



Blue Star Helium

Peter Kondrat

5 Tamarade Dr.

Littleton

CO

80127

March 31, 2025

Project Name - Jackson #4L4

Project Number - [none]

Attached are your analytical results for Jackson #4L4 received by Origins Laboratory March 17, 2025. This project is associated with Origins project number E5C0620-01.

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

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

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

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

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

Origins Laboratory
303.433.1322
projectmanager@originslab.com



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



Blue Star Helium
5 Tamarade Dr.
Littleton CO 80127

Peter Kondrat
Project Number: [none]
Project: Jackson #4L4

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
J4L4-S1	E5C0620-01	Soil	March 17, 2025 8:07	03/17/2025 14:45
J4L4-S2	E5C0620-02	Soil	March 17, 2025 8:15	03/17/2025 14:45
J4L4-S3	E5C0620-03	Soil	March 17, 2025 8:22	03/17/2025 14:45

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager

ORIGINS LABORATORY

Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

1725 Elk Plaza | Denver, CO 80217 | Phone: 303.433.1322 | Fax: 303.265.9645

Sample ID/Description	Date Sampled	Time Sampled	# of Containers	Preservative			Matrix			Analysis	Sample Indicators		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil			Air Summit Canister #	Other
J4L4-S1	3/17/2025	8:07	2			X				X	Drill Cuttings	EMC Table 915-1	1
J4L4-S2	3/17/2025	8:15	2			X				X	Drill Cuttings	EMC Table 915-1	2
J4L4-S3	3/17/2025	8:22	2			X				X	Drill Cuttings	EMC Table 915-1	3
Note: Please provide results in 5 days Except Chromes 6													
Reimbursed By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:							
[Signature]	3/17/2025	11:44	[Signature]	03/17/25	11:45	48 Hr <input type="checkbox"/> 24 Hr <input type="checkbox"/> 12 Hr <input type="checkbox"/>							

Client: Blue Star Helium
 Address: 2011 Forest Ave Durango CO 81301
 Telephone Number: 970-759-5370
 Email Address: pkondrat@bluestarhelium.com
 Project Manager: Peter Kondrat
 Project Name: Jackson #4L4
 Project Number:
 Sample Collected By: pkondrat@bluestarhelium.com



4.7°C
 Disp. Permitt. Meters

Origins Laboratory

 Jen Pellegrini For Jordan A. Bynon, Project Manager

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ORIGINS LABORATORY

Blue Star Helium
5 Tamarade Dr.
Littleton CO 80127

Peter Kondrat
Project Number: [none]
Project: Jackson #4L4

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

Sample Receipt Checklist

Origins Work Order: EDC0020 Client: Blue Star
Client Project ID: Jackson

Checklist Completed by: ZHC/JAR Shipped Via: HO
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 3/18/25 Airbill #: N/A

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

Cooler Number/Temperature: 147c / / / (Describe)

Thermometer ID: 1007

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

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

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 03/18/25

Origins Laboratory

Jefe Pellegrini

Jen Pellegrini For Jordan A. Bynon, Project Manager

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Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

J4L4-S1
3/17/2025 8:07:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-01 (Soil)									
GEL Laboratories, LLC									
PAH by 3541/8270									
1-Methylnaphthalene	ND	0.00168	0.00508	mg/kg dry	1	2770832	03/26/2025	03/26/2025	U
2-Methylnaphthalene	ND	0.00168	0.00508	"	"	"	"	"	U
Acenaphthene	ND	0.00168	0.00508	"	"	"	"	"	U
Anthracene	ND	0.00168	0.00508	"	"	"	"	"	U
Benzo(a)anthracene	ND	0.00168	0.00508	"	"	"	"	"	U
Benzo(a)pyrene	ND	0.00168	0.00508	"	"	"	"	"	U
Benzo(b)fluoranthene	ND	0.00168	0.00508	"	"	"	"	"	U
Benzo(k)fluoranthene	ND	0.00168	0.00508	"	"	"	"	"	U
Chrysene	ND	0.00168	0.00508	"	"	"	"	"	U
Dibenzo(a,h)anthracene	ND	0.00168	0.00508	"	"	"	"	"	U
Fluoranthene	ND	0.00168	0.00508	"	"	"	"	"	U
Fluorene	ND	0.00168	0.00508	"	"	"	"	"	U
Indeno(1,2,3-cd)pyrene	ND	0.00168	0.00508	"	"	"	"	"	U
Naphthalene	ND	0.00168	0.00508	"	"	"	"	"	U
Pyrene	ND	0.00168	0.00508	"	"	"	"	"	U
Surrogate: 5-alpha-Androstane	43 %			22-135		"	"	"	
Total Metals 7196A									
Hexavalent Chromium	ND	0.171	0.428	mg/kg dry	1	2768808	"	03/28/2025	U

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 Project: Jackson #4L4

J4L4-S1
3/17/2025 8:07:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-01 (Soil)									
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	1.07		0.0984	mg/L	1	B5C2052	03/20/2025	03/25/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5C2128	03/21/2025	03/25/2025	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua
Surrogate: o-Terphenyl	48.3 %			50-150		"	"	"	S-DUP
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5C2039	03/20/2025	03/21/2025	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	0.270		0.200	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	101 %			70-130		"	"	"	
Surrogate: Toluene-d8	100 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	95.7 %			70-130		"	"	"	

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

J4L4-S1
3/17/2025 8:07:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-01 (Soil)									
Origins Laboratory									
Metals by Saturated Paste by EPA 6010									
Calcium	10.6		0.499	meq/L	10	[CALC]	03/20/2025	03/24/2025	
Magnesium	3.89		0.823	"	"	"	"	"	
Sodium	29.3		0.435	"	"	"	"	"	
pH in Soil by 9045D									
pH	8.43			pH Units	1	B5C2022	03/20/2025	03/22/2025	
SAR by 20B Saturated Paste									
SAR	10.9		0.0100	SAR	1	B5C2013	03/20/2025	03/24/2025	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	3.97		0.00500	mmhos/cm	1	B5C2022	03/20/2025	03/22/2025	
Table 915 metals by EPA 6020B									
Arsenic	4.36		0.278	mg/kg	10	B5C2029	03/20/2025	03/21/2025	
Barium	113		9.59	"	"	"	"	"	
Cadmium	ND		0.0959	"	"	"	"	"	Ua
Copper	13.4		9.59	"	"	"	"	"	
Lead	5.22		0.959	"	"	"	"	"	
Nickel	9.68		0.959	"	"	"	"	"	
Selenium	ND		0.249	"	"	"	"	"	Ua

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Project: Jackson #4L4

J4L4-S1

3/17/2025 8:07:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-01 (Soil)									
Origins Laboratory									
Table 915 metals by EPA 6020B									
Silver	ND		0.0959	mg/kg	10	B5C2029	03/20/2025	03/21/2025	Ua
Zinc	ND		35.5	"	"	"	"	"	Ua

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 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

J4L4-S2
3/17/2025 8:15:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-02 (Soil)									
GEL Laboratories, LLC									
PAH by 3541/8270									
1-Methylnaphthalene	ND	0.00190	0.00576	mg/kg dry	1	2770832	03/26/2025	03/26/2025	U
2-Methylnaphthalene	ND	0.00190	0.00576	"	"	"	"	"	U
Acenaphthene	ND	0.00190	0.00576	"	"	"	"	"	U
Anthracene	ND	0.00190	0.00576	"	"	"	"	"	U
Benzo(a)anthracene	ND	0.00190	0.00576	"	"	"	"	"	U
Benzo(a)pyrene	ND	0.00190	0.00576	"	"	"	"	"	U
Benzo(b)fluoranthene	ND	0.00190	0.00576	"	"	"	"	"	U
Benzo(k)fluoranthene	ND	0.00190	0.00576	"	"	"	"	"	U
Chrysene	ND	0.00190	0.00576	"	"	"	"	"	U
Dibenzo(a,h)anthracene	ND	0.00190	0.00576	"	"	"	"	"	U
Fluoranthene	ND	0.00190	0.00576	"	"	"	"	"	U
Fluorene	ND	0.00190	0.00576	"	"	"	"	"	U
Indeno(1,2,3-cd)pyrene	ND	0.00190	0.00576	"	"	"	"	"	U
Naphthalene	ND	0.00190	0.00576	"	"	"	"	"	U
Pyrene	ND	0.00190	0.00576	"	"	"	"	"	U
Surrogate: 5-alpha-Androstane	59 %			22-135		"	"	"	
Total Metals 7196A									
Hexavalent Chromium	ND	0.172	0.431	mg/kg dry	1	2768808	"	03/28/2025	U

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Jen Pellegrini For Jordan A. Bynon, Project Manager



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 Project Number: [none]
 Project: Jackson #4L4

J4L4-S2
3/17/2025 8:15:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-02 (Soil)									
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	1.04		0.0997	mg/L	1	B5C2052	03/20/2025	03/25/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5C2128	03/21/2025	03/24/2025	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua
Surrogate: o-Terphenyl	51.0 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5C2039	03/20/2025	03/21/2025	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	0.325		0.200	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	99.2 %			70-130		"	"	"	
Surrogate: Toluene-d8	102 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	96.7 %			70-130		"	"	"	

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Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

J4L4-S2
3/17/2025 8:15:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-02 (Soil)									
Origins Laboratory									
Metals by Saturated Paste by EPA 6010									
Calcium	6.50		0.499	meq/L	10	[CALC]	03/20/2025	03/24/2025	
Magnesium	2.33		0.823	"	"	"	"	"	
Sodium	36.6		0.435	"	"	"	"	"	
pH in Soil by 9045D									
pH	8.50			pH Units	1	B5C2022	03/20/2025	03/22/2025	
SAR by 20B Saturated Paste									
SAR	17.4		0.0100	SAR	1	B5C2013	03/20/2025	03/24/2025	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	4.30		0.00500	mmhos/cm	1	B5C2022	03/20/2025	03/22/2025	
Table 915 metals by EPA 6020B									
Arsenic	4.66		0.279	mg/kg	10	B5C2029	03/20/2025	03/21/2025	
Barium	52.2		9.63	"	"	"	"	"	
Cadmium	ND		0.0963	"	"	"	"	"	Ua
Copper	ND		9.63	"	"	"	"	"	Ua
Lead	2.86		0.963	"	"	"	"	"	
Nickel	7.31		0.963	"	"	"	"	"	
Selenium	ND		0.250	"	"	"	"	"	Ua

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium

5 Tamarade Dr.

Littleton CO 80127

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Project Number: [none]

Project: Jackson #4L4

J4L4-S2

3/17/2025 8:15:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-02 (Soil)									
Origins Laboratory									
Table 915 metals by EPA 6020B									
Silver	ND		0.0963	mg/kg	10	B5C2029	03/20/2025	03/21/2025	Ua
Zinc	ND		35.6	"	"	"	"	"	Ua

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Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

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 Project Number: [none]
 Project: Jackson #4L4

J4L4-S3
3/17/2025 8:22:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-03 (Soil)									
GEL Laboratories, LLC									
PAH by 3541/8270									
1-Methylnaphthalene	ND	0.00173	0.00523	mg/kg dry	1	2770815	03/26/2025	03/27/2025	U
2-Methylnaphthalene	ND	0.00173	0.00523	"	"	"	"	"	U
Acenaphthene	ND	0.00173	0.00523	"	"	"	"	"	U
Anthracene	ND	0.00173	0.00523	"	"	"	"	"	U
Benzo(a)anthracene	ND	0.00173	0.00523	"	"	"	"	"	U
Benzo(a)pyrene	ND	0.00173	0.00523	"	"	"	"	"	U
Benzo(b)fluoranthene	ND	0.00173	0.00523	"	"	"	"	"	U
Benzo(k)fluoranthene	ND	0.00173	0.00523	"	"	"	"	"	U
Chrysene	ND	0.00173	0.00523	"	"	"	"	"	U
Dibenzo(a,h)anthracene	ND	0.00173	0.00523	"	"	"	"	"	U
Fluoranthene	ND	0.00173	0.00523	"	"	"	"	"	U
Fluorene	ND	0.00173	0.00523	"	"	"	"	"	U
Indeno(1,2,3-cd)pyrene	ND	0.00173	0.00523	"	"	"	"	"	U
Naphthalene	ND	0.00173	0.00523	"	"	"	"	"	U
Pyrene	ND	0.00173	0.00523	"	"	"	"	"	U
Surrogate: 5-alpha-Androstane	54 %			22-135		"	"	"	
Total Metals 7196A									
Hexavalent Chromium	ND	0.216	0.541	mg/kg dry	1	2768808	"	03/28/2025	U

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Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

J4L4-S3
3/17/2025 8:22:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-03 (Soil)									
Origins Laboratory									
Boron (DTPA Sorbitol)									
Boron	1.08		0.101	mg/L	1	B5C2052	03/20/2025	03/25/2025	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B5C2128	03/21/2025	03/25/2025	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua
Surrogate: o-Terphenyl	53.9 %			50-150		"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B5C2039	03/20/2025	03/21/2025	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	0.00232		0.00200	"	"	"	"	"	
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	0.00730		0.00200	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.393		0.200	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	103 %			70-130		"	"	"	
Surrogate: Toluene-d8	101 %			70-130		"	"	"	
Surrogate: 4-Bromofluorobenzene	95.3 %			70-130		"	"	"	

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Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

J4L4-S3
3/17/2025 8:22:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
E5C0620-03 (Soil)									
Origins Laboratory									
Metals by Saturated Paste by EPA 6010									
Calcium	2.31		0.499	meq/L	10	[CALC]	03/20/2025	03/24/2025	
Magnesium	0.965		0.823	"	"	"	"	"	
Sodium	28.5		0.435	"	"	"	"	"	
pH in Soil by 9045D									
pH	8.60			pH Units	1	B5C2022	03/20/2025	03/22/2025	
SAR by 20B Saturated Paste									
SAR	22.3		0.0100	SAR	1	B5C2013	03/20/2025	03/24/2025	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	3.15		0.00500	mmhos/cm	1	B5C2022	03/20/2025	03/22/2025	
Table 915 metals by EPA 6020B									
Arsenic	5.06		0.275	mg/kg	10	B5C2029	03/20/2025	03/21/2025	
Barium	46.0		9.48	"	"	"	"	"	
Cadmium	ND		0.0948	"	"	"	"	"	Ua
Copper	ND		9.48	"	"	"	"	"	Ua
Lead	3.67		0.948	"	"	"	"	"	
Nickel	7.60		0.948	"	"	"	"	"	
Selenium	ND		0.247	"	"	"	"	"	Ua

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium

5 Tamarade Dr.

Littleton CO 80127

Peter Kondrat

Project Number: [none]

Project: Jackson #4L4

J4L4-S3

3/17/2025 8:22:00AM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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E5C0620-03 (Soil)
Origins Laboratory

Table 915 metals by EPA 6020B

Silver	ND		0.0948	mg/kg	10	B5C2029	03/20/2025	03/21/2025	Ua
Zinc	ND		35.1	"	"	"	"	"	Ua

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2013 - Saturated Paste Metals

Blank (B5C2013-BLK1)

Prepared: 03/20/2025 Analyzed: 03/24/2025

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

Duplicate (B5C2013-DUP1)

Source: E5C0584-05

Prepared: 03/20/2025 Analyzed: 03/24/2025

SAR	ND	0.0100	SAR	2.30				200		Ua
Calcium PPM	48.0	10.0	mg/L	46.9				2.38	50	
Magnesium PPM	19.7	10.0	"	19.2				2.57	50	
Sodium PPM	75.3	10.0	"	74.2				1.50	50	

Batch B5C2052 - DTPA Sorbitol Preparation

Blank (B5C2052-BLK1)

Prepared: 03/20/2025 Analyzed: 03/25/2025

Boron	ND	0.100	mg/L							Ua
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Duplicate (B5C2052-DUP1)

Source: E5C0619-02

Prepared: 03/20/2025 Analyzed: 03/25/2025

Boron	0.804	0.0984	mg/L	0.825				2.53	50	
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Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2128 - EPA 3550B

Blank (B5C2128-BLK1)

Prepared: 03/21/2025 Analyzed: 03/24/2025

Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	18		"	24.9		73.4	50-150			

LCS (B5C2128-BS1)

Prepared: 03/21/2025 Analyzed: 03/24/2025

Diesel (C10-C28)	810	50.0	mg/kg	1000		81.0	70-130			
Residual Range Organics (C28-C40)	851	200	"	1000		85.1	70-130			
Surrogate: o-Terphenyl	38		"	49.8		77.1	50-150			

Matrix Spike (B5C2128-MS1)

Source: E5C0619-01

Prepared: 03/21/2025 Analyzed: 03/24/2025

Diesel (C10-C28)	778	50.0	mg/kg	1000	ND	77.8	70-130			
Residual Range Organics (C28-C40)	801	200	"	1000	ND	80.1	70-130			
Surrogate: o-Terphenyl	34		"	49.8		67.9	50-150			

Matrix Spike Dup (B5C2128-MSD1)

Source: E5C0619-01

Prepared: 03/21/2025 Analyzed: 03/24/2025

Diesel (C10-C28)	793	50.0	mg/kg	1000	ND	79.3	70-130	1.92	35	
Residual Range Organics (C28-C40)	824	200	"	1000	ND	82.4	70-130	2.80	35	
Surrogate: o-Terphenyl	36		"	49.8		72.8	50-150			

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2029 - EPA 3050B

Blank (B5C2029-BLK1)

Prepared: 03/20/2025 Analyzed: 03/21/2025

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

LCS (B5C2029-BS1)

Prepared: 03/20/2025 Analyzed: 03/21/2025

Arsenic	5.88	0.290	mg/kg	5.00		118	80-120			
Barium	587	10.0	"	500		117	80-120			
Cadmium	5.71	0.100	"	5.00		114	80-120			
Copper	55.5	10.0	"	50.0		111	80-120			
Lead	5.69	1.00	"	5.00		114	80-120			
Nickel	5.53	1.00	"	5.00		111	80-120			
Selenium	5.86	0.260	"	5.00		117	80-120			
Silver	5.82	0.100	"	5.00		116	80-120			
Zinc	55.9	37.0	"	50.0		112	80-120			

Matrix Spike (B5C2029-MS1)

Source: E5B0317-03

Prepared: 03/20/2025 Analyzed: 03/21/2025

Arsenic	9.26	0.258	mg/kg	4.44	5.45	85.9	75-125			
Barium	621	8.88	"	444	299	72.6	75-125			QM-07
Cadmium	4.60	0.0888	"	4.44	0.215	98.8	75-125			
Copper	56.9	8.88	"	44.4	13.3	98.3	75-125			
Lead	14.0	0.888	"	4.44	11.1	66.7	75-125			QM-07

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2029 - EPA 3050B

Matrix Spike (B5C2029-MS1)

Source: E5B0317-03

Prepared: 03/20/2025 Analyzed: 03/21/2025

Nickel	18.5	0.888	mg/kg	4.44	15.9	60.5	75-125			QM-07
Selenium	4.52	0.231	"	4.44	0.281	95.5	75-125			
Silver	4.43	0.0888	"	4.44	0.0382	98.9	75-125			
Zinc	91.6	32.9	"	44.4	51.5	90.2	75-125			

Matrix Spike Dup (B5C2029-MSD1)

Source: E5B0317-03

Prepared: 03/20/2025 Analyzed: 03/21/2025

Arsenic	9.34	0.260	mg/kg	4.48	5.45	86.6	75-125	0.769	20	
Barium	733	8.97	"	448	299	96.8	75-125	16.5	20	
Cadmium	4.80	0.0897	"	4.48	0.215	102	75-125	4.30	20	
Copper	58.2	8.97	"	44.8	13.3	100	75-125	2.15	20	
Lead	14.6	0.897	"	4.48	11.1	78.5	75-125	3.90	20	
Nickel	18.9	0.897	"	4.48	15.9	68.4	75-125	2.03	20	QM-07
Selenium	4.70	0.233	"	4.48	0.281	98.5	75-125	3.77	20	
Silver	4.61	0.0897	"	4.48	0.0382	102	75-125	3.96	20	
Zinc	92.4	33.2	"	44.8	51.5	91.0	75-125	0.832	20	

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2022 - Saturated Paste pH/EC

Blank (B5C2022-BLK1)

Prepared: 03/20/2025 Analyzed: 03/22/2025

Specific Conductance (EC)	ND	0.00500	mmhos/cm							Ua
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Duplicate (B5C2022-DUP1)

Source: E5C0584-05

Prepared: 03/20/2025 Analyzed: 03/22/2025

Specific Conductance (EC)	0.804	0.00500	mmhos/cm		0.776			3.49	25	
pH	8.33		pH Units		8.32			0.120	25	

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2039 - EPA 5030 (soil)

Blank (B5C2039-BLK1)

Prepared: 03/20/2025 Analyzed: 03/20/2025

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.6	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		93.8	70-130			

LCS (B5C2039-BS1)

Prepared: 03/20/2025 Analyzed: 03/20/2025

1,2,4-Trimethylbenzene	0.116	0.00200	mg/kg	0.100		116	70-130			
1,3,5-Trimethylbenzene	0.117	0.00200	"	0.100		117	70-130			
Benzene	0.0900	0.00200	"	0.100		90.0	70-130			
Ethylbenzene	0.106	0.00200	"	0.100		106	70-130			
Naphthalene	0.116	0.00380	"	0.100		116	70-130			
Toluene	0.107	0.00200	"	0.100		107	70-130			
o-Xylene	0.115	0.00200	"	0.100		115	70-130			
m,p-Xylene	0.217	0.00400	"	0.200		109	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		91.4	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.5	70-130			

Matrix Spike (B5C2039-MS1)

Source: E5C0620-01

Prepared: 03/20/2025 Analyzed: 03/20/2025

1,2,4-Trimethylbenzene	0.0938	0.00200	mg/kg	0.100	ND	93.8	70-130			
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Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B5C2039 - EPA 5030 (soil)

Matrix Spike (B5C2039-MS1)

Source: E5C0620-01

Prepared: 03/20/2025 Analyzed: 03/20/2025

1,3,5-Trimethylbenzene	0.0940	0.00200	mg/kg	0.100	ND	94.0	70-130			
Benzene	0.0824	0.00200	"	0.100	ND	82.4	70-130			
Ethylbenzene	0.0905	0.00200	"	0.100	ND	90.5	70-130			
Naphthalene	0.109	0.00380	"	0.100	ND	109	70-130			
Toluene	0.0953	0.00200	"	0.100	ND	95.3	70-130			
o-Xylene	0.0996	0.00200	"	0.100	ND	99.6	70-130			
m,p-Xylene	0.184	0.00400	"	0.200	ND	92.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.7	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.2	70-130			

Matrix Spike Dup (B5C2039-MSD1)

Source: E5C0620-01

Prepared: 03/20/2025 Analyzed: 03/20/2025

1,2,4-Trimethylbenzene	0.0971	0.00200	mg/kg	0.100	ND	97.1	70-130	3.52	20	
1,3,5-Trimethylbenzene	0.0966	0.00200	"	0.100	ND	96.6	70-130	2.73	20	
Benzene	0.0846	0.00200	"	0.100	ND	84.6	70-130	2.61	20	
Ethylbenzene	0.0916	0.00200	"	0.100	ND	91.6	70-130	1.14	20	
Naphthalene	0.113	0.00380	"	0.100	ND	113	70-130	3.58	20	
Toluene	0.0977	0.00200	"	0.100	ND	97.7	70-130	2.51	20	
o-Xylene	0.101	0.00200	"	0.100	ND	101	70-130	1.83	20	
m,p-Xylene	0.186	0.00400	"	0.200	ND	93.1	70-130	1.12	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.8	70-130			

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2770815 - SW846 3541

BLANK (1206047927-BLK)

Prepared: 03/26/2025 Analyzed: 03/27/2025

Benzo(a)pyrene	ND	0.00327	mg/kg	-	-	-	-	-	-	U
Naphthalene	ND	0.00327	"	-	-	-	-	-	-	U
Indeno(1,2,3-cd)pyrene	ND	0.00327	"	-	-	-	-	-	-	U
Fluorene	ND	0.00327	"	-	-	-	-	-	-	U
Fluoranthene	ND	0.00327	"	-	-	-	-	-	-	U
Dibenzo(a,h)anthracene	ND	0.00327	"	-	-	-	-	-	-	U
Chrysene	ND	0.00327	"	-	-	-	-	-	-	U
Pyrene	ND	0.00327	"	-	-	-	-	-	-	U
Benzo(a)anthracene	ND	0.00327	"	-	-	-	-	-	-	U
Anthracene	ND	0.00327	"	-	-	-	-	-	-	U
Acenaphthene	ND	0.00327	"	-	-	-	-	-	-	U
2-Methylnaphthalene	ND	0.00327	"	-	-	-	-	-	-	U
1-Methylnaphthalene	ND	0.00327	"	-	-	-	-	-	-	U
Benzo(b)fluoranthene	ND	0.00327	"	-	-	-	-	-	-	U
Benzo(k)fluoranthene	ND	0.00327	"	-	-	-	-	-	-	U

Surrogate: 5-alpha-Androstane

0.135

0.164

82

22-135

LCS (1206047928-BKS)

Prepared: 03/26/2025 Analyzed: 03/27/2025

1-Methylnaphthalene	0.254	0.00333	mg/kg	0.333	76	39-109
Dibenzo(a,h)anthracene	0.280	0.00333	"	0.333	84	38-132
Chrysene	0.285	0.00333	"	0.333	86	42-117
Benzo(b)fluoranthene	0.261	0.00333	"	0.333	78	39-123
Benzo(k)fluoranthene	0.256	0.00333	"	0.333	77	40-122
Benzo(a)anthracene	0.278	0.00333	"	0.333	83	42-120
Anthracene	0.280	0.00333	"	0.333	84	41-117
Acenaphthene	0.268	0.00333	"	0.333	81	41-112
2-Methylnaphthalene	0.259	0.00333	"	0.333	78	39-110

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2770815 - SW846 3541

LCS (1206047928-BKS)

Prepared: 03/26/2025 Analyzed: 03/27/2025

Fluoranthene	0.268	0.00333	mg/kg	0.333		81	39-119			
Benzo(a)pyrene	0.278	0.00333	"	0.333		83	39-127			
Fluorene	0.269	0.00333	"	0.333		81	37-115			
Pyrene	0.270	0.00333	"	0.333		81	38-117			
Naphthalene	0.266	0.00333	"	0.333		80	38-109			
Indeno(1,2,3-cd)pyrene	0.270	0.00333	"	0.333		81	38-133			
Surrogate: 5-alpha-Androstane	0.159		"	0.166		96	22-135			

LCSD (1206047929-BKSD)

Prepared: 03/26/2025 Analyzed: 03/27/2025

Dibenzo(a,h)anthracene	0.279	0.00332	mg/kg	0.332		84	38-132	0	30	
Pyrene	0.266	0.00332	"	0.332		80	38-117	1	30	
Naphthalene	0.263	0.00332	"	0.332		79	38-109	1	30	
Indeno(1,2,3-cd)pyrene	0.271	0.00332	"	0.332		82	38-133	0	30	
Fluoranthene	0.264	0.00332	"	0.332		80	39-119	2	30	
Chrysene	0.282	0.00332	"	0.332		85	42-117	1	30	
Benzo(k)fluoranthene	0.251	0.00332	"	0.332		76	40-122	2	30	
1-Methylnaphthalene	0.248	0.00332	"	0.332		75	39-109	2	30	
Benzo(a)pyrene	0.274	0.00332	"	0.332		83	39-127	1	30	
Benzo(a)anthracene	0.275	0.00332	"	0.332		83	42-120	1	30	
Anthracene	0.272	0.00332	"	0.332		82	41-117	3	30	
Acenaphthene	0.258	0.00332	"	0.332		78	41-112	4	30	
2-Methylnaphthalene	0.253	0.00332	"	0.332		76	39-110	2	30	
Benzo(b)fluoranthene	0.262	0.00332	"	0.332		79	39-123	0	30	
Fluorene	0.259	0.00332	"	0.332		78	37-115	4	30	
Surrogate: 5-alpha-Androstane	0.152		"	0.166		92	22-135			

MS (1206047930 S)

Source: E5C0620-03

Prepared: 03/26/2025 Analyzed: 03/27/2025

Origins Laboratory

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

Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2770815 - SW846 3541

MS (1206047930 S)

Source: E5C0620-03

Prepared: 03/26/2025 Analyzed: 03/27/2025

Benzo(k)fluoranthene	0.268	0.00525	mg/kg dry	0.525	<0.00173	51	18-138			
Chrysene	0.297	0.00525	"	0.525	<0.00173	57	19-129			
Dibenzo(a,h)anthracene	0.287	0.00525	"	0.525	<0.00173	55	11-134			
Fluoranthene	0.278	0.00525	"	0.525	<0.00173	53	14-136			
Fluorene	0.267	0.00525	"	0.525	<0.00173	51	16-134			
Indeno(1,2,3-cd)pyrene	0.280	0.00525	"	0.525	<0.00173	53	13-134			
Pyrene	0.281	0.00525	"	0.525	<0.00173	54	12-139			
Benzo(b)fluoranthene	0.274	0.00525	"	0.525	<0.00173	52	14-136			
Naphthalene	0.252	0.00525	"	0.525	<0.00173	48	16-126			
2-Methylnaphthalene	0.249	0.00525	"	0.525	<0.00173	47	15-132			
Acenaphthene	0.258	0.00525	"	0.525	<0.00173	49	17-129			
Anthracene	0.285	0.00525	"	0.525	<0.00173	54	18-136			
Benzo(a)anthracene	0.291	0.00525	"	0.525	<0.00173	55	20-132			
Benzo(a)pyrene	0.292	0.00525	"	0.525	<0.00173	56	16-133			
1-Methylnaphthalene	0.245	0.00525	"	0.525	<0.00173	47	15-129			
Surrogate: 5-alpha-Androstane	0.155		"	0.262	0.142	59	22-135			

MSD (1206047931 SD)

Source: E5C0620-03

Prepared: 03/26/2025 Analyzed: 03/27/2025

1-Methylnaphthalene	0.143	0.00520	mg/kg dry	0.520	<0.00172	28	15-129	53	30	
Benzo(k)fluoranthene	0.182	0.00520	"	0.520	<0.00172	35	18-138	38	30	
Benzo(b)fluoranthene	0.188	0.00520	"	0.520	<0.00172	36	14-136	37	30	
Benzo(a)pyrene	0.200	0.00520	"	0.520	<0.00172	39	16-133	37	30	
Benzo(a)anthracene	0.201	0.00520	"	0.520	<0.00172	39	20-132	37	30	
Anthracene	0.199	0.00520	"	0.520	<0.00172	38	18-136	35	30	
Acenaphthene	0.164	0.00520	"	0.520	<0.00172	32	17-129	44	30	
2-Methylnaphthalene	0.146	0.00520	"	0.520	<0.00172	28	15-132	52	30	
Chrysene	0.205	0.00520	"	0.520	<0.00172	40	19-129	36	30	

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2770815 - SW846 3541

MSD (1206047931 SD)

Source: E5C0620-03

Prepared: 03/26/2025 Analyzed: 03/27/2025

Dibenzo(a,h)anthracene	0.193	0.00520	mg/kg dry	0.520	<0.00172	37	11-134	39	30	
Pyrene	0.199	0.00520	"	0.520	<0.00172	38	12-139	34	30	
Fluoranthene	0.198	0.00520	"	0.520	<0.00172	38	14-136	34	30	
Naphthalene	0.139	0.00520	"	0.520	<0.00172	27	16-126	58	30	
Indeno(1,2,3-cd)pyrene	0.187	0.00520	"	0.520	<0.00172	36	13-134	40	30	
Fluorene	0.185	0.00520	"	0.520	<0.00172	36	16-134	36	30	
Surrogate: 5-alpha-Androstane	0.113		"	0.260	0.142	44	22-135			

Batch 2770832 - SW846 3541

BLANK (1206047967-BLK)

Prepared: 03/26/2025 Analyzed: 03/26/2025

Benzo(a)anthracene	ND	0.00330	mg/kg				-			U
Benzo(a)pyrene	ND	0.00330	"				-			U
Benzo(b)fluoranthene	ND	0.00330	"				-			U
Dibenzo(a,h)anthracene	ND	0.00330	"				-			U
Anthracene	ND	0.00330	"				-			U
Pyrene	ND	0.00330	"				-			U
Chrysene	ND	0.00330	"				-			U
Fluorene	ND	0.00330	"				-			U
Indeno(1,2,3-cd)pyrene	ND	0.00330	"				-			U
Naphthalene	ND	0.00330	"				-			U
Benzo(k)fluoranthene	ND	0.00330	"				-			U
Fluoranthene	ND	0.00330	"				-			U
2-Methylnaphthalene	ND	0.00330	"				-			U
1-Methylnaphthalene	ND	0.00330	"				-			U
Acenaphthene	ND	0.00330	"				-			U
Surrogate: 5-alpha-Androstane	0.160		"	0.165		97	22-135			

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2770832 - SW846 3541

LCS (1206047968-BKS)

Prepared: 03/26/2025 Analyzed: 03/26/2025

Benzo(b)fluoranthene	0.244	0.00329	mg/kg	0.329		74	39-123			
Benzo(k)fluoranthene	0.230	0.00329	"	0.329		70	40-122			
Chrysene	0.242	0.00329	"	0.329		74	42-117			
Dibenzo(a,h)anthracene	0.256	0.00329	"	0.329		78	38-132			
Benzo(a)pyrene	0.257	0.00329	"	0.329		78	39-127			
Fluorene	0.244	0.00329	"	0.329		74	37-115			
Acenaphthene	0.230	0.00329	"	0.329		70	41-112			
Indeno(1,2,3-cd)pyrene	0.251	0.00329	"	0.329		76	38-133			
Naphthalene	0.243	0.00329	"	0.329		74	38-109			
Pyrene	0.252	0.00329	"	0.329		77	38-117			
Fluoranthene	0.257	0.00329	"	0.329		78	39-119			
2-Methylnaphthalene	0.249	0.00329	"	0.329		76	39-110			
1-Methylnaphthalene	0.242	0.00329	"	0.329		74	39-109			
Anthracene	0.265	0.00329	"	0.329		81	41-117			
Benzo(a)anthracene	0.255	0.00329	"	0.329		78	42-120			
Surrogate: 5-alpha-Androstane	0.142		"	0.164		86	22-135			

LCS D (1206047969-BKSD)

Prepared: 03/26/2025 Analyzed: 03/26/2025

Dibenzo(a,h)anthracene	0.281	0.00332	mg/kg	0.332		85	38-132	9	30	
Benzo(a)anthracene	0.280	0.00332	"	0.332		84	42-120	10	30	
Benzo(a)pyrene	0.284	0.00332	"	0.332		85	39-127	10	30	
Benzo(b)fluoranthene	0.264	0.00332	"	0.332		79	39-123	8	30	
Pyrene	0.278	0.00332	"	0.332		84	38-117	10	30	
Naphthalene	0.264	0.00332	"	0.332		79	38-109	8	30	
Fluorene	0.270	0.00332	"	0.332		81	37-115	10	30	
Benzo(k)fluoranthene	0.257	0.00332	"	0.332		77	40-122	11	30	

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2770832 - SW846 3541

LCSD (1206047969-BKSD)

Prepared: 03/26/2025 Analyzed: 03/26/2025

Chrysene	0.266	0.00332	mg/kg	0.332		80	42-117	10	30	
Anthracene	0.292	0.00332	"	0.332		88	41-117	10	30	
Indeno(1,2,3-cd)pyrene	0.276	0.00332	"	0.332		83	38-133	9	30	
Fluoranthene	0.284	0.00332	"	0.332		85	39-119	10	30	
2-Methylnaphthalene	0.275	0.00332	"	0.332		83	39-110	10	30	
1-Methylnaphthalene	0.266	0.00332	"	0.332		80	39-109	10	30	
Acenaphthene	0.255	0.00332	"	0.332		77	41-112	10	30	

Surrogate: 5-alpha-Androstane

0.156

"

0.166

94

22-135

MS (1206047970 S)

Source: E5C0620-01

Prepared: 03/26/2025 Analyzed: 03/26/2025

Benzo(a)anthracene	0.275	0.00510	mg/kg dry	0.510	<0.00168	54	20-132			
Benzo(a)pyrene	0.247	0.00510	"	0.510	<0.00168	48	16-133			
Benzo(b)fluoranthene	0.238	0.00510	"	0.510	<0.00168	47	14-136			
Benzo(k)fluoranthene	0.214	0.00510	"	0.510	<0.00168	42	18-138			
Anthracene	0.274	0.00510	"	0.510	<0.00168	54	18-136			
Fluorene	0.267	0.00510	"	0.510	<0.00168	52	16-134			
Chrysene	0.235	0.00510	"	0.510	<0.00168	46	19-129			
Indeno(1,2,3-cd)pyrene	0.218	0.00510	"	0.510	<0.00168	43	13-134			
Naphthalene	0.215	0.00510	"	0.510	<0.00168	42	16-126			
Pyrene	0.351	0.00510	"	0.510	<0.00168	69	12-139			
Dibenzo(a,h)anthracene	0.211	0.00510	"	0.510	<0.00168	41	11-134			
2-Methylnaphthalene	0.238	0.00510	"	0.510	<0.00168	47	15-132			
1-Methylnaphthalene	0.232	0.00510	"	0.510	<0.00168	45	15-129			
Acenaphthene	0.234	0.00510	"	0.510	<0.00168	46	17-129			
Fluoranthene	0.359	0.00510	"	0.510	<0.00168	70	14-136			

Surrogate: 5-alpha-Androstane

0.163

"

0.255

0.110 64

22-135

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2770832 - SW846 3541

MSD (1206047971 SD)

Source: E5C0620-01

Prepared: 03/26/2025 Analyzed: 03/26/2025

Fluoranthene	0.287	0.00508	mg/kg dry	0.508	<0.00168	56	14-136	22	30	
Benzo(a)anthracene	0.297	0.00508	"	0.508	<0.00168	59	20-132	8	30	
Benzo(a)pyrene	0.292	0.00508	"	0.508	<0.00168	57	16-133	17	30	
Benzo(b)fluoranthene	0.270	0.00508	"	0.508	<0.00168	53	14-136	12	30	
Benzo(k)fluoranthene	0.255	0.00508	"	0.508	<0.00168	50	18-138	18	30	
Dibenzo(a,h)anthracene	0.275	0.00508	"	0.508	<0.00168	54	11-134	26	30	
2-Methylnaphthalene	0.215	0.00508	"	0.508	<0.00168	42	15-132	10	30	
Fluorene	0.242	0.00508	"	0.508	<0.00168	48	16-134	10	30	
Indeno(1,2,3-cd)pyrene	0.274	0.00508	"	0.508	<0.00168	54	13-134	23	30	
Naphthalene	0.194	0.00508	"	0.508	<0.00168	38	16-126	10	30	
Chrysene	0.274	0.00508	"	0.508	<0.00168	54	19-129	15	30	
Anthracene	0.292	0.00508	"	0.508	<0.00168	57	18-136	7	30	
1-Methylnaphthalene	0.210	0.00508	"	0.508	<0.00168	41	15-129	10	30	
Pyrene	0.286	0.00508	"	0.508	<0.00168	56	12-139	20	30	
Acenaphthene	0.212	0.00508	"	0.508	<0.00168	42	17-129	10	30	
Surrogate: 5-alpha-Androstane	0.187		"	0.254	0.110	74	22-135			

Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
 5 Tamarade Dr.
 Littleton CO 80127

Peter Kondrat
 Project Number: [none]
 Project: Jackson #4L4

Total Metals 7196A - Quality Control
GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2768808 - SW846 3060A

BLANK (1206043768-BLK)

Prepared: 03/26/2025 Analyzed: 03/28/2025

Hexavalent Chromium	ND	0.379	mg/kg				-			U
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LCS (1206043769-BKS)

Prepared: 03/26/2025 Analyzed: 03/28/2025

Hexavalent Chromium	3.20	0.322	mg/kg	3.22		99.2	80-120			
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DUP (1206043770 D)

Source: E5C0620-01

Prepared: 03/26/2025 Analyzed: 03/28/2025

Hexavalent Chromium	ND	0.429	mg/kg dry		<0.171		0-50	N/A	50	U
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MS (1206043771 S)

Source: E5C0620-01

Prepared: 03/26/2025 Analyzed: 03/28/2025

Hexavalent Chromium	2.65	0.429	mg/kg dry	4.29	<0.172	60.5	75-125			
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DUP (1206043772 D)

Source: E5C0620-02

Prepared: 03/26/2025 Analyzed: 03/28/2025

Hexavalent Chromium	ND	0.430	mg/kg dry		<0.172		0-50	N/A	50	U
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MS (1206043773 S)

Source: E5C0620-02

Prepared: 03/26/2025 Analyzed: 03/28/2025

Hexavalent Chromium	3.85	0.430	mg/kg dry	4.30	<0.172	89.1	75-125			
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ILCS (1206043774-ILCS)

Prepared: 03/26/2025 Analyzed: 03/28/2025

Hexavalent Chromium	4.69	0.228	mg/kg	4.64		101	80-120			
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Origins Laboratory

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Jen Pellegrini For Jordan A. Bynon, Project Manager



Blue Star Helium
5 Tamarade Dr.
Littleton CO 80127

Peter Kondrat
Project Number: [none]
Project: Jackson #4L4

Notes and Definitions

- Ua Sample is Non-Detect.
 - U Result not detected above the detection limit
 - 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 Greater than the detection limit but less than the reporting limit
 - B Blank contamination
 - 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

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Jen Pellegrini For Jordan A. Bynon, Project Manager