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## **April 27, 2022 Report**



May 12, 2022

Absaroka

Kenneth Rogowski

112 High St.

Buffalo WY 82834

Project Name - Ridgeview 32-16-1

Project Number - GUP.CO.0586.02

Attached are your analytical results for Ridgeview 32-16-1 received by Origins Laboratory, Inc. April 28, 2022. This project is associated with Origins project number Y204694-01.

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, Inc.  
303.433.1322  
o-squad@oelabinc.com



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

Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG-1@0"	Y204694-01	Soil	April 27, 2022 8:45	04/28/2022 15:00

Origins Laboratory, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: Y201694

Client: Absaroka

Client Project ID: Ridgeview 32-16-1

Checklist Completed by: JB

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

Date/time completed: 4/22/22

Airbill #: N/A

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

Cooler Number/Temperature: 1 12.5 °C 1 °C 1 °C (Describe) °C

Thermometer ID: 1004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?		<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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<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 <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by: JB (Project Manager)

Date/Time Reviewed: 5-1-22

Origins Laboratory, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**BG-1@0"**  
**4/27/2022 8:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y204694-01 (Soil)**

**Anions by 9056A**

Chloride	ND	3.33	4	mg/Kg	1	L615012	05/09/2022	05/09/2022	
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**Boron (DTPA Sorbitol)**

Boron	0.343		0.101	mg/L	1	B2E0207	05/02/2022	05/03/2022	
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**Metals by Saturated Paste by EPA 6010**

Calcium	2.30		0.499	meq/L	10	[CALC]	05/02/2022	05/03/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	8.31			pH Units	1	B2E0211	05/02/2022	05/03/2022	
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**SAR by 20B Saturated Paste**

SAR	0.0412			SAR	1	B2E0204	05/02/2022	05/03/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.280		0.00500	mmhos/cm	1	B2E0210	05/02/2022	05/03/2022	
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 112 High St.  
 Buffalo WY 82834

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 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**BG-1@0"**  
**4/27/2022 8:45:00AM**

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

**Origins Laboratory, Inc.**  
**Y204694-01 (Soil)**

**Total Metals by 6020B**

Arsenic	6.36	0.0855	0.25	mg/Kg	5	L614049	05/03/2022	05/06/2022	
Barium	96.6	0.042	0.25	"	"	"	"	"	
Cadmium	0.263	0.0259	0.25	"	"	"	"	"	
Copper	11.7	0.0806	0.25	"	"	"	"	"	
Lead	10.9	0.031	0.25	"	"	"	"	"	
Nickel	13.1	0.0633	0.25	"	"	"	"	"	
Selenium	0.181	0.103	0.25	"	"	"	"	"	J
Silver	0.0329	0.0067	0.25	"	"	"	"	"	J
Zinc	44.3	0.534	2.5	"	"	"	"	"	

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L614924	04/27/2022	05/08/2022	
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 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B2E0207 - Default Prep Metals</b>										
<b>Blank (B2E0207-BLK1)</b>					Prepared: 05/02/2022 Analyzed: 05/03/2022					
Boron	ND	0.100	mg/L							U
<b>Duplicate (B2E0207-DUP1)</b>					<b>Source: Y204693-01</b> Prepared: 05/02/2022 Analyzed: 05/03/2022					
Boron	0.407	1.02	mg/L		0.393			3.49	50	U

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 Project: Ridgeview 32-16-1

**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B2E0210 - NO PREP</b>										
<b>Blank (B2E0210-BLK1)</b>					Prepared: 05/02/2022 Analyzed: 05/03/2022					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							U
<b>Duplicate (B2E0210-DUP1)</b>					Source: Y204684-01 Prepared: 05/02/2022 Analyzed: 05/03/2022					
Specific Conductance (EC)	0.251	0.00500	mmhos/cm		0.234			7.22	25	
<b>Batch B2E0211 - NO PREP</b>										
<b>Duplicate (B2E0211-DUP1)</b>					Source: Y204684-01 Prepared: 05/02/2022 Analyzed: 05/03/2022					
pH	8.12		pH Units		8.08			0.494	25	

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 Project: Ridgeview 32-16-1

**Anions by 9056A - Quality Control  
 Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L615012 - SW-9056A (PREP)</b>										
<b>LCSD (LCSD-L615012)</b>					Prepared: 05/09/2022 Analyzed: 05/09/2022					
Chloride	532	3.33	mg/Kg	500		106	80-120	0.5	20	
<b>LCS (LCS-L615012)</b>					Prepared: 05/09/2022 Analyzed: 05/09/2022					
Chloride	529	3.33	mg/Kg	500		106	80-120			
<b>LRB (LRB-L615012)</b>					Prepared: 05/09/2022 Analyzed: 05/09/2022					
Chloride	ND	4	mg/Kg							

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**Total Metals by 6020B - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L614049 - 3050B**

<b>MSD (L 93140-MSD-L614049)</b>		<b>Source: Y204694-01</b>			<b>Prepared: 05/03/2022 Analyzed: 05/06/2022</b>					
Nickel	10.1	0.0633	mg/Kg	2.3	13.1	NR	75-125	25.1	80	*
Zinc	55.7	0.534	"	23	44.3	50	75-125	5.2	80	*
Arsenic	3.58	0.0855	"	2.3	6.36	NR	75-125	36.1	80	I*
Selenium	3.13	0.103	"	4.59	0.181	64	75-125	1.9	80	*
Lead	10.9	0.031	"	2.3	10.9	0	75-125	5.3	80	*
Copper	9.47	0.0806	"	2.3	11.7	NR	75-125	8.3	80	I*
Cadmium	0.513	0.0259	"	0.459	0.263	54	75-125	5.3	80	*
Barium	95.8	0.042	"	4.59	96.6	NR	75-125	0.1	80	*
Silver	0.509	0.0067	"	0.459	0.0329	104	75-125	3.8	80	

<b>MS (L 93140-MS-L614049)</b>		<b>Source: Y204694-01</b>			<b>Prepared: 05/03/2022 Analyzed: 05/06/2022</b>					
Zinc	58.7	0.534	mg/Kg	23.3	44.3	62	75-125			*
Arsenic	5.16	0.0855	"	2.33	6.36	NR	75-125			I*
Barium	95.9	0.042	"	4.65	96.6	NR	75-125			*
Cadmium	0.541	0.0259	"	0.465	0.263	60	75-125			*
Copper	10.3	0.0806	"	2.33	11.7	NR	75-125			I*
Lead	11.5	0.031	"	2.33	10.9	26	75-125			*
Nickel	13	0.0633	"	2.33	13.1	NR	75-125			*
Selenium	3.07	0.103	"	4.65	0.181	62	75-125			*
Silver	0.49	0.0067	"	0.465	0.0329	98	75-125			

<b>LCS (LCS-L614049)</b>		<b>Prepared: 05/03/2022 Analyzed: 05/06/2022</b>								
Cadmium	0.492	0.0259	mg/Kg	0.5		98	80-120			
Copper	2.49	0.0806	"	2.5		100	80-120			
Lead	2.51	0.031	"	2.5		100	80-120			
Nickel	2.58	0.0633	"	2.5		103	80-120			
Selenium	4.97	0.103	"	5		99	80-120			

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 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**Total Metals by 6020B - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L614049 - 3050B**

**LCS (LCS-L614049)**

Prepared: 05/03/2022 Analyzed: 05/06/2022

Silver	0.532	0.0067	mg/Kg	0.5		106	80-120			
Zinc	25.1	0.534	"	25		100	80-120			
Barium	5.04	0.042	"	5		101	80-120			
Arsenic	2.81	0.0855	"	2.5		112	80-120			

**LRB (LRB-L614049)**

Prepared: 05/03/2022 Analyzed: 05/06/2022

Cadmium	ND	0.25	mg/Kg				-			
Zinc	ND	2.5	"				-			
Silver	ND	0.25	"				-			
Selenium	ND	0.25	"				-			
Nickel	ND	0.25	"				-			
Copper	ND	0.25	"				-			
Barium	ND	0.25	"				-			
Arsenic	ND	0.25	"				-			
Lead	ND	0.25	"				-			

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 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**Total Metals by 7196A - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L614924 -</b>										
<b>DUP (L 93113-DUP)</b>		<b>Source: 93113</b>			Prepared: Analyzed: 05/08/2022					
Chromium, Hexavalent	ND	0.251	mg/Kg		93113		-	0	20	
<b>MS (L 93113-MS)</b>		<b>Source: 93113</b>			Prepared: Analyzed: 05/08/2022					
Chromium, Hexavalent	2.65	0.244	mg/Kg	7.76	93113	34	75-125			*
<b>LCS (LCS)</b>					Prepared: Analyzed: 05/08/2022					
Chromium, Hexavalent	7.04	0.244	mg/Kg	8		88	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 05/08/2022					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

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**Notes and Definitions**

- U Sample is Non-Detect.
- J Estimated Value. Analyte below reported quantitation limit.
- I\* [Undefined]
- \* QC Failure

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, Inc.



Jen Pellegrini For Noelle Doyle Mathis, President

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July 28, 2022 Report



August 17, 2022

Absaroka

Kenneth Rogowski

112 High St.

Buffalo WY 82834

Project Name - Ridgeview 32-16-1

Project Number - GUP.CO.0586.02

Attached are your analytical results for Ridgeview 32-16-1 received by Origins Laboratory, Inc. August 01, 2022. This project is associated with Origins project number Y208039-01.

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.

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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.

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o-squad@oelabinc.com



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112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
R_SEP_1@1.5'	Y208039-01	Soil	July 28, 2022 7:35	08/01/2022 11:00
R_WH_1@2'	Y208039-02	Soil	July 28, 2022 8:35	08/01/2022 11:00
R_WH_3@2.5'	Y208039-03	Soil	July 28, 2022 8:45	08/01/2022 11:00
R_WH_5@3'	Y208039-04	Soil	July 28, 2022 9:10	08/01/2022 11:00
R_WH_6@1.5'	Y208039-05	Soil	July 28, 2022 9:40	08/01/2022 11:00

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 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**ORIGINS**  
 LABORATORY, INC

4208039

www.originslaboratory.com

page 1 of 1

Client: Absaroka Energy & Environmental Solutions  
 Address: 112 High St, Buffalo, WY 82834  
 Telephone Number: JM-307.262.8975/KR-970.222.7106  
 Email Address: [ken.rogowski@absarokasolutions.com](mailto:ken.rogowski@absarokasolutions.com)

Project Manager: Kenneth Rogowski  
 Project Name: Ridgeview 32-16-1  
 Project Number: GUP.CO.0586.02  
 Samples Collected By: Jordan Fleming / Austin Moon

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions		
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #			Other	
R_Sep_1 @ 1.5'	7/28/22	7:35	2	X				X					COCC Table 915-1	1
R_WH_1 @ 2'	7/28/22	8:35	2	X				X					COCC Table 915-1	2
R_WH_3 @ 2.5'	7/28/22	8:45	2	X				X					COCC Table 915-1	3
R_WH_5 @ 3'	7/28/22	9:10	2	X				X					COCC Table 915-1	4
R_WH_6 @ 1.5'	7/28/22	9:40	2	X				X					COCC Table 915-1	5
														6
														7
														8
														9
														10
Relinquished By: 	Date: 7/29/22	Time: 1800	Time: 00	Received By: DE	Date: 08/01/2022	Time: 11:00	Turnaround Time: Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>							
Relinquished By:	Date:	Time:	Time:	Received By:	Date:	Time:								

U.D. Date Results Needed

Origins Laboratory, Inc.  


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Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

Origins Laboratory

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

Origins Work Order: 4208039

Sample Receipt Checklist

Client: Absaroka  
 Client Project ID: Ridgeview

Checklist Completed by: JB  
 Date/time completed: 8-2-22

Shipped Via: HD  
 (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 °C / °C / °C (Describe)

Thermometer ID: T603

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	X			
Is there ice present (document if blue ice is used)	X			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		X		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		X		
Were all samples received intact <sup>(1)</sup> ?	X			
Was adequate sample volume provided <sup>(1)</sup> ?	X			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		X		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	X			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	X			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	X			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	X			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH > 10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			X	
Additional Comments (if any):				

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

Reviewed by (Project Manager) JR

Date/Time Reviewed 8/3/22

Origins Laboratory, Inc.

*J Byron*

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

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

R SEP 1@1.5'  
 7/28/2022 7:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y208039-01 (Soil)

**Boron (DTPA Sorbitol)**

Boron	ND		0.0991	mg/L	1	B2H0305	08/03/2022	08/04/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	145		25.0	mg/kg	1	B2H0217	08/02/2022	08/09/2022	
Residual Range Organics (C28-C40)	247		100	"	"	"	"	"	

Surrogate: o-Terphenyl	36.5 %		50-150			"	"	"	S-DUP
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0216	08/02/2022	08/03/2022	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	101 %		70-130			"	"	"	
Surrogate: Toluene-d8	104 %		70-130			"	"	"	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

R SEP 1@1.5'  
 7/28/2022 7:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene	114 %		70-130			B2H02 16	08/02/2022	08/03/2022	
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**Metals by Saturated Paste by EPA 6010**

Calcium	2.81		0.499	meq/L	10	[CALC]	08/03/2022	08/04/2022	
Magnesium	1.49		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00182	0.00335	mg/Kg	5	L630368	08/04/2022	08/05/2022	
2-Methylnaphthalene	ND	0.00323	0.00335	"	"	"	"	"	
Acenaphthene	0.00157	0.00152	0.00335	"	"	"	"	"	J
Anthracene	0.00336	0.00167	0.00335	"	"	"	"	"	
Benzo(a)anthracene	ND	0.00247	0.00335	"	"	"	"	"	
Benzo(a)pyrene	ND	0.00234	0.00335	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.00293	0.00335	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.00219	0.00335	"	"	"	"	"	
Chrysene	0.00952	0.00312	0.00335	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.00307	0.00335	"	"	"	"	"	
Fluoranthene	0.00235	0.00197	0.00335	"	"	"	"	"	J
Fluorene	0.00171	0.00143	0.00335	"	"	"	"	"	J

Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

**R SEP 1@1.5'**  
**7/28/2022 7:35:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208039-01 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	ND	0.00314	0.00335	mg/Kg	5	L630368	08/04/2022	08/05/2022	
Naphthalene	ND	0.00242	0.00335	"	"	"	"	"	
Pyrene	ND	0.00322	0.00335	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	62.5 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	51.7 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	51.1 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	7.56			pH Units	1	B2H0313	08/03/2022	08/04/2022	
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**SAR by 20B Saturated Paste**

SAR	0.119			SAR	1	B2H0307	08/03/2022	08/04/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.404		0.00500	mmhos/cm	1	B2H0313	08/03/2022	08/04/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	4.34		0.0716	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
Barium	124		7.16	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**R SEP 1@1.5'**  
**7/28/2022 7:35:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-01 (Soil)**

**Table 915 metals by EPA 6020B**

Cadmium	0.190		0.0716	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
Copper	8.80		7.16	"	"	"	"	08/05/2022	
Lead	7.25		0.716	"	"	"	"	08/04/2022	
Nickel	10.5		0.716	"	"	"	"	"	
Selenium	0.157		0.0716	"	"	"	"	"	
Silver	ND		0.0716	"	"	"	"	"	U
Zinc	ND		71.6	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.488	1	mg/Kg	2	L630281	07/28/2022	08/04/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

R WH 1@2'  
 7/28/2022 8:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y208039-02 (Soil)

**Boron (DTPA Sorbitol)**

Boron	ND		0.0992	mg/L	1	B2H0305	08/03/2022	08/04/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0217	08/02/2022	08/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	91.5 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0216	08/02/2022	08/03/2022	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	101 %		70-130			"	"	"	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

R WH 1@2'  
7/28/2022 8:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y208039-02 (Soil)

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	102 %		70-130			B2H02 16	08/02/2022	08/03/2022	
Surrogate: 4-Bromofluorobenzene	103 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	ND		0.499	meq/L	10	[CALC]	08/03/2022	08/04/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	0.000689	0.000364	0.00067	mg/Kg	1	L630368	08/04/2022	08/05/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

R WH 1@2'  
7/28/2022 8:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
Y208039-02 (Soil)

**PAH by 8270D SIM**

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L630368	08/04/2022	08/05/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	50.6 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	55.8 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	45.4 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	7.25			pH Units	1	B2H0313	08/03/2022	08/04/2022	
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**SAR by 20B Saturated Paste**

SAR	0.303			SAR	1	B2H0307	08/03/2022	08/04/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.0802		0.00500	mmhos/cm	1	B2H0313	08/03/2022	08/04/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	3.78		0.0810	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

R WH 1@2'  
 7/28/2022 8:35:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y208039-02 (Soil)

**Table 915 metals by EPA 6020B**

Barium	90.7		8.10	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
Cadmium	0.127		0.0810	"	"	"	"	"	
Copper	8.80		8.10	"	"	"	"	08/05/2022	
Lead	6.44		0.810	"	"	"	"	08/04/2022	
Nickel	11.1		0.810	"	"	"	"	"	
Selenium	0.165		0.0810	"	"	"	"	"	
Silver	ND		0.0810	"	"	"	"	"	U
Zinc	ND		81.0	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	1.26	2.58	mg/Kg	5	L630281	07/28/2022	08/04/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**R WH 3@2.5'**  
**7/28/2022 8:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.100	mg/L	1	B2H0305	08/03/2022	08/04/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	252		25.0	mg/kg	1	B2H0217	08/02/2022	08/09/2022	
Residual Range Organics (C28-C40)	170		100	"	"	"	"	"	

Surrogate: <i>o</i> -Terphenyl	88.6 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0216	08/02/2022	08/03/2022	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	1.71		0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	103 %		70-130			"	"	"	
Surrogate: Toluene-d8	104 %		70-130			"	"	"	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**R WH 3@2.5'**  
**7/28/2022 8:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-03 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene 121 % 70-130 B2H02 08/02/2022 08/03/2022  
 16

**Metals by Saturated Paste by EPA 6010**

Calcium	1.83	0.499	meq/L	10	[CALC]	08/03/2022	08/04/2022
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.12	0.435	"	"	"	"	"

**PAH by 8270D SIM**

1-Methylnaphthalene	0.0248	0.00364	0.0067	mg/Kg	10	L630368	08/04/2022	08/05/2022
2-Methylnaphthalene	0.00817	0.00645	0.0067	"	"	"	"	"
Acenaphthene	0.00595	0.00304	0.0067	"	"	"	"	J
Anthracene	0.00491	0.00334	0.0067	"	"	"	"	J
Benzo(a)anthracene	ND	0.00493	0.0067	"	"	"	"	"
Benzo(a)pyrene	ND	0.00468	0.0067	"	"	"	"	"
Benzo(b)fluoranthene	ND	0.00585	0.0067	"	"	"	"	"
Benzo(k)fluoranthene	ND	0.00437	0.0067	"	"	"	"	"
Chrysene	0.0121	0.00624	0.0067	"	"	"	"	"
Dibenz(a,h)anthracene	0.0364	0.00614	0.0067	"	"	"	"	"
Fluoranthene	ND	0.00394	0.0067	"	"	"	"	"
Fluorene	0.0291	0.00286	0.0067	"	"	"	"	"
Indeno(1,2,3-cd)pyrene	ND	0.00627	0.0067	"	"	"	"	"

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**R WH 3@2.5'**  
**7/28/2022 8:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208039-03 (Soil)**

**PAH by 8270D SIM**

Naphthalene	ND	0.00484	0.0067	mg/Kg	10	L630368	08/04/2022	08/05/2022	
Pyrene	<b>0.0128</b>	<b>0.00643</b>	0.0067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	34.6 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	61.7 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	62 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	7.14			pH Units	1	B2H0313	08/03/2022	08/04/2022	
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**SAR by 20B Saturated Paste**

SAR	0.981			SAR	1	B2H0307	08/03/2022	08/04/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.363		0.00500	mmhos/cm	1	B2H0313	08/03/2022	08/04/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	3.20		0.0888	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
Barium	86.5		8.88	"	"	"	"	"	
Cadmium	0.151		0.0888	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**R WH 3@2.5'**  
**7/28/2022 8:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-03 (Soil)**

**Table 915 metals by EPA 6020B**

Copper	8.92		8.88	mg/kg	5	B2H0222	08/02/2022	08/05/2022	
Lead	6.13		0.888	"	"	"	"	08/04/2022	
Nickel	8.77		0.888	"	"	"	"	"	
Selenium	0.178		0.0888	"	"	"	"	"	
Silver	ND		0.0888	"	"	"	"	"	U
Zinc	ND		88.8	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.488	1	mg/Kg	2	L630281	07/28/2022	08/04/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

R WH 5@3'  
 7/28/2022 9:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.213		0.0991	mg/L	1	B2H0305	08/03/2022	08/04/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0217	08/02/2022	08/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	99.2 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0216	08/02/2022	08/03/2022	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			"	"	"	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

R WH 5@3'  
7/28/2022 9:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y208039-04 (Soil)

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	102 %		70-130			B2H02 16	08/02/2022	08/03/2022	
Surrogate: 4-Bromofluorobenzene	105 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	2.05		0.499	meq/L	10	[CALC]	08/03/2022	08/04/2022	
Magnesium	1.54		0.823	"	"	"	"	"	
Sodium	1.42		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L630368	08/04/2022	08/05/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

**R WH 5@3'**  
**7/28/2022 9:10:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208039-04 (Soil)**

**PAH by 8270D SIM**

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L630368	08/04/2022	08/05/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	<b>0.00237</b>	<b>0.000484</b>	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	52.6 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	67.5 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	48.6 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	7.96			pH Units	1	B2H0313	08/03/2022	08/04/2022	
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**SAR by 20B Saturated Paste**

SAR	1.06			SAR	1	B2H0307	08/03/2022	08/04/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.546		0.00500	mmhos/cm	1	B2H0313	08/03/2022	08/04/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	4.74		0.0895	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

R WH 5@3'  
 7/28/2022 9:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y208039-04 (Soil)

**Table 915 metals by EPA 6020B**

Barium	158		8.95	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
Cadmium	0.273		0.0895	"	"	"	"	"	
Copper	9.88		8.95	"	"	"	"	08/05/2022	
Lead	8.74		0.895	"	"	"	"	08/04/2022	
Nickel	11.9		0.895	"	"	"	"	"	
Selenium	0.256		0.0895	"	"	"	"	"	
Silver	ND		0.0895	"	"	"	"	"	U
Zinc	ND		89.5	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	1.22	2.5	mg/Kg	5	L630283	07/28/2022	08/08/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**R WH 6@1.5'**  
**7/28/2022 9:40:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.222		0.0992	mg/L	1	B2H0305	08/03/2022	08/04/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0217	08/02/2022	08/09/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	96.9 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0216	08/02/2022	08/03/2022	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			"	"	"	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

**R WH 6@1.5'**  
**7/28/2022 9:40:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-05 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	102 %		70-130			B2H02 16	08/02/2022	08/03/2022	
Surrogate: 4-Bromofluorobenzene	103 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>4.65</b>		0.499	meq/L	10	[CALC]	08/03/2022	08/04/2022	
Magnesium	<b>1.85</b>		0.823	"	"	"	"	"	
Sodium	<b>1.61</b>		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L630368	08/04/2022	08/05/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	<b>0.000582</b>	<b>0.000468</b>	0.00067	"	"	"	"	"	J
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	<b>0.000913</b>	<b>0.000624</b>	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

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 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**R WH 6@1.5'**  
**7/28/2022 9:40:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208039-05 (Soil)**

**PAH by 8270D SIM**

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L630368	08/04/2022	08/05/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	45.6 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	54.7 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	42 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	7.87			pH Units	1	B2H0313	08/03/2022	08/04/2022	
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**SAR by 20B Saturated Paste**

SAR	0.896			SAR	1	B2H0307	08/03/2022	08/04/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.747		0.00500	mmhos/cm	1	B2H0313	08/03/2022	08/04/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	4.66		0.0783	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**R WH 6@1.5'**  
**7/28/2022 9:40:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208039-05 (Soil)**

**Table 915 metals by EPA 6020B**

Barium	128		7.83	mg/kg	5	B2H0222	08/02/2022	08/04/2022	
Cadmium	0.159		0.0783	"	"	"	"	"	
Copper	10.5		7.83	"	"	"	"	08/05/2022	
Lead	8.50		0.783	"	"	"	"	08/04/2022	
Nickel	13.5		0.783	"	"	"	"	"	
Selenium	0.205		0.0783	"	"	"	"	"	
Silver	ND		0.0783	"	"	"	"	"	U
Zinc	ND		78.3	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	1.22	2.5	mg/Kg	5	L630283	07/28/2022	08/08/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0216 - EPA 5030 (soil)**

**Blank (B2H0216-BLK1)**

Prepared: 08/02/2022 Analyzed: 08/03/2022

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	0.0100	"							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	97.0		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	104		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	102		70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0216 - EPA 5030 (soil)**

**LCS (B2H0216-BS1)**

Prepared: 08/02/2022 Analyzed: 08/03/2022

1,2,4-Trimethylbenzene	0.117	0.00200	mg/kg	0.100		117	70-130			
1,3,5-Trimethylbenzene	0.117	0.00200	"	0.100		117	70-130			
Benzene	0.108	0.00200	"	0.100		108	70-130			
Ethylbenzene	0.113	0.00200	"	0.100		113	70-130			
Naphthalene	0.109	0.0100	"	0.100		109	70-130			
Toluene	0.115	0.00200	"	0.100		115	70-130			
o-Xylene	0.116	0.00200	"	0.100		116	70-130			
m,p-Xylene	0.235	0.00400	"	0.200		118	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		104	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2H0216 - EPA 5030 (soil)

Matrix Spike (B2H0216-MS1)	Source: Y207624-01			Prepared: 08/02/2022 Analyzed: 08/03/2022						
1,2,4-Trimethylbenzene	0.120	0.00200	mg/kg	0.100	ND	120	70-130			
1,3,5-Trimethylbenzene	0.120	0.00200	"	0.100	ND	120	70-130			
Benzene	0.106	0.00200	"	0.100	0.000680	105	70-130			
Ethylbenzene	0.120	0.00200	"	0.100	ND	120	70-130			
Naphthalene	0.0982	0.0100	"	0.100	0.00264	95.5	70-130			
Toluene	0.114	0.00200	"	0.100	ND	114	70-130			
o-Xylene	0.124	0.00200	"	0.100	ND	124	70-130			
m,p-Xylene	0.250	0.00400	"	0.200	ND	125	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		105	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2H0216 - EPA 5030 (soil)

Matrix Spike Dup (B2H0216-MSD1)	Source: Y207624-01			Prepared: 08/02/2022 Analyzed: 08/03/2022						
1,2,4-Trimethylbenzene	0.118	0.00200	mg/kg	0.100	ND	118	70-130	1.74	20	
1,3,5-Trimethylbenzene	0.117	0.00200	"	0.100	ND	117	70-130	2.48	20	
Benzene	0.106	0.00200	"	0.100	0.000680	105	70-130	0.0754	20	
Ethylbenzene	0.119	0.00200	"	0.100	ND	119	70-130	0.770	20	
Naphthalene	0.0950	0.0100	"	0.100	0.00264	92.4	70-130	3.27	20	
Toluene	0.113	0.00200	"	0.100	ND	113	70-130	0.405	20	
o-Xylene	0.123	0.00200	"	0.100	ND	123	70-130	0.340	20	
m,p-Xylene	0.246	0.00400	"	0.200	ND	123	70-130	1.47	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		105	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		106	70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B2H0217 - EPA 3550B</b>										
<b>Blank (B2H0217-BLK1)</b>										
					Prepared: 08/02/2022 Analyzed: 08/09/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	14		"	24.9		57.6	50-150			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0217 - EPA 3550B**

**LCS (B2H0217-BS1)**

Prepared: 08/02/2022 Analyzed: 08/11/2022

Diesel (C10-C28)	474	25.0	mg/kg	500		94.8	70-130			
Residual Range Organics (C28-C40)	375	100	"	500		75.0	70-130			
Surrogate: o-Terphenyl	19		"	24.9		76.3	50-150			

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Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0217 - EPA 3550B**

<b>Matrix Spike (B2H0217-MS1)</b>	<b>Source: Y208037-01</b>			<b>Prepared: 08/02/2022 Analyzed: 08/10/2022</b>						
Diesel (C10-C28)	606	25.0	mg/kg	500	ND	121	70-130			
Residual Range Organics (C28-C40)	549	100	"	500	ND	110	70-130			
Surrogate: o-Terphenyl	25		"	24.9		101	50-150			

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Kenneth Rogowski  
 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0217 - EPA 3550B**

<b>Matrix Spike Dup (B2H0217-MSD1)</b>	<b>Source: Y208037-01</b>			<b>Prepared: 08/02/2022 Analyzed: 08/10/2022</b>						
Diesel (C10-C28)	491	25.0	mg/kg	500	ND	98.2	70-130	20.9	35	
Residual Range Organics (C28-C40)	400	100	"	500	ND	79.9	70-130	31.6	35	
Surrogate: o-Terphenyl	25		"	24.9		99.3	50-150			

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 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Metals by SM 3500 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0222 - Default Prep Metals**

**Blank (B2H0222-BLK1)**

Prepared: 08/02/2022 Analyzed: 08/04/2022

Arsenic	ND	0.000100	mg/kg							U
Barium	ND	0.0100	"							U
Cadmium	ND	0.000100	"							U
Copper	ND	0.0100	"							U
Lead	ND	0.00100	"							U
Nickel	ND	0.00100	"							U
Selenium	ND	0.000100	"							U
Silver	ND	0.000100	"							U
Zinc	ND	0.100	"							U

**LCS (B2H0222-BS1)**

Prepared: 08/02/2022 Analyzed: 08/04/2022

Arsenic	0.0530	0.000100	mg/kg	0.0500		106	80-120			
Barium	5.15	0.0100	"	5.00		103	80-120			
Cadmium	0.0521	0.000100	"	0.0500		104	80-120			
Copper	0.579	0.0100	"	0.500		116	80-120			
Lead	0.0500	0.00100	"	0.0500		100	80-120			
Nickel	0.0542	0.00100	"	0.0500		108	80-120			
Selenium	0.0532	0.000100	"	0.0500		106	80-120			
Silver	0.0533	0.000100	"	0.0500		107	80-120			
Zinc	0.521	0.100	"	0.500		104	80-120			

**Matrix Spike (B2H0222-MS1)**

Source: Y207601-01

Prepared: 08/02/2022 Analyzed: 08/04/2022

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 Project: Ridgeview 32-16-1

**Metals by SM 3500 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0222 - Default Prep Metals**

<b>Matrix Spike (B2H0222-MS1)</b>		<b>Source: Y207601-01</b>			Prepared: 08/02/2022 Analyzed: 08/04/2022					
Arsenic	8.63	0.0169	mg/kg	8.46	2.00	78.4	75-125			
Barium	1090	1.69	"	846	200	105	75-125			
Cadmium	8.75	0.0169	"	8.46	0.121	102	75-125			
Copper	96.3	1.69	"	84.6	27.1	81.8	75-125			
Lead	16.1	0.169	"	8.46	7.19	106	75-125			
Nickel	13.1	0.169	"	8.46	14.8	NR	75-125			QM-07
Selenium	8.35	0.0169	"	8.46	0.0956	97.5	75-125			
Silver	8.59	0.0169	"	8.46	0.0758	101	75-125			
Zinc	83.9	16.9	"	84.6	58.9	29.5	75-125			QM-07
<b>Matrix Spike Dup (B2H0222-MSD1)</b>		<b>Source: Y207601-01</b>			Prepared: 08/02/2022 Analyzed: 08/04/2022					
Arsenic	9.31	0.0164	mg/kg	8.18	2.00	89.4	75-125	7.55	20	
Barium	1050	1.64	"	818	200	104	75-125	3.71	20	
Cadmium	8.70	0.0164	"	8.18	0.121	105	75-125	0.538	20	
Copper	91.2	1.64	"	81.8	27.1	78.3	75-125	5.45	20	
Lead	16.0	0.164	"	8.18	7.19	107	75-125	1.12	20	
Nickel	13.7	0.164	"	8.18	14.8	NR	75-125	4.58	20	QM-07
Selenium	8.15	0.0164	"	8.18	0.0956	98.5	75-125	2.40	20	
Silver	8.77	0.0164	"	8.18	0.0758	106	75-125	2.13	20	
Zinc	84.4	16.4	"	81.8	58.9	31.1	75-125	0.528	20	QM-07

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 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0313 - NO PREP**

**Blank (B2H0313-BLK1)**

Prepared: 08/03/2022 Analyzed: 08/04/2022

Specific Conductance (EC)	0.00150	0.00500	mmhos/cm
pH	0.00		pH Units

**Duplicate (B2H0313-DUP1)**

**Source: Y208039-01**

Prepared: 08/03/2022 Analyzed: 08/04/2022

pH	7.41		pH Units	7.56		2.00	25
Specific Conductance (EC)	0.389	0.00500	mmhos/cm	0.404		3.83	25

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Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L630368 - 3550B**

<b>MSD (L 94655-MSD-L630368)</b>		<b>Source: 94655</b>			Prepared: 08/04/2022 Analyzed: 08/05/2022					
Benzo(b)fluoranthene	0.0571	0.00293	mg/Kg	0.163	<0.00293	35	30-130	12.4	30	
Benzo(k)fluoranthene	0.0644	0.00219	"	0.163	<0.00219	39.5	30-130	25	30	
Naphthalene	0.0988	0.00242	"	0.163	0.0403	35.8	30-130	35.8	30	
Indeno(1,2,3-cd)pyrene	0.052	0.00314	"	0.163	<0.00314	31.9	30-130	18.4	30	
Fluorene	0.0943	0.00143	"	0.163	0.0151	48.5	30-130	23.9	30	
Fluoranthene	0.0916	0.00197	"	0.163	<0.00197	56.1	30-130	18.2	30	
Dibenz(a,h)anthracene	0.0761	0.00307	"	0.163	<0.00307	46.6	30-130	20.7	30	
Pyrene	0.0913	0.00322	"	0.163	0.00383	53.6	30-130	17.6	30	
Chrysene	0.0913	0.00312	"	0.163	0.00771	51.2	30-130	24.6	30	
1-Methylnaphthalene	0.127	0.00182	"	0.163	0.0818	27.7	30-130	35	30	*
2-Methylnaphthalene	0.124	0.00323	"	0.163	0.0756	29.6	30-130	31.2	30	*
Acenaphthene	0.0829	0.00152	"	0.163	<0.00152	50.8	30-130	22.5	30	
Anthracene	0.0887	0.00167	"	0.163	<0.00167	54.4	30-130	15.8	30	
Benzo(a)anthracene	0.0842	0.00247	"	0.163	<0.00247	51.6	30-130	10	30	
Benzo(a)pyrene	0.0845	0.00234	"	0.163	<0.00234	51.8	30-130	17.7	30	
Surrogate: Nitrobenzene-d5	33.3		"	0.327	170	33.3	29-110			
Surrogate: 2-Fluorobiphenyl	40.3		"	0.327	196	40.3	33-115			
Surrogate: 4-Terphenyl-d14	55.9		"	0.327	238	55.9	33-122			

<b>MS (L 94655-MS-L630368)</b>		<b>Source: 94655</b>			Prepared: 08/04/2022 Analyzed: 08/05/2022					
Indeno(1,2,3-cd)pyrene	0.0626	0.00314	mg/Kg	0.162	<0.00314	38.6	30-130			
Benzo(b)fluoranthene	0.0647	0.00293	"	0.162	<0.00293	39.9	30-130			
Naphthalene	0.142	0.00242	"	0.162	0.0403	62.7	30-130			
Fluorene	0.12	0.00143	"	0.162	0.0151	64.7	30-130			
Fluoranthene	0.11	0.00197	"	0.162	<0.00197	67.9	30-130			
Dibenz(a,h)anthracene	0.0937	0.00307	"	0.162	<0.00307	57.8	30-130			
Chrysene	0.117	0.00312	"	0.162	0.00771	67.4	30-130			

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112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GUP.CO.0586.02  
Project: Ridgeview 32-16-1

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L630368 - 3550B**

MS (L 94655-MS-L630368)	Source: 94655			Prepared: 08/04/2022 Analyzed: 08/05/2022						
Benzo(k)fluoranthene	0.0828	0.00219	mg/Kg	0.162	<0.00219	51.1	30-130			
Pyrene	0.109	0.00322	"	0.162	0.00383	64.9	30-130			
Benzo(a)anthracene	0.0931	0.00247	"	0.162	<0.00247	57.4	30-130			
Anthracene	0.104	0.00167	"	0.162	<0.00167	64.1	30-130			
Acenaphthene	0.104	0.00152	"	0.162	<0.00152	64.1	30-130			
2-Methylnaphthalene	0.17	0.00323	"	0.162	0.0756	58.2	30-130			
1-Methylnaphthalene	0.181	0.00182	"	0.162	0.0818	61.2	30-130			
Benzo(a)pyrene	0.101	0.00234	"	0.162	<0.00234	62.3	30-130			
Surrogate: 4-Terphenyl-d14	67		"	0.325	238	67	33-122			
Surrogate: 2-Fluorobiphenyl	56.9		"	0.325	196	56.9	33-115			
Surrogate: Nitrobenzene-d5	47.6		"	0.325	170	47.6	29-110			

LCS (LCS-L630368)	Prepared: 08/04/2022 Analyzed: 08/05/2022									
Benzo(a)anthracene	0.111	0.000493	mg/Kg	0.167		66.4	30-130			
Benzo(a)pyrene	0.115	0.000468	"	0.167		68.8	30-130			
Benzo(b)fluoranthene	0.0775	0.000585	"	0.167		46.4	30-130			
Chrysene	0.112	0.000624	"	0.167		67	30-130			
Fluoranthene	0.118	0.000394	"	0.167		70.6	30-130			
Fluorene	0.118	0.000286	"	0.167		70.6	30-130			
Anthracene	0.117	0.000334	"	0.167		70	30-130			
Naphthalene	0.102	0.000484	"	0.167		61	30-130			
Benzo(k)fluoranthene	0.107	0.000437	"	0.167		64	30-130			
Pyrene	0.119	0.000643	"	0.167		71.2	30-130			
Indeno(1,2,3-cd)pyrene	0.0797	0.000627	"	0.167		47.7	30-130			
Dibenz(a,h)anthracene	0.119	0.000614	"	0.167		71.2	30-130			
2-Methylnaphthalene	0.106	0.000645	"	0.167		63.4	30-130			
1-Methylnaphthalene	0.104	0.000364	"	0.167		62.2	30-130			

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 Project: Ridgeview 32-16-1

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L630368 - 3550B**

**LCS (LCS-L630368)**

Prepared: 08/04/2022 Analyzed: 08/05/2022

Acenaphthene	0.112	0.000304	mg/Kg	0.167		67	30-130			
Surrogate: Nitrobenzene-d5	61.2		"	0.333		61.2	29-110			
Surrogate: 4-Terphenyl-d14	74.7		"	0.333		74.7	33-122			
Surrogate: 2-Fluorobiphenyl	69.6		"	0.333		69.6	33-115			

**LRB (LRB-L630368)**

Prepared: 08/04/2022 Analyzed: 08/05/2022

Fluorene	ND	0.00067	mg/Kg				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Chrysene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Naphthalene	ND	0.00067	"				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
Pyrene	ND	0.00067	"				-			
Surrogate: 2-Fluorobiphenyl	62.7		"	0.333		62.7	33-115			
Surrogate: Nitrobenzene-d5	56.7		"	0.333		56.7	29-110			
Surrogate: 4-Terphenyl-d14	69.6		"	0.333		69.6	33-122			

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 Project Number: GUP.CO.0586.02  
 Project: Ridgeview 32-16-1

**Total Metals by 7196A - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L630283 -</b>										
<b>DUP (L 94659-DUP)</b>		<b>Source: Y208039-04</b>			Prepared: Analyzed: 08/08/2022					
Chromium, Hexavalent	ND	1.23	mg/Kg		<2.52		-	0	20	
<b>MS (L 94659-MS)</b>		<b>Source: Y208039-04</b>			Prepared: Analyzed: 08/08/2022					
Chromium, Hexavalent	5.16	1.22	mg/Kg	7.86	<1.22	66	75-125			*
<b>MSD (L 94659-MSD)</b>		<b>Source: Y208039-04</b>			Prepared: Analyzed: 08/08/2022					
Chromium, Hexavalent	555	24.7	mg/Kg	685	<24.7	81	75-125			
<b>LCS (LCS)</b>					Prepared: Analyzed: 08/08/2022					
Chromium, Hexavalent	6.74	0.244	mg/Kg	8		84	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 08/08/2022					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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 Project: Ridgeview 32-16-1

**Total Metals by 7196A - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L630281 -</b>										
<b>DUP (L 82057-DUP)</b>		<b>Source: 82057</b>			Prepared: Analyzed: 08/04/2022					
Chromium, Hexavalent	ND	0.497	mg/Kg		<1.02		-	0	20	
<b>MS (L 82057-MS)</b>		<b>Source: 82057</b>			Prepared: Analyzed: 08/04/2022					
Chromium, Hexavalent	4.2	0.497	mg/Kg	8.16	<0.497	51	75-125			*
<b>MSD (L 82057-MSD)</b>		<b>Source: 82057</b>			Prepared: Analyzed: 08/04/2022					
Chromium, Hexavalent	566	24.8	mg/Kg	629	<24.8	90	75-125			

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Project: Ridgeview 32-16-1

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**Notes and Definitions**

- U Sample is Non-Detect.
- S-DUP Duplicate analysis confirmed surrogate failure due to matrix effects.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- J Estimated Value. Analyte below reported quantitation limit.
- \* QC Failure
- 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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## **August 3, 2022 Report**

August 19, 2022

Absaroka

Kenneth Rogowski

112 High St.

Buffalo WY 82834

**Project Name - Ridgeview 32-16-1**

**Project Number - GPE.CO0586.02**

Attached are your analytical results for Ridgeview 32-16-1 received by Origins Laboratory, Inc. August 04, 2022. This project is associated with Origins project number Y208136-01.

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, Inc.  
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
R_TB_1@9'	Y208136-01	Soil	August 3, 2022 9:20	08/04/2022 14:10
R_TB_SW_2@6'	Y208136-02	Soil	August 3, 2022 9:30	08/04/2022 14:10
R_TB_SW_3@9'	Y208136-03	Soil	August 3, 2022 9:40	08/04/2022 14:10
R_TB_SW_1@7'	Y208136-04	Soil	August 3, 2022 9:45	08/04/2022 14:10
R_TB_4@6'	Y208136-05	Soil	August 3, 2022 10:05	08/04/2022 14:10
R_TB_SW_5@6'	Y208136-06	Soil	August 3, 2022 10:20	08/04/2022 14:10
R_TB_SW_6@3'	Y208136-07	Soil	August 3, 2022 10:45	08/04/2022 14:10
R_TB_SW_7@3'	Y208136-08	Soil	August 3, 2022 10:55	08/04/2022 14:10

The following analysis were not analyzed on R\_TB\_1@9' due to insufficient sample volume: GBTEX+TMB, DRO-ORO, and PAH. Client notified on 08/11/2022. JAB

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

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



4208130

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page 1 of 1

Client: Absaroka Energy & Environmental Solutions  
 Address: 112 High St, Buffalo, WY 82834

Telephone Number: 307.262.8975/KR-970.222.7106  
 Email Address: ken.rogowski@originslab.com

Project Manager: Kenneth Rogowski  
 Project Name: Ridgeview 32-16-1  
 Project Number: GUP.CO.0586.02  
 Samples Collected By: Michelle Henry

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative			Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil		
R-TB-1 @ 9'	8/3	0926	1								
R-TB-SW-2 @ 6'		0930	1								
R-TB-SW-3 @ 9'		0940	1								
R-TB-SW-1 @ 7'		0945	1								
R-TB-4 @ 6'		1005	1								
R-TB-SW-5 @ 6'		1020	1								
R-TB-SW-6 @ 3'		1045	1								
R-TB-SW-7 @ 3'		1055	1								
Relinquished By: [Signature]	Date: 8/1/02	Time: 1200									
Received By: [Signature]	Date: 8/1/02	Time: 14:00									

40 Date Results Needed

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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

Origins Laboratory

Sample Receipt Checklist

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

Origins Work Order: Y208134

Client: Absaroka  
Client Project ID: Ridgeview

Checklist Completed by: JRS  
Date/Time completed: 8-5-22

Shipped Via: HD  
Airbill #: N/A  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

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

Water  Other: \_\_\_\_\_

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

Thermometer ID: T003

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

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

JRS  
Reviewed by (Project Manager)

8/5/22  
Date/Time Reviewed

Origins Laboratory, Inc.

*J Byron*

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB 1@9'**  
**8/3/2022 9:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.184		0.0984	mg/L	1	B2H0807	08/08/2022	08/09/2022	
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**Metals by Saturated Paste by EPA 6010**

Calcium	ND		0.499	meq/L	10	[CALC]	08/08/2022	08/10/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	3.84		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	9.30			pH Units	1	B2H0813	08/08/2022	08/10/2022	
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**SAR by 20B Saturated Paste**

SAR	9.26			SAR	1	B2H0809	08/08/2022	08/10/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.494		0.00500	mmhos/cm	1	B2H0813	08/08/2022	08/10/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	1.18		0.0768	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Barium	53.2		7.68	"	"	"	"	"	
Cadmium	0.0876		0.0768	"	"	"	"	"	
Copper	ND		7.68	"	"	"	"	"	U

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB 1@9'**  
**8/3/2022 9:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-01 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	1.93		0.768	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Nickel	5.31		0.768	"	"	"	"	"	
Selenium	ND		0.154	"	10	"	"	08/11/2022	U
Silver	ND		0.0768	"	5	"	"	08/10/2022	U
Zinc	ND		76.8	"	"	"	"	"	U

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 2@6'**  
**8/3/2022 9:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.619		0.0995	mg/L	1	B2H0807	08/08/2022	08/09/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	32.6		25.0	mg/kg	1	B2H0822	08/08/2022	08/16/2022	
Residual Range Organics (C28-C40)	178		100	"	"	"	"	"	

Surrogate: o-Terphenyl	110 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0828	08/08/2022	08/09/2022	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			"	"	"	
Surrogate: Toluene-d8	99.7 %		70-130			"	"	"	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 2@6'**  
**8/3/2022 9:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-02 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene	104 %		70-130			B2H08 28	08/08/2022	08/09/2022	
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**Metals by Saturated Paste by EPA 6010**

Calcium	ND		0.499	meq/L	10	[CALC]	08/08/2022	08/10/2022	
Magnesium	2.61		0.823	"	"	"	"	"	
Sodium	0.576		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 2@6'**  
**8/3/2022 9:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208136-02 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	68.1 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	84.9 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	58.4 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.52			pH Units	1	B2H0813	08/08/2022	08/10/2022	
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**SAR by 20B Saturated Paste**

SAR	0.476			SAR	1	B2H0809	08/08/2022	08/10/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.334		0.00500	mmhos/cm	1	B2H0813	08/08/2022	08/10/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	5.00		0.0932	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Barium	106		9.32	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 2@6'**  
**8/3/2022 9:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-02 (Soil)**

**Table 915 metals by EPA 6020B**

Cadmium	0.165		0.0932	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Copper	ND		9.32	"	"	"	"	"	U
Lead	8.52		0.932	"	"	"	"	"	
Nickel	12.3		0.932	"	"	"	"	"	
Selenium	0.324		0.186	"	10	"	"	08/11/2022	
Silver	ND		0.0932	"	5	"	"	08/10/2022	U
Zinc	ND		93.2	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.502	mg/Kg	1	L632052	08/03/2022	08/15/2022	
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Buffalo WY 82834

Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

**R TB SW 3@9'**  
**8/3/2022 9:40:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.384		0.0995	mg/L	1	B2H0807	08/08/2022	08/09/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0822	08/08/2022	08/16/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	94.6 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0828	08/08/2022	08/09/2022	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	102 %		70-130			"	"	"	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

**R TB SW 3@9'**  
**8/3/2022 9:40:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-03 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	100 %		70-130			B2H08 28	08/08/2022	08/09/2022	
Surrogate: 4-Bromofluorobenzene	104 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	2.71		0.499	meq/L	10	[CALC]	08/08/2022	08/10/2022	
Magnesium	6.27		0.823	"	"	"	"	"	
Sodium	9.35		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.000735	0.000394	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

**R TB SW 3@9'**  
**8/3/2022 9:40:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208136-03 (Soil)**

**PAH by 8270D SIM**

Fluorene	0.000345	0.000286	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	J
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	121 %		33-115			"	"	"	*
Surrogate: 4-Terphenyl-d14	140 %		33-122			"	"	"	*
Surrogate: Nitrobenzene-d5	101 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.44			pH Units	1	B2H0813	08/08/2022	08/10/2022	
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**SAR by 20B Saturated Paste**

SAR	4.41			SAR	1	B2H0809	08/08/2022	08/10/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.82		0.00500	mmhos/cm	1	B2H0813	08/08/2022	08/10/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	4.29		0.0738	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 3@9'**  
**8/3/2022 9:40:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-03 (Soil)**

**Table 915 metals by EPA 6020B**

Barium	101		7.38	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Cadmium	0.143		0.0738	"	"	"	"	"	
Copper	ND		7.38	"	"	"	"	"	U
Lead	7.04		0.738	"	"	"	"	"	
Nickel	9.03		0.738	"	"	"	"	"	
Selenium	0.170		0.0738	"	"	"	"	08/11/2022	
Silver	ND		0.0738	"	"	"	"	08/10/2022	U
Zinc	ND		73.8	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L632052	08/03/2022	08/15/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 1@7'**  
**8/3/2022 9:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.827		0.0999	mg/L	1	B2H0807	08/08/2022	08/09/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0822	08/08/2022	08/16/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	108 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0828	08/08/2022	08/09/2022	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			"	"	"	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

R TB SW 1@7'  
8/3/2022 9:45:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
Y208136-04 (Soil)

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	100 %		70-130			B2H08 28	08/08/2022	08/09/2022	
Surrogate: 4-Bromofluorobenzene	105 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	0.640		0.499	meq/L	10	[CALC]	08/08/2022	08/10/2022	
Magnesium	3.07		0.823	"	"	"	"	"	
Sodium	8.82		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00039	0.000718	mg/Kg	1	L632729	08/17/2022	08/18/2022	
2-Methylnaphthalene	ND	0.000691	0.000718	"	"	"	"	"	
Acenaphthene	ND	0.000326	0.000718	"	"	"	"	"	
Anthracene	ND	0.000358	0.000718	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000528	0.000718	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000502	0.000718	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000627	0.000718	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000468	0.000718	"	"	"	"	"	
Chrysene	ND	0.000669	0.000718	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000658	0.000718	"	"	"	"	"	
Fluoranthene	ND	0.000422	0.000718	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

**R TB SW 1@7'**  
**8/3/2022 9:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208136-04 (Soil)**

**PAH by 8270D SIM**

Fluorene	ND	0.000306	0.000718	mg/Kg	1	L632729	08/17/2022	08/18/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000672	0.000718	"	"	"	"	"	
Naphthalene	ND	0.000519	0.000718	"	"	"	"	"	
Pyrene	ND	0.000689	0.000718	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	72.8 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	87.1 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	61.6 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.63			pH Units	1	B2H0813	08/08/2022	08/10/2022	
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**SAR by 20B Saturated Paste**

SAR	6.48			SAR	1	B2H0809	08/08/2022	08/10/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.28		0.00500	mmhos/cm	1	B2H0813	08/08/2022	08/10/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	5.19		0.0951	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 1@7'**  
**8/3/2022 9:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-04 (Soil)**

**Table 915 metals by EPA 6020B**

Barium	132		9.51	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Cadmium	0.295		0.0951	"	"	"	"	"	
Copper	ND		9.51	"	"	"	"	"	U
Lead	8.23		0.951	"	"	"	"	"	
Nickel	12.8		0.951	"	"	"	"	"	
Selenium	0.525		0.0951	"	"	"	"	08/11/2022	
Silver	ND		0.0951	"	"	"	"	08/10/2022	U
Zinc	ND		95.1	"	"	"	"	"	U

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L632052	08/03/2022	08/15/2022	
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB 4@6'**  
**8/3/2022 10:05:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.429		0.101	mg/L	1	B2H0807	08/08/2022	08/09/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0822	08/08/2022	08/16/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	98.6 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0828	08/08/2022	08/09/2022	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			"	"	"	
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

R TB 4@6'  
 8/3/2022 10:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
 Y208136-05 (Soil)

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	101 %		70-130			B2H08 28	08/08/2022	08/09/2022	
Surrogate: 4-Bromofluorobenzene	105 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	0.803		0.499	meq/L	10	[CALC]	08/08/2022	08/10/2022	
Magnesium	2.97		0.823	"	"	"	"	"	
Sodium	3.12		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	0.00264	0.000364	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
2-Methylnaphthalene	0.00312	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	0.000407	0.000304	0.00067	"	"	"	"	"	J
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.000425	0.000394	0.00067	"	"	"	"	"	J
Fluorene	0.000648	0.000286	0.00067	"	"	"	"	"	J

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB 4@6'**  
**8/3/2022 10:05:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208136-05 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
Naphthalene	<b>0.0021</b>	<b>0.000484</b>	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	124 %		33-115			"	"	"	*
Surrogate: 4-Terphenyl-d14	146 %		33-122			"	"	"	*
Surrogate: Nitrobenzene-d5	104 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	<b>8.37</b>			pH Units	1	B2H0813	08/08/2022	08/10/2022	
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**SAR by 20B Saturated Paste**

SAR	<b>2.27</b>			SAR	1	B2H0809	08/08/2022	08/10/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	<b>0.760</b>		0.00500	mmhos/cm	1	B2H0813	08/08/2022	08/10/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	<b>3.55</b>		0.0897	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Barium	<b>89.1</b>		8.97	"	"	"	"	"	

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB 4@6'**  
**8/3/2022 10:05:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-05 (Soil)**

**Table 915 metals by EPA 6020B**

Cadmium	0.156		0.0897	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Copper	ND		8.97	"	"	"	"	"	U
Lead	6.16		0.897	"	"	"	"	"	
Nickel	8.23		0.897	"	"	"	"	"	
Selenium	0.164		0.0897	"	"	"	"	"	
Silver	ND		0.0897	"	"	"	"	"	U
Zinc	ND		89.7	"	"	"	"	"	U

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L632660	08/03/2022	08/15/2022	
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 5@6'**  
**8/3/2022 10:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-06 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.411		0.101	mg/L	1	B2H0807	08/08/2022	08/09/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0822	08/08/2022	08/16/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	99.9 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0828	08/08/2022	08/09/2022	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			"	"	"	
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Absaroka  
112 High St.  
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Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

**R TB SW 5@6'**  
**8/3/2022 10:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-06 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	99.4 %		70-130			B2H08 28	08/08/2022	08/09/2022	
Surrogate: 4-Bromofluorobenzene	106 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	ND		0.499	meq/L	10	[CALC]	08/08/2022	08/10/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	5.67		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	0.00196	0.000364	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
2-Methylnaphthalene	0.00204	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	0.00108	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

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 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 5@6'**  
**8/3/2022 10:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208136-06 (Soil)**

**PAH by 8270D SIM**

Fluorene	0.000308	0.000286	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	J
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	0.00124	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	58.5 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	68.9 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	47.1 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.60			pH Units	1	B2H0813	08/08/2022	08/10/2022	
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**SAR by 20B Saturated Paste**

SAR	10.9			SAR	1	B2H0809	08/08/2022	08/10/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.677		0.00500	mmhos/cm	1	B2H0813	08/08/2022	08/10/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	3.73		0.0846	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 5@6'**  
**8/3/2022 10:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-06 (Soil)**

**Table 915 metals by EPA 6020B**

Barium	127		8.46	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Cadmium	0.202		0.0846	"	"	"	"	"	
Copper	ND		8.46	"	"	"	"	"	U
Lead	6.72		0.846	"	"	"	"	"	
Nickel	9.82		0.846	"	"	"	"	"	
Selenium	0.225		0.0846	"	"	"	"	"	
Silver	ND		0.0846	"	"	"	"	"	U
Zinc	ND		84.6	"	"	"	"	"	U

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.247	0.507	mg/Kg	1	L632660	08/03/2022	08/15/2022	
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Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

**R TB SW 6@3'**  
**8/3/2022 10:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-07 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.113		0.101	mg/L	1	B2H0807	08/08/2022	08/09/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0822	08/08/2022	08/16/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	112 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0828	08/08/2022	08/09/2022	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			"	"	"	
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Origins Laboratory, Inc.



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Absaroka  
112 High St.  
Buffalo WY 82834

Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

**R TB SW 6@3'**  
**8/3/2022 10:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-07 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	99.8 %		70-130			B2H08 28	08/08/2022	08/09/2022	
Surrogate: 4-Bromofluorobenzene	105 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	1.16		0.499	meq/L	10	[CALC]	08/08/2022	08/10/2022	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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Kenneth Rogowski  
Project Number: GPE.CO0586.02  
Project: Ridgeview 32-16-1

**R TB SW 6@3'**  
**8/3/2022 10:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208136-07 (Soil)**

**PAH by 8270D SIM**

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	98.8 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	111 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	83 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.20			pH Units	1	B2H0813	08/08/2022	08/10/2022	
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**SAR by 20B Saturated Paste**

SAR	0.0716			SAR	1	B2H0809	08/08/2022	08/10/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.206		0.00500	mmhos/cm	1	B2H0813	08/08/2022	08/10/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	4.03		0.0810	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 6@3'**  
**8/3/2022 10:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-07 (Soil)**

**Table 915 metals by EPA 6020B**

Barium	100		8.10	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Cadmium	0.195		0.0810	"	"	"	"	"	
Copper	ND		8.10	"	"	"	"	"	U
Lead	6.19		0.810	"	"	"	"	"	
Nickel	9.67		0.810	"	"	"	"	"	
Selenium	0.160		0.0810	"	"	"	"	"	
Silver	ND		0.0810	"	"	"	"	"	U
Zinc	ND		81.0	"	"	"	"	"	U

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.502	mg/Kg	1	L632660	08/03/2022	08/15/2022	
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Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 7@3'**  
**8/3/2022 10:55:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-08 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.135		0.0996	mg/L	1	B2H0807	08/08/2022	08/09/2022	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B2H0822	08/08/2022	08/16/2022	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	111 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B2H0828	08/08/2022	08/09/2022	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			"	"	"	
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Origins Laboratory, Inc.



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 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 7@3'**  
**8/3/2022 10:55:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-08 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	101 %		70-130			B2H08 28	08/08/2022	08/09/2022	
Surrogate: 4-Bromofluorobenzene	105 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	0.833		0.499	meq/L	10	[CALC]	08/08/2022	08/10/2022	
Magnesium	1.65		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.000364	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
2-Methylnaphthalene	ND	0.000645	0.00067	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	ND	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

**R TB SW 7@3'**  
**8/3/2022 10:55:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, Inc.**  
**Y208136-08 (Soil)**

**PAH by 8270D SIM**

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L632729	08/17/2022	08/18/2022	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	
Naphthalene	ND	0.000484	0.00067	"	"	"	"	"	
Pyrene	ND	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	52.7 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	62.5 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	43 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.37			pH Units	1	B2H0813	08/08/2022	08/10/2022	
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**SAR by 20B Saturated Paste**

SAR	0.171			SAR	1	B2H0809	08/08/2022	08/10/2022	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.289		0.00500	mmhos/cm	1	B2H0813	08/08/2022	08/10/2022	
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**Table 915 metals by EPA 6020B**

Arsenic	3.01		0.0758	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
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 Project: Ridgeview 32-16-1

**R TB SW 7@3'**  
**8/3/2022 10:55:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y208136-08 (Soil)**

**Table 915 metals by EPA 6020B**

Barium	92.6		7.58	mg/kg	5	B2H0518	08/05/2022	08/10/2022	
Cadmium	0.175		0.0758	"	"	"	"	"	
Copper	ND		7.58	"	"	"	"	"	U
Lead	5.27		0.758	"	"	"	"	"	
Nickel	8.46		0.758	"	"	"	"	"	
Selenium	0.124		0.0758	"	"	"	"	"	
Silver	ND		0.0758	"	"	"	"	"	U
Zinc	ND		75.8	"	"	"	"	"	U

**Total Metals by 7196 A**

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L632660	08/03/2022	08/15/2022	
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Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B2H0822 - EPA 3580</b>										
<b>Blank (B2H0822-BLK1)</b>										
					Prepared: 08/15/2022 Analyzed: 08/15/2022					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	24		"	24.9		98.1	50-150			

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 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0822 - EPA 3580**

**LCS (B2H0822-BS1)**

Prepared: 08/15/2022 Analyzed: 08/15/2022

Diesel (C10-C28)	1260	50.0	mg/kg	1000		126	70-130			
Residual Range Organics (C28-C40)	1210	200	"	1000		121	70-130			
Surrogate: o-Terphenyl	51		"	49.8		102	50-150			

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0822 - EPA 3580**

<b>Matrix Spike (B2H0822-MS1)</b>	<b>Source: Y208134-03</b>			<b>Prepared: 08/15/2022 Analyzed: 08/15/2022</b>						
Diesel (C10-C28)	1310	50.0	mg/kg	1000	54.5	126	70-130			
Residual Range Organics (C28-C40)	1230	200	"	1000	ND	123	70-130			
Surrogate: o-Terphenyl	46		"	49.8		91.6	50-150			

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 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0822 - EPA 3580**

<b>Matrix Spike Dup (B2H0822-MSD1)</b>	<b>Source: Y208134-03</b>			<b>Prepared: 08/15/2022 Analyzed: 08/15/2022</b>						
Diesel (C10-C28)	1340	50.0	mg/kg	1000	54.5	128	70-130	1.71	35	
Residual Range Organics (C28-C40)	1340	200	"	1000	ND	134	70-130	8.81	35	QM-07
Surrogate: o-Terphenyl	46		"	49.8		93.2	50-150			

Origins Laboratory, Inc.



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 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0828 - EPA 5030 (soil)**

**Blank (B2H0828-BLK1)**

Prepared: 08/08/2022 Analyzed: 08/09/2022

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	0.0100	"							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		98.6	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

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 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0828 - EPA 5030 (soil)**

**LCS (B2H0828-BS1)**

Prepared: 08/08/2022 Analyzed: 08/09/2022

1,2,4-Trimethylbenzene	0.107	0.00200	mg/kg	0.100		107	70-130			
1,3,5-Trimethylbenzene	0.108	0.00200	"	0.100		108	70-130			
Benzene	0.101	0.00200	"	0.100		101	70-130			
Ethylbenzene	0.105	0.00200	"	0.100		105	70-130			
Naphthalene	0.0961	0.0100	"	0.100		96.1	70-130			
Toluene	0.106	0.00200	"	0.100		106	70-130			
o-Xylene	0.109	0.00200	"	0.100		109	70-130			
m,p-Xylene	0.220	0.00400	"	0.200		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.0	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		105	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

Origins Laboratory, Inc.



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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2H0828 - EPA 5030 (soil)

Matrix Spike (B2H0828-MS1)	Source: Y208136-02			Prepared: 08/08/2022 Analyzed: 08/09/2022						
1,2,4-Trimethylbenzene	0.102	0.00200	mg/kg	0.100	0.000540	101	70-130			
1,3,5-Trimethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130			
Benzene	0.0999	0.00200	"	0.100	ND	99.9	70-130			
Ethylbenzene	0.102	0.00200	"	0.100	ND	102	70-130			
Naphthalene	0.0869	0.0100	"	0.100	0.00338	83.5	70-130			
Toluene	0.101	0.00200	"	0.100	ND	101	70-130			
o-Xylene	0.105	0.00200	"	0.100	ND	105	70-130			
m,p-Xylene	0.214	0.00400	"	0.200	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

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Absaroka  
 112 High St.  
 Buffalo WY 82834

Kenneth Rogowski  
 Project Number: GPE.CO0586.02  
 Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B2H0828 - EPA 5030 (soil)

Matrix Spike Dup (B2H0828-MSD1)	Source: Y208136-02			Prepared: 08/08/2022 Analyzed: 08/09/2022						
1,2,4-Trimethylbenzene	0.110	0.00200	mg/kg	0.100	0.000540	109	70-130	7.37	20	
1,3,5-Trimethylbenzene	0.109	0.00200	"	0.100	ND	109	70-130	6.94	20	
Benzene	0.106	0.00200	"	0.100	ND	106	70-130	5.98	20	
Ethylbenzene	0.109	0.00200	"	0.100	ND	109	70-130	6.64	20	
Naphthalene	0.101	0.0100	"	0.100	0.00338	97.3	70-130	14.7	20	
Toluene	0.108	0.00200	"	0.100	ND	108	70-130	6.21	20	
o-Xylene	0.112	0.00200	"	0.100	ND	112	70-130	6.63	20	
m,p-Xylene	0.226	0.00400	"	0.200	ND	113	70-130	5.78	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

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Project: Ridgeview 32-16-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Metals by SM 3500 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0518 - Default Prep Metals**

**Blank (B2H0518-BLK1)**

Prepared: 08/05/2022 Analyzed: 08/10/2022

Arsenic	ND	0.000100	mg/kg							U
Barium	ND	0.0100	"							U
Cadmium	ND	0.000100	"							U
Copper	ND	0.0100	"							U
Lead	ND	0.00100	"							U
Nickel	ND	0.00100	"							U
Selenium	ND	0.000100	"							U
Silver	ND	0.000100	"							U
Zinc	ND	0.100	"							U

**LCS (B2H0518-BS1)**

Prepared: 08/05/2022 Analyzed: 08/10/2022

Arsenic	0.0500	0.000100	mg/kg	0.0500		99.9	80-120
Barium	4.89	0.0100	"	5.00		97.8	80-120
Cadmium	0.0536	0.000100	"	0.0500		107	80-120
Copper	0.500	0.0100	"	0.500		100	80-120
Lead	0.0522	0.00100	"	0.0500		104	80-120
Nickel	0.0555	0.00100	"	0.0500		111	80-120
Selenium	0.0470	0.000100	"	0.0500		94.1	80-120
Silver	0.0448	0.000100	"	0.0500		89.5	80-120
Zinc	0.525	0.100	"	0.500		105	80-120

**Matrix Spike (B2H0518-MS1)**

Source: Y208134-06

Prepared: 08/05/2022 Analyzed: 08/10/2022

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**Metals by SM 3500 Series Methods - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0518 - Default Prep Metals**

<b>Matrix Spike (B2H0518-MS1)</b>		<b>Source: Y208134-06</b>			<b>Prepared: 08/05/2022 Analyzed: 08/10/2022</b>					
Arsenic	11.2	0.0174	mg/kg	8.72	6.45	54.6	75-125			QM-07
Barium	962	1.74	"	872	96.7	99.1	75-125			
Cadmium	9.51	0.0174	"	8.72	0.254	106	75-125			
Copper	69.0	1.74	"	87.2	14.4	62.6	75-125			QM-07
Lead	23.2	0.174	"	8.72	13.0	117	75-125			
Nickel	22.0	0.174	"	8.72	15.0	79.4	75-125			
Selenium	6.66	0.0174	"	8.72	0.286	73.1	75-125			QM-07
Silver	7.69	0.0174	"	8.72	0.117	86.8	75-125			
Zinc	133	17.4	"	87.2	59.9	84.3	75-125			
<b>Matrix Spike Dup (B2H0518-MSD1)</b>		<b>Source: Y208134-06</b>			<b>Prepared: 08/05/2022 Analyzed: 08/10/2022</b>					
Arsenic	10.7	0.0165	mg/kg	8.23	6.45	51.8	75-125	4.56	20	QM-07
Barium	936	1.65	"	823	96.7	102	75-125	2.66	20	
Cadmium	8.67	0.0165	"	8.23	0.254	102	75-125	9.24	20	
Copper	65.0	1.65	"	82.3	14.4	61.5	75-125	5.87	20	QM-07
Lead	22.1	0.165	"	8.23	13.0	111	75-125	4.58	20	
Nickel	20.7	0.165	"	8.23	15.0	68.2	75-125	6.13	20	QM-07
Selenium	5.99	0.0165	"	8.23	0.286	69.3	75-125	10.7	20	QM-07
Silver	7.07	0.0165	"	8.23	0.117	84.4	75-125	8.41	20	
Zinc	125	16.5	"	82.3	59.9	78.7	75-125	6.75	20	

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**Saturated Paste - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B2H0813 - NO PREP**

**Blank (B2H0813-BLK1)**

Prepared: 08/08/2022 Analyzed: 08/10/2022

Specific Conductance (EC)	0.00170	0.00500	mmhos/cm
pH	0.00		pH Units

**Duplicate (B2H0813-DUP1)**

**Source: Y208136-01**

Prepared: 08/08/2022 Analyzed: 08/10/2022

pH	9.43		pH Units	9.30		1.39	25
Specific Conductance (EC)	0.414	0.00500	mmhos/cm	0.494		17.6	25

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 Project: Ridgeview 32-16-1

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L632729 - 3550B**

**LCSD (LCSD-L632729)**

Prepared: 08/17/2022 Analyzed: 08/18/2022

Pyrene	0.126	0.000643	mg/Kg	0.167		75.4	30-130	2.3	20	
Fluorene	0.113	0.000286	"	0.167		67.6	30-130	0.8	20	
Indeno(1,2,3-cd)pyrene	0.14	0.000627	"	0.167		83.8	30-130	0.7	20	
Naphthalene	0.117	0.000484	"	0.167		70	30-130	2.5	20	
Fluoranthene	0.13	0.000394	"	0.167		77.8	30-130	3	20	
Dibenz(a,h)anthracene	0.147	0.000614	"	0.167		88	30-130	2.6	20	
Chrysene	0.125	0.000624	"	0.167		74.8	30-130	4.6	20	
Benzo(k)fluoranthene	0.127	0.000437	"	0.167		76	30-130	5.3	20	
Benzo(b)fluoranthene	0.13	0.000585	"	0.167		77.8	30-130	4.7	20	
Benzo(a)anthracene	0.139	0.000493	"	0.167		83.2	30-130	0	20	
Anthracene	0.119	0.000334	"	0.167		71.2	30-130	2.4	20	
Acenaphthene	0.107	0.000304	"	0.167		64	30-130	0	20	
2-Methylnaphthalene	0.104	0.000645	"	0.167		62.2	30-130	0.9	20	
1-Methylnaphthalene	0.105	0.000364	"	0.167		62.8	30-130	0	20	
Benzo(a)pyrene	0.131	0.000468	"	0.167		78.4	30-130	3	20	
Surrogate: Nitrobenzene-d5	53.7		"	0.333		53.7	29-110			
Surrogate: 4-Terphenyl-d14	76.5		"	0.333		76.5	33-122			
Surrogate: 2-Fluorobiphenyl	65.7		"	0.333		65.7	33-115			

**LCS (LCS-L632729)**

Prepared: 08/17/2022 Analyzed: 08/18/2022

Naphthalene	0.12	0.000484	mg/Kg	0.167		71.8	30-130			
Benzo(k)fluoranthene	0.134	0.000437	"	0.167		80.2	30-130			
2-Methylnaphthalene	0.105	0.000645	"	0.167		62.8	30-130			
1-Methylnaphthalene	0.105	0.000364	"	0.167		62.8	30-130			
Acenaphthene	0.107	0.000304	"	0.167		64	30-130			
Anthracene	0.122	0.000334	"	0.167		73	30-130			
Benzo(a)anthracene	0.139	0.000493	"	0.167		83.2	30-130			

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**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L632729 - 3550B**

**LCS (LCS-L632729)**

Prepared: 08/17/2022 Analyzed: 08/18/2022

Pyrene	0.129	0.000643	mg/Kg	0.167		77.2	30-130			
Benzo(b)fluoranthene	0.124	0.000585	"	0.167		74.2	30-130			
Chrysene	0.131	0.000624	"	0.167		78.4	30-130			
Dibenz(a,h)anthracene	0.151	0.000614	"	0.167		90.4	30-130			
Fluoranthene	0.134	0.000394	"	0.167		80.2	30-130			
Fluorene	0.112	0.000286	"	0.167		67	30-130			
Indeno(1,2,3-cd)pyrene	0.141	0.000627	"	0.167		84.4	30-130			
Benzo(a)pyrene	0.135	0.000468	"	0.167		80.8	30-130			
Surrogate: 2-Fluorobiphenyl	67.5		"	0.333		67.5	33-115			
Surrogate: 4-Terphenyl-d14	78.6		"	0.333		78.6	33-122			
Surrogate: Nitrobenzene-d5	56.1		"	0.333		56.1	29-110			

**LRB (LRB-L632729)**

Prepared: 08/17/2022 Analyzed: 08/18/2022

Benzo(b)fluoranthene	ND	0.00067	mg/Kg				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Pyrene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
Chrysene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Naphthalene	ND	0.00067	"				-			

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 Project: Ridgeview 32-16-1

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L632729 - 3550B**

**LRB (LRB-L632729)**

Prepared: 08/17/2022 Analyzed: 08/18/2022

Anthracene	ND	0.00067	mg/Kg				-			
Surrogate: 2-Fluorobiphenyl	76.8		"	0.333	76.8		33-115			
Surrogate: 4-Terphenyl-d14	84.9		"	0.333	84.9		33-122			
Surrogate: Nitrobenzene-d5	62.1		"	0.333	62.1		29-110			

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**Total Metals by 7196 A - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L632660 -</b>										
<b>DUP (L 87336-DUP)</b>		<b>Source: Y208136-05</b>			Prepared: Analyzed: 08/15/2022					
Chromium, Hexavalent	ND	0.244	mg/Kg		<0.500		-	0	20	
<b>MS (L 87336-MS)</b>		<b>Source: Y208136-05</b>			Prepared: Analyzed: 08/15/2022					
Chromium, Hexavalent	4.39	0.248	mg/Kg	8.16	<0.248	54	75-125			*
<b>MSD (L 87336-MSD)</b>		<b>Source: Y208136-05</b>			Prepared: Analyzed: 08/15/2022					
Chromium, Hexavalent	527	24.5	mg/Kg	679	<24.5	78	75-125			
<b>LCS (LCS)</b>					Prepared: Analyzed: 08/15/2022					
Chromium, Hexavalent	7.24	0.244	mg/Kg	8		91	75-125			
<b>LRB (LRB)</b>					Prepared: Analyzed: 08/15/2022					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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**Total Metals by 7196A - Quality Control**  
**Waypoint Analytical, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch L632052 -

<b>DUP (L 87326-DUP)</b>		<b>Source: 87326</b>			Prepared: Analyzed: 08/15/2022					
Chromium, Hexavalent	ND	0.247	mg/Kg		<0.508		-	0	20	
<b>MS (L 87326-MS)</b>		<b>Source: 87326</b>			Prepared: Analyzed: 08/15/2022					
Chromium, Hexavalent	6.41	0.244	mg/Kg	7.7	<0.244	83	75-125			
<b>MSD (L 87326-MSD)</b>		<b>Source: 87326</b>			Prepared: Analyzed: 08/15/2022					
Chromium, Hexavalent	523	24.4	mg/Kg	607	<24.4	86	75-125			

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**Notes and Definitions**

U Sample is Non-Detect.

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

J Estimated Value. Analyte below reported quantitation limit.

\* QC Failure

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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