L	10	[CALC]	05/01/2025	05/08/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	0.581		0.435	"	"	"	"	"	
PAH by EPA 8270E extracted via 3580A									
1-Methylnaphthalene	ND		0.002	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	U
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

PW-N01@2'
4/28/2025 12:43:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-07 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Chrysene	ND	0.020	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	102 %			60-130	"	"	"	
Surrogate: Anthracene-d10	95.3 %			60-130	"	"	"	
Surrogate: Pyrene-d10	97.2 %			60-130	"	"	"	
Surrogate: Benzo (a) pyrene-d12	102 %			60-130	"	"	"	

pH in Soil by 9045D

pH	8.39		pH Units	1	B5E0215	05/02/2025	05/07/2025	
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SAR by 20B Saturated Paste

SAR	0.605	0.0100	SAR	1	B5E0165	05/01/2025	05/08/2025	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.225	0.00500	mmhos/cm	1	B5E0215	05/02/2025	05/07/2025	
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Origins Laboratory



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Absaroka

112 High St.

Buffalo WY 82834

Max Dahlgren

Project Number: [none]

Project: KMG - Bright 10-4-5Y/Schan Facility

PW-N01@2'

4/28/2025 12:43:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-07 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	1.96		0.269	mg/kg	10	B5D2938	04/29/2025	05/01/2025	
Barium	ND		75.9	"	"	"	"	"	
Cadmium	ND		0.352	"	"	"	"	"	
Copper	ND		42.6	"	"	"	"	"	
Lead	ND		13.0	"	"	"	"	"	
Nickel	ND		24.1	"	"	"	"	"	
Selenium	ND		0.241	"	"	"	"	"	
Silver	ND		0.741	"	"	"	"	"	
Zinc	ND		343	"	"	"	"	"	

Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

AST-B02@3"
4/28/2025 3:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5D0802-08 (Soil) Enthalpy Orange									
TOTAL METALS BY EPA 7199									
Hexavalent Chromium	ND		0.29	mg/Kg	1	370604	05/06/2025	05/07/2025	ND
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	ND		0.0997	mg/L	1	B5D2932	04/29/2025	05/02/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	76.6		25.0	mg/kg	1	B5D3042	04/30/2025	05/01/2025	
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	101 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	1.20		0.500	mg/kg	250	B5E0150	05/01/2025	05/02/2025	
1,3,5-Trimethylbenzene	1.04		0.500	"	"	"	"	"	
Benzene	ND		0.0500	"	25	"	"	05/07/2025	R-05, U
Ethylbenzene	ND		0.0500	"	"	"	"	"	R-05, U
Toluene	ND		0.0500	"	"	"	"	"	R-05, U
Xylenes, total	4.14		0.500	"	250	"	"	05/02/2025	
Gasoline Range Hydrocarbons	156		50.0	"	"	"	"	"	

Origins Laboratory



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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

AST-B02@3"
4/28/2025 3:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-08 (Soil)
Origins Laboratory

GBTEX+TMBs by 8260D

Surrogate: 1,2-Dichloroethane-d4	104 %			70-130		B5E0150	05/01/2025	05/02/2025	
Surrogate: Toluene-d8	99.8 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	98.9 %			70-130		"	"	"	

Metals by Saturated Paste by EPA 6010

Calcium	2.49		0.499	meq/L	10	[CALC]	05/01/2025	05/08/2025	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	0.084		0.002	mg/kg	1	B5E0168	05/01/2025	05/08/2025	
2-Methylnaphthalene	0.221		0.002	"	"	"	"	"	
Acenaphthene	ND		0.020	"	"	"	"	"	U
Anthracene	ND		0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	U
Chrysene	ND		0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	U

Origins Laboratory

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

AST-B02@3"
4/28/2025 3:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-08 (Soil)
Origins Laboratory

PAH by EPA 8270E extracted via 3580A

Fluoranthene	ND		0.020	mg/kg	1	B5E0168	05/01/2025	05/08/2025	U
Fluorene	ND		0.020	"	"	"	"	"	U
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	U
Naphthalene	0.076		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	102 %			60-130		"	"	"	
Surrogate: Anthracene-d10	95.3 %			60-130		"	"	"	
Surrogate: Pyrene-d10	98.0 %			60-130		"	"	"	
Surrogate: Benzo (a) pyrene-d12	105 %			60-130		"	"	"	

pH in Soil by 9045D

pH	7.99			pH Units	1	B5E0215	05/02/2025	05/07/2025	
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SAR by 20B Saturated Paste

SAR	0.0606		0.0100	SAR	1	B5E0165	05/01/2025	05/08/2025	
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.305		0.00500	mmhos/cm	1	B5E0215	05/02/2025	05/07/2025	
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Table 915 metals by EPA 6020B

Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

AST-B02@3"
4/28/2025 3:30:00PM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5D0802-08 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Arsenic	2.30	0.273	mg/kg	10	B5D2938	04/29/2025	05/01/2025	
Barium	ND	77.1	"	"	"	"	"	"
Cadmium	ND	0.357	"	"	"	"	"	"
Copper	ND	43.2	"	"	"	"	"	"
Lead	ND	13.2	"	"	"	"	"	"
Nickel	ND	24.4	"	"	"	"	"	"
Selenium	ND	0.244	"	"	"	"	"	"
Silver	ND	0.752	"	"	"	"	"	"
Zinc	ND	348	"	"	"	"	"	"

Origins Laboratory



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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5D2920 - DTPA Sorbitol Preparation

Blank (B5D2920-BLK1)

Prepared: 04/29/2025 Analyzed: 05/02/2025

Boron ND 0.100 mg/L

Duplicate (B5D2920-DUP1)

Source: E5D0696-01

Prepared: 04/29/2025 Analyzed: 05/02/2025

Boron 1.33 0.101 mg/L 1.36 2.44 50

Batch B5D2932 - DTPA Sorbitol Preparation

Blank (B5D2932-BLK1)

Prepared: 04/29/2025 Analyzed: 05/02/2025

Boron ND 0.100 mg/L

Duplicate (B5D2932-DUP1)

Source: E5D0799-01

Prepared: 04/29/2025 Analyzed: 05/02/2025

Boron 0.341 0.100 mg/L 0.339 0.463 50

Batch B5E0165 - Saturated Paste Metals

Blank (B5E0165-BLK1)

Prepared: 05/01/2025 Analyzed: 05/08/2025

SAR ND 0.0100 SAR

Calcium PPM ND 10.0 mg/L

Magnesium PPM ND 10.0 "

Sodium PPM ND 10.0 "

Duplicate (B5E0165-DUP1)

Source: E5D0797-02

Prepared: 05/01/2025 Analyzed: 05/08/2025

SAR ND 0.0100 SAR 2.22 200

Calcium PPM 489 10.0 mg/L 192 87.4 50 QR-DUP

Magnesium PPM 186 10.0 " 85.6 73.9 50 QR-DUP

Sodium PPM 188 10.0 " 147 24.5 50

Origins Laboratory

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5E0168 - EPA 3580

Blank (B5E0168-BLK1)

Prepared: 05/01/2025 Analyzed: 05/08/2025

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	190		"	200		96.3	60-130			
Surrogate: Pyrene-d10	200		"	200		100	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		103	60-130			

LCS (B5E0168-BS1)

Prepared: 05/01/2025 Analyzed: 05/08/2025

1-Methylnaphthalene	0.190	0.002	mg/kg	0.200		94.8	70-130			
2-Methylnaphthalene	0.190	0.002	"	0.200		94.9	70-130			
Acenaphthene	0.204	0.020	"	0.200		102	70-130			
Anthracene	0.196	0.020	"	0.200		98.2	70-130			

Origins Laboratory

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5E0168 - EPA 3580

LCS (B5E0168-BS1)

Prepared: 05/01/2025 Analyzed: 05/08/2025

Benzo (a) anthracene	0.225	0.005	mg/kg	0.200		113	70-130			
Benzo (a) pyrene	0.207	0.020	"	0.200		103	70-130			
Benzo (b) fluoranthene	0.229	0.020	"	0.200		115	70-130			
Benzo (g,h,i) perylene	0.204	0.020	"	0.200		102	70-130			
Benzo (k) fluoranthene	0.218	0.020	"	0.200		109	70-130			
Chrysene	0.207	0.020	"	0.200		104	70-130			
Dibenz (a,h) anthracene	0.237	0.020	"	0.200		118	70-130			
Fluoranthene	0.223	0.020	"	0.200		112	70-130			
Fluorene	0.203	0.020	"	0.200		102	70-130			
Indeno (1,2,3-cd) pyrene	0.213	0.020	"	0.200		107	70-130			
Naphthalene	0.205	0.002	"	0.200		103	70-130			
Phenanthrene	0.216	0.020	"	0.200		108	70-130			
Pyrene	0.219	0.020	"	0.200		109	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	190		"	200		93.6	60-130			
Surrogate: Pyrene-d10	200		"	200		99.1	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			

Matrix Spike (B5E0168-MS1)

Source: E5D0798-01

Prepared: 05/01/2025 Analyzed: 05/08/2025

1-Methylnaphthalene	0.181	0.002	mg/kg	0.200	0.001	89.8	70-130			
2-Methylnaphthalene	0.182	0.002	"	0.200	ND	91.1	70-130			
Acenaphthene	0.200	0.020	"	0.200	0.0007	99.6	70-130			
Anthracene	0.190	0.020	"	0.200	ND	94.9	70-130			
Benzo (a) anthracene	0.223	0.005	"	0.200	0.001	111	70-130			
Benzo (a) pyrene	0.219	0.020	"	0.200	0.001	109	70-130			
Benzo (b) fluoranthene	0.254	0.020	"	0.200	ND	127	70-130			
Benzo (g,h,i) perylene	0.212	0.020	"	0.200	0.0006	105	70-130			

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5E0168 - EPA 3580

Matrix Spike (B5E0168-MS1)		Source: E5D0798-01			Prepared: 05/01/2025 Analyzed: 05/08/2025					
Benzo (k) fluoranthene	0.239	0.020	mg/kg	0.200	ND	120	70-130			
Chrysene	0.201	0.020	"	0.200	0.0005	100	70-130			
Dibenz (a,h) anthracene	0.246	0.020	"	0.200	0.0008	122	70-130			
Fluoranthene	0.219	0.020	"	0.200	ND	109	70-130			
Fluorene	0.201	0.020	"	0.200	ND	101	70-130			
Indeno (1,2,3-cd) pyrene	0.223	0.020	"	0.200	0.002	111	70-130			
Naphthalene	0.203	0.002	"	0.200	ND	101	70-130			
Phenanthrene	0.202	0.020	"	0.200	ND	101	70-130			
Pyrene	0.210	0.020	"	0.200	ND	105	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	180		"	200		92.2	60-130			
Surrogate: Pyrene-d10	200		"	200		97.9	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		100	60-130			

Matrix Spike Dup (B5E0168-MSD1)		Source: E5D0798-01			Prepared: 05/01/2025 Analyzed: 05/08/2025					
1-Methylnaphthalene	0.187	0.002	mg/kg	0.200	0.001	93.0	70-130	3.50	20	
2-Methylnaphthalene	0.188	0.002	"	0.200	ND	94.1	70-130	3.23	20	
Acenaphthene	0.206	0.020	"	0.200	0.0007	103	70-130	3.21	20	
Anthracene	0.192	0.020	"	0.200	ND	95.8	70-130	0.955	20	
Benzo (a) anthracene	0.215	0.005	"	0.200	0.001	107	70-130	3.70	20	
Benzo (a) pyrene	0.231	0.020	"	0.200	0.001	115	70-130	5.32	20	
Benzo (b) fluoranthene	0.265	0.020	"	0.200	ND	133	70-130	4.34	20	QM-07
Benzo (g,h,i) perylene	0.225	0.020	"	0.200	0.0006	112	70-130	6.03	20	
Benzo (k) fluoranthene	0.247	0.020	"	0.200	ND	124	70-130	3.24	20	
Chrysene	0.208	0.020	"	0.200	0.0005	104	70-130	3.32	20	
Dibenz (a,h) anthracene	0.256	0.020	"	0.200	0.0008	127	70-130	4.01	20	
Fluoranthene	0.222	0.020	"	0.200	ND	111	70-130	1.72	20	

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5E0168 - EPA 3580

Matrix Spike Dup (B5E0168-MSD1)

Source: E5D0798-01

Prepared: 05/01/2025 Analyzed: 05/08/2025

Fluorene	0.206	0.020	mg/kg	0.200	ND	103	70-130	2.46	20	
Indeno (1,2,3-cd) pyrene	0.207	0.020	"	0.200	0.002	103	70-130	7.35	20	
Naphthalene	0.203	0.002	"	0.200	ND	102	70-130	0.198	20	
Phenanthrene	0.207	0.020	"	0.200	ND	104	70-130	2.63	20	
Pyrene	0.216	0.020	"	0.200	ND	108	70-130	2.96	20	
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	190		"	200		95.5	60-130			
Surrogate: Pyrene-d10	200		"	200		97.7	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		101	60-130			

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Absaroka
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Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5D3042 - EPA 3550B

Blank (B5D3042-BLK1)

Prepared: 04/30/2025 Analyzed: 05/01/2025

Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	27		"	24.9		110	50-150			

LCS (B5D3042-BS1)

Prepared: 04/30/2025 Analyzed: 05/01/2025

Diesel (C10-C28)	911	50.0	mg/kg	1000		91.1	70-130			
Residual Range Organics (C28-C40)	862	200	"	1000		86.2	70-130			
Surrogate: o-Terphenyl	55		"	49.8		111	50-150			

Matrix Spike (B5D3042-MS1)

Source: E5D0802-01

Prepared: 04/30/2025 Analyzed: 05/01/2025

Diesel (C10-C28)	881	50.0	mg/kg	1000	ND	88.1	70-130			
Residual Range Organics (C28-C40)	849	200	"	1000	ND	84.9	70-130			
Surrogate: o-Terphenyl	53		"	49.8		106	50-150			

Matrix Spike Dup (B5D3042-MSD1)

Source: E5D0802-01

Prepared: 04/30/2025 Analyzed: 05/01/2025

Diesel (C10-C28)	913	50.0	mg/kg	1000	ND	91.3	70-130	3.51	35	
Residual Range Organics (C28-C40)	872	200	"	1000	ND	87.2	70-130	2.69	35	
Surrogate: o-Terphenyl	53		"	49.8		106	50-150			

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Absaroka
112 High St.
Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5D2938 - EPA 3050B

Blank (B5D2938-BLK1)

Prepared: 04/29/2025 Analyzed: 05/01/2025

Arsenic	ND	0.290	mg/kg							
Barium	ND	82.0	"							
Cadmium	ND	0.380	"							
Copper	ND	46.0	"							
Lead	ND	14.0	"							
Nickel	ND	26.0	"							
Selenium	ND	0.260	"							
Silver	ND	0.800	"							
Zinc	ND	370	"							

LCS (B5D2938-BS1)

Prepared: 04/29/2025 Analyzed: 05/01/2025

Arsenic	5.26	0.290	mg/kg	5.00		105	80-120			
Barium	539	82.0	"	500		108	80-120			
Cadmium	5.28	0.380	"	5.00		106	80-120			
Copper	56.2	46.0	"	50.0		112	80-120			
Lead	5.47	14.0	"	5.00		109	80-120			
Nickel	5.78	26.0	"	5.00		116	80-120			
Selenium	5.35	0.260	"	5.00		107	80-120			
Silver	5.26	0.800	"	5.00		105	80-120			
Zinc	59.2	370	"	50.0		118	80-120			

Matrix Spike (B5D2938-MS1)

Source: E5D0799-01

Prepared: 04/29/2025 Analyzed: 05/01/2025

Arsenic	6.66	0.262	mg/kg	4.52	2.88	83.7	75-125			
Barium	567	74.2	"	452	58.4	112	75-125			
Cadmium	4.91	0.344	"	4.52	0.0981	106	75-125			
Copper	57.1	41.6	"	45.2	4.96	115	75-125			
Lead	9.31	12.7	"	4.52	5.36	87.3	75-125			

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Absaroka
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Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5D2938 - EPA 3050B

Matrix Spike (B5D2938-MS1)

Source: E5D0799-01

Prepared: 04/29/2025 Analyzed: 05/01/2025

Nickel	9.99	23.5	mg/kg	4.52	4.94	112	75-125			
Selenium	4.77	0.235	"	4.52	0.0622	104	75-125			
Silver	4.87	0.724	"	4.52	0.0149	107	75-125			
Zinc	75.9	335	"	45.2	25.2	112	75-125			

Matrix Spike Dup (B5D2938-MSD1)

Source: E5D0799-01

Prepared: 04/29/2025 Analyzed: 05/01/2025

Arsenic	6.67	0.277	mg/kg	4.77	2.88	79.4	75-125	0.0666	20	
Barium	577	78.2	"	477	58.4	109	75-125	1.76	20	
Cadmium	4.93	0.363	"	4.77	0.0981	101	75-125	0.537	20	
Copper	57.2	43.9	"	47.7	4.96	110	75-125	0.166	20	
Lead	9.54	13.4	"	4.77	5.36	87.7	75-125	2.49	20	
Nickel	9.99	24.8	"	4.77	4.94	106	75-125	0.0165	20	
Selenium	5.00	0.248	"	4.77	0.0622	104	75-125	4.80	20	
Silver	4.91	0.763	"	4.77	0.0149	103	75-125	0.870	20	
Zinc	75.8	353	"	47.7	25.2	106	75-125	0.139	20	

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 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5E0215 - Saturated Paste pH/EC

Blank (B5E0215-BLK1)

Prepared: 05/02/2025 Analyzed: 05/07/2025

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B5E0215-DUP1)

Source: E5D0797-02

Prepared: 05/02/2025 Analyzed: 05/07/2025

Specific Conductance (EC)	3.57	0.00500	mmhos/cm		2.02		55.4	25	QR-DUP
pH	7.89		pH Units		7.97		1.01	25	

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Absaroka
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Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5E0150 - EPA 5030 (soil)

Blank (B5E0150-BLK1)

Prepared: 05/01/2025 Analyzed: 05/02/2025

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	0.13		"	0.125	106	70-130				
Surrogate: Toluene-d8	0.13		"	0.125	101	70-130				
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	100	70-130				

LCS (B5E0150-BS1)

Prepared: 05/01/2025 Analyzed: 05/02/2025

1,2,4-Trimethylbenzene	0.0936	0.00200	mg/kg	0.100	93.6	70-130				
1,3,5-Trimethylbenzene	0.0957	0.00200	"	0.100	95.7	70-130				
Benzene	0.0919	0.00200	"	0.100	91.9	70-130				
Ethylbenzene	0.0924	0.00200	"	0.100	92.4	70-130				
Naphthalene	0.0960	0.00380	"	0.100	96.0	70-130				
Toluene	0.0907	0.00200	"	0.100	90.7	70-130				
o-Xylene	0.0915	0.00200	"	0.100	91.5	70-130				
m,p-Xylene	0.180	0.00400	"	0.200	89.9	70-130				

Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125	104	70-130				
Surrogate: Toluene-d8	0.13		"	0.125	100	70-130				
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125	97.6	70-130				

Matrix Spike (B5E0150-MS1)

Source: E5D0792-01

Prepared: 05/01/2025 Analyzed: 05/02/2025

1,2,4-Trimethylbenzene	0.103	0.00200	mg/kg	0.100	ND	103	70-130			
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Buffalo WY 82834

Max Dahlgren
Project Number: [none]
Project: KMG - Bright 10-4-5Y/Schan Facility

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5E0150 - EPA 5030 (soil)

Matrix Spike (B5E0150-MS1)		Source: E5D0792-01			Prepared: 05/01/2025 Analyzed: 05/02/2025					
1,3,5-Trimethylbenzene	0.103	0.00200	mg/kg	0.100	ND	103	70-130			
Benzene	0.104	0.00200	"	0.100	ND	104	70-130			
Ethylbenzene	0.0985	0.00200	"	0.100	ND	98.5	70-130			
Naphthalene	0.110	0.00380	"	0.100	ND	110	70-130			
Toluene	0.0997	0.00200	"	0.100	ND	99.7	70-130			
o-Xylene	0.0996	0.00200	"	0.100	ND	99.6	70-130			
m,p-Xylene	0.193	0.00400	"	0.200	ND	96.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		111	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.3	70-130			

Matrix Spike Dup (B5E0150-MSD1)		Source: E5D0792-01			Prepared: 05/01/2025 Analyzed: 05/02/2025					
1,2,4-Trimethylbenzene	0.108	0.00200	mg/kg	0.100	ND	108	70-130	4.88	20	
1,3,5-Trimethylbenzene	0.108	0.00200	"	0.100	ND	108	70-130	4.87	20	
Benzene	0.111	0.00200	"	0.100	ND	111	70-130	6.37	20	
Ethylbenzene	0.105	0.00200	"	0.100	ND	105	70-130	6.47	20	
Naphthalene	0.120	0.00380	"	0.100	ND	120	70-130	8.46	20	
Toluene	0.105	0.00200	"	0.100	ND	105	70-130	5.14	20	
o-Xylene	0.104	0.00200	"	0.100	ND	104	70-130	4.78	20	
m,p-Xylene	0.204	0.00400	"	0.200	ND	102	70-130	5.75	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		111	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.2	70-130			

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Absaroka
 112 High St.
 Buffalo WY 82834

Max Dahlgren
 Project Number: [none]
 Project: KMG - Bright 10-4-5Y/Schan Facility

TOTAL METALS BY EPA 7199 - Quality Control
Enthalpy Orange

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 370604 - EPA 3060A										
BLANK (QC1254940)										
					Prepared: 05/06/2025 Analyzed: 05/07/2025					
Hexavalent Chromium	ND	0.30	mg/Kg				-			ND
LCS (QC1254941)										
					Prepared: 05/06/2025 Analyzed: 05/07/2025					
Hexavalent Chromium	40.10	0.6000	mg/Kg	40.00		100	80-120			
Duplicate (QC1254942)										
					Prepared: 05/06/2025 Analyzed: 05/07/2025					
Hexavalent Chromium	ND	0.2941	mg/Kg		0		-		30	ND
Matrix Spike (QC1254944)										
					Prepared: 05/06/2025 Analyzed: 05/07/2025					
Hexavalent Chromium	33.73	0.5952	mg/Kg	39.68	0	85	70-130			

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Absaroka

112 High St.

Buffalo

WY

82834

Max Dahlgren

Project Number: [none]

Project: KMG - Bright 10-4-5Y/Schan Facility

Notes and Definitions

U Sample is Non-Detect.

R-05 The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.

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.

ND Not Detected

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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