



December 27, 2023

KP Kauffman Co. Inc.

John Peterson

1700 Lincoln St #4550

Denver

CO

80203

Project Name - Grant 2 Flowline

Project Number - [none]

Attached are your analytical results for Grant 2 Flowline received by Origins Laboratory, Inc. December 05, 2023. This project is associated with Origins project number Y312127-01.

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

KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH-1	Y312127-01	Soil	December 5, 2023 10:03	12/05/2023 16:00
SW-1	Y312127-02	Soil	December 5, 2023 10:05	12/05/2023 16:00
SW-2	Y312127-03	Soil	December 5, 2023 10:07	12/05/2023 16:00
SW-3	Y312127-04	Soil	December 5, 2023 10:09	12/05/2023 16:00
SW-4	Y312127-05	Soil	December 5, 2023 10:11	12/05/2023 16:00

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

www.originslaboratory.com

4312127

page of

ORIGINS
LABORATORY, INC

Client: KP Kauffman Project Manager: John Peterson
Address: 1700 Lincoln St. Suite 4550 Project Name: Grant 2 Flowline
Denver CO Project Number: _____
Telephone Number: _____ Samples Collected By: Cullen Chew
Email Address: j.peterson@kpk.com

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

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa Canister #		
BH-1	12/5/23	1003	3									1
SW-1		1005	3									2
SW-2		1007	3									3
SW-3		1009	3									4
SW-4		1011	3									5
												6
												7
												8
												9
												10
Relinquished By: <u>Cullen Chew</u>	Date: <u>12/5/2023</u>	Time: <u>1600</u>	Received By: <u>EH S</u>	Date: <u>12/5/23</u>	Time: <u>2000</u>	Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard						

Temp Received- 5.8 Date Results Needed

Origins Laboratory, Inc.

Bynon

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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 4312127

Client: KPK

Client Project ID: Grant 2 FC

Checklist Completed by: EH5

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

Date/time completed: 12/5/23

Airbill #: N/A

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

Cooler Number/Temperature: 1 5.8 °C °C °C (Describe) °C

Thermometer ID: 7004

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

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

Reviewed by (Project Manager) [Signature]

Date/Time Reviewed 12/7/23

Origins Laboratory, Inc.

[Signature]

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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

BH-1

12/5/2023 10:03:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-01 (Soil)

Boron (DTPA Sorbitol)

Boron	0.112	0.0997	mg/L	1	B3L0802	12/08/2023	12/11/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3L0624	12/06/2023	12/09/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	106 %	50-150			"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3L0620	12/06/2023	12/07/2023	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	94.3 %	70-130			"	"	"
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Origins Laboratory, Inc.



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1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

BH-1

12/5/2023 10:03:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	89.7 %	70-130	B3L06 20	12/06/2023	12/07/2023
Surrogate: 4-Bromofluorobenzene	113 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	1.54	0.499	meq/L	10	[CALC]	12/08/2023	12/12/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.84	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3L0622	12/06/2023	12/10/2023	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

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John Peterson
Project Number: [none]
Project: Grant 2 Flowline

BH-1

12/5/2023 10:03:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-01 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B3L0622	12/06/2023	12/10/2023	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	106 %	60-130	"	"	"
Surrogate: Anthracene-d10	95.5 %	60-130	"	"	"
Surrogate: Pyrene-d10	94.0 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	101 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.23	pH Units	1	B3L0811	12/08/2023	12/09/2023
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SAR by 20B Saturated Paste

SAR	1.85	0.0100	SAR	1	B3L0806	12/08/2023	12/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.324	0.00500	mmhos/cm	1	B3L0811	12/08/2023	12/09/2023
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Total Metals by 6020B

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1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

BH-1

12/5/2023 10:03:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.

Y312127-01 (Soil)

Total Metals by 6020B

Arsenic	1.54	0.0855	0.25	mg/Kg	5	L721431	12/08/2023	12/24/2023	
Barium	50.4	0.042	0.25	"	"	"	"	"	
Cadmium	0.0633	0.026	0.25	"	"	"	"	"	J
Copper	6.33	0.0805	0.25	"	"	"	"	"	
Lead	5.08	0.031	0.25	"	"	"	"	"	
Nickel	6.31	0.0635	0.25	"	"	"	"	"	
Selenium	0.505	0.103	0.25	"	"	"	"	"	
Silver	0.0173	0.0067	0.25	"	"	"	"	"	J
Zinc	21.5	0.535	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L721734	12/05/2023	12/12/2023	
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1700 Lincoln St #4550
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John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-1

12/5/2023 10:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.143	0.0988	mg/L	1	B3L0802	12/08/2023	12/11/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3L0624	12/06/2023	12/09/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	105 %	50-150			"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3L0620	12/06/2023	12/07/2023	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	112 %	70-130			"	"	"
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Origins Laboratory, Inc.



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1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-1

12/5/2023 10:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	102 %	70-130	B3L06 20	12/06/2023	12/07/2023
Surrogate: 4-Bromofluorobenzene	110 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	1.24	0.499	meq/L	10	[CALC]	12/08/2023	12/12/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	0.927	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3L0622	12/06/2023	12/10/2023	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-1

12/5/2023 10:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-02 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B3L0622	12/06/2023	12/10/2023	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	103 %	60-130	"	"	"
Surrogate: Anthracene-d10	97.2 %	60-130	"	"	"
Surrogate: Pyrene-d10	96.7 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	100 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.25	pH Units	1	B3L0811	12/08/2023	12/09/2023
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SAR by 20B Saturated Paste

SAR	0.955	0.0100	SAR	1	B3L0806	12/08/2023	12/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.644	0.00500	mmhos/cm	1	B3L0811	12/08/2023	12/09/2023
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Total Metals by 6020B

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-1

12/5/2023 10:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC. Y312127-02 (Soil)

Total Metals by 6020B

Arsenic	1.89	0.0855	0.25	mg/Kg	5	L721431	12/08/2023	12/24/2023	
Barium	64.7	0.042	0.25	"	"	"	"	"	
Cadmium	0.084	0.026	0.25	"	"	"	"	"	J
Copper	7.27	0.0805	0.25	"	"	"	"	"	
Lead	4.96	0.031	0.25	"	"	"	"	"	
Nickel	8.04	0.0635	0.25	"	"	"	"	"	
Selenium	0.69	0.103	0.25	"	"	"	"	"	
Silver	0.332	0.0067	0.25	"	"	"	"	"	
Zinc	26	0.535	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L721734	12/05/2023	12/12/2023	
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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-2

12/5/2023 10:07:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-03 (Soil)

Boron (DTPA Sorbitol)

Boron	0.165	0.0997	mg/L	1	B3L0802	12/08/2023	12/11/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3L0624	12/06/2023	12/09/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	105 %	50-150			"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3L0620	12/06/2023	12/07/2023	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"
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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-2

12/5/2023 10:07:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-03 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.0 %	70-130	B3L06 20	12/06/2023	12/07/2023
Surrogate: 4-Bromofluorobenzene	112 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	0.999	0.499	meq/L	10	[CALC]	12/08/2023	12/12/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.27	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3L0622	12/06/2023	12/10/2023	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-2

12/5/2023 10:07:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-03 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B3L0622	12/06/2023	12/10/2023	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	105 %	60-130	"	"	"
Surrogate: Anthracene-d10	96.2 %	60-130	"	"	"
Surrogate: Pyrene-d10	96.4 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	102 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.40	pH Units	1	B3L0811	12/08/2023	12/09/2023
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SAR by 20B Saturated Paste

SAR	1.47	0.0100	SAR	1	B3L0806	12/08/2023	12/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.304	0.00500	mmhos/cm	1	B3L0811	12/08/2023	12/09/2023
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Total Metals by 6020B

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-2

12/5/2023 10:07:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC. Y312127-03 (Soil)

Total Metals by 6020B

Arsenic	2.14	0.0855	0.25	mg/Kg	5	L721431	12/08/2023	12/24/2023	
Barium	55.5	0.042	0.25	"	"	"	"	"	
Cadmium	0.0967	0.026	0.25	"	"	"	"	"	J
Copper	7.01	0.0805	0.25	"	"	"	"	"	
Lead	4.65	0.031	0.25	"	"	"	"	"	
Nickel	8.17	0.0635	0.25	"	"	"	"	"	
Selenium	0.59	0.103	0.25	"	"	"	"	"	
Silver	0.0371	0.0067	0.25	"	"	"	"	"	J
Zinc	22.5	0.535	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L721734	12/05/2023	12/12/2023	
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Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-3

12/5/2023 10:09:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-04 (Soil)

Boron (DTPA Sorbitol)

Boron	0.227	0.100	mg/L	1	B3L0802	12/08/2023	12/11/2023
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	818	25.0	mg/kg	1	B3L0624	12/06/2023	12/09/2023
Residual Range Organics (C28-C40)	1860	100	"	"	"	"	"

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

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3L0620	12/06/2023	12/07/2023	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	0.532	0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	126 %	70-130	"	"	"
Surrogate: Toluene-d8	109 %	70-130	"	"	"

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-3

12/5/2023 10:09:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-04 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	88.9 %	70-130	B3L06 20	12/06/2023	12/07/2023
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Metals by Saturated Paste by EPA 6010

Calcium	2.30	0.499	meq/L	10	[CALC]	12/08/2023	12/12/2023
Magnesium	1.02	0.823	"	"	"	"	"
Sodium	0.926	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	0.005	0.002	mg/kg	1	B3L0622	12/06/2023	12/11/2023	
2-Methylnaphthalene	0.004	0.002	"	"	"	"	"	
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-3

12/5/2023 10:09:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-04 (Soil)

PAH by EPA 8270E

Indeno (1,2,3-cd) pyrene	ND	0.020	mg/kg	1	B3L0622	12/06/2023	12/11/2023	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	106 %	60-130	"	"	"
Surrogate: Anthracene-d10	99.1 %	60-130	"	"	"
Surrogate: Pyrene-d10	86.4 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	98.6 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.21	pH Units	1	B3L0811	12/08/2023	12/09/2023
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SAR by 20B Saturated Paste

SAR	0.718	0.0100	SAR	1	B3L0806	12/08/2023	12/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.425	0.00500	mmhos/cm	1	B3L0811	12/08/2023	12/09/2023
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Total Metals by 6020B

Arsenic	2.7	0.0855	0.25	mg/Kg	5	L721431	12/08/2023	12/24/2023
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Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-3

12/5/2023 10:09:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC.

Y312127-04 (Soil)

Total Metals by 6020B

Barium	74.7	0.042	0.25	mg/Kg	5	L721431	12/08/2023	12/24/2023	
Cadmium	0.135	0.026	0.25	"	"	"	"	"	J
Copper	9.93	0.0805	0.25	"	"	"	"	"	
Lead	12.9	0.031	0.25	"	"	"	"	"	
Nickel	10.6	0.0635	0.25	"	"	"	"	"	
Selenium	0.759	0.103	0.25	"	"	"	"	"	
Silver	0.0486	0.0067	0.25	"	"	"	"	"	J
Zinc	36.3	0.535	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L721734	12/05/2023	12/12/2023	
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Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-4

12/5/2023 10:11:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-05 (Soil)

Boron (DTPA Sorbitol)

Boron	0.204	0.101	mg/L	1	B3L0803	12/08/2023	12/11/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3L0624	12/06/2023	12/11/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	79.8 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3L0620	12/06/2023	12/07/2023	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	118 %	70-130	"	"	"
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Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-4

12/5/2023 10:11:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-05 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	94.6 %	70-130	B3L06 20	12/06/2023	12/07/2023
Surrogate: 4-Bromofluorobenzene	102 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	0.878	0.499	meq/L	10	[CALC]	12/08/2023	12/12/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.13	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3L0622	12/06/2023	12/10/2023	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-4

12/5/2023 10:11:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y312127-05 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B3L0622	12/06/2023	12/10/2023	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	101 %	60-130	"	"	"
Surrogate: Anthracene-d10	97.2 %	60-130	"	"	"
Surrogate: Pyrene-d10	98.2 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	98.5 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.39	pH Units	1	B3L0811	12/08/2023	12/09/2023
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SAR by 20B Saturated Paste

SAR	1.39	0.0100	SAR	1	B3L0806	12/08/2023	12/12/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.285	0.00500	mmhos/cm	1	B3L0811	12/08/2023	12/09/2023
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Total Metals by 6020B

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

SW-4

12/5/2023 10:11:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Waypoint Analytical, LLC. Y312127-05 (Soil)

Total Metals by 6020B

Arsenic	1.94	0.0855	0.25	mg/Kg	5	L721431	12/08/2023	12/24/2023	
Barium	53.1	0.042	0.25	"	"	"	"	"	
Cadmium	0.0741	0.026	0.25	"	"	"	"	"	J
Copper	7.59	0.0805	0.25	"	"	"	"	"	
Lead	5.4	0.031	0.25	"	"	"	"	"	
Nickel	8.58	0.0635	0.25	"	"	"	"	"	
Selenium	0.505	0.103	0.25	"	"	"	"	"	
Silver	0.0394	0.0067	0.25	"	"	"	"	"	J
Zinc	25.4	0.535	2.5	"	"	"	"	"	

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L721734	12/05/2023	12/12/2023	
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Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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
Batch B3L0620 - EPA 5030 (soil)										
Blank (B3L0620-BLK1)					Prepared: 12/06/2023 Analyzed: 12/06/2023					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.3	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		84.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		90.4	70-130			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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
Batch B3L0620 - EPA 5030 (soil)										
LCS (B3L0620-BS1)					Prepared: 12/06/2023 Analyzed: 12/06/2023					
1,2,4-Trimethylbenzene	0.100	0.00200	mg/kg	0.100		100	70-130			
1,3,5-Trimethylbenzene	0.110	0.00200	"	0.100		110	70-130			
Benzene	0.101	0.00200	"	0.100		101	70-130			
Ethylbenzene	0.0937	0.00200	"	0.100		93.7	70-130			
Naphthalene	0.104	0.00380	"	0.100		104	70-130			
Toluene	0.113	0.00200	"	0.100		113	70-130			
o-Xylene	0.0933	0.00200	"	0.100		93.3	70-130			
m,p-Xylene	0.195	0.00400	"	0.200		97.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		103	70-130			
Surrogate: Toluene-d8	0.14		"	0.125		114	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		91.5	70-130			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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
Batch B3L0620 - EPA 5030 (soil)										
Matrix Spike (B3L0620-MS1)		Source: Y312030-01			Prepared: 12/06/2023 Analyzed: 12/06/2023					
1,2,4-Trimethylbenzene	0.105	0.00200	mg/kg	0.100	ND	105	70-130			
1,3,5-Trimethylbenzene	0.114	0.00200	"	0.100	ND	114	70-130			
Benzene	0.110	0.00200	"	0.100	ND	110	70-130			
Ethylbenzene	0.0905	0.00200	"	0.100	ND	90.5	70-130			
Naphthalene	0.122	0.00380	"	0.100	0.00128	121	70-130			
Toluene	0.116	0.00200	"	0.100	ND	116	70-130			
o-Xylene	0.113	0.00200	"	0.100	ND	113	70-130			
m,p-Xylene	0.199	0.00400	"	0.200	ND	99.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.15		"	0.125		119	70-130			
Surrogate: Toluene-d8	0.15		"	0.125		117	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		112	70-130			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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
Batch B3L0620 - EPA 5030 (soil)										
Matrix Spike Dup (B3L0620-MSD1)		Source: Y312030-01			Prepared: 12/06/2023 Analyzed: 12/06/2023					
1,2,4-Trimethylbenzene	0.110	0.00200	mg/kg	0.100	ND	110	70-130	5.21	20	
1,3,5-Trimethylbenzene	0.108	0.00200	"	0.100	ND	108	70-130	5.73	20	
Benzene	0.105	0.00200	"	0.100	ND	105	70-130	4.52	20	
Ethylbenzene	0.0841	0.00200	"	0.100	ND	84.1	70-130	7.29	20	
Naphthalene	0.102	0.00380	"	0.100	0.00128	100	70-130	18.5	20	
Toluene	0.118	0.00200	"	0.100	ND	118	70-130	1.84	20	
o-Xylene	0.0960	0.00200	"	0.100	ND	96.0	70-130	16.6	20	
m,p-Xylene	0.176	0.00400	"	0.200	ND	88.0	70-130	12.5	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.16		"	0.125		128	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		104	70-130			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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
Batch B3L0624 - EPA 3550B										
Blank (B3L0624-BLK1)					Prepared: 12/06/2023 Analyzed: 12/08/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	29		"	24.9		117	50-150			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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 B3L0624 - EPA 3550B

LCS (B3L0624-BS1)

Prepared: 12/06/2023 Analyzed: 12/08/2023

Diesel (C10-C28)	899	50.0	mg/kg	1000		89.9	70-130			
Residual Range Organics (C28-C40)	892	200	"	1000		89.2	70-130			
Surrogate: o-Terphenyl	53		"	49.8		106	50-150			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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 B3L0624 - EPA 3550B

Matrix Spike (B3L0624-MS1)		Source: Y312072-01			Prepared: 12/06/2023 Analyzed: 12/08/2023					
Diesel (C10-C28)	934	50.0	mg/kg	1000	ND	93.4	70-130			
Residual Range Organics (C28-C40)	922	200	"	1000	ND	92.2	70-130			
Surrogate: o-Terphenyl	50		"	49.8		101	50-150			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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
Batch B3L0624 - EPA 3550B										
Matrix Spike Dup (B3L0624-MSD1)			Source: Y312072-01			Prepared: 12/06/2023 Analyzed: 12/08/2023				
Diesel (C10-C28)	930	50.0	mg/kg	1000	ND	93.0	70-130	0.386	35	
Residual Range Organics (C28-C40)	916	200	"	1000	ND	91.6	70-130	0.604	35	
Surrogate: o-Terphenyl	48		"	49.8		96.6	50-150			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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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EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B3L0622 - EPA 3580

Blank (B3L0622-BLK1)

Prepared: 12/06/2023 Analyzed: 12/09/2023

1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	210		ug/kg	200		103	60-130			
Surrogate: Anthracene-d10	190		"	200		94.8	60-130			
Surrogate: Pyrene-d10	200		"	200		99.8	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B3L0622 - EPA 3580

LCS (B3L0622-BS1)

Prepared: 12/06/2023 Analyzed: 12/09/2023

1-Methylnaphthalene	0.212	0.002	mg/kg	0.200		106	70-130
2-Methylnaphthalene	0.207	0.002	"	0.200		103	70-130
Acenaphthene	0.208	0.020	"	0.200		104	70-130
Anthracene	0.218	0.020	"	0.200		109	70-130
Benzo (a) anthracene	0.189	0.005	"	0.200		94.4	70-130
Benzo (a) pyrene	0.217	0.020	"	0.200		108	70-130
Benzo (b) fluoranthene	0.210	0.020	"	0.200		105	70-130
Benzo (g,h,i) perylene	0.220	0.020	"	0.200		110	70-130
Benzo (k) fluoranthene	0.226	0.020	"	0.200		113	70-130
Chrysene	0.212	0.020	"	0.200		106	70-130
Dibenz (a,h) anthracene	0.221	0.020	"	0.200		111	70-130
Fluoranthene	0.208	0.020	"	0.200		104	70-130
Fluorene	0.214	0.020	"	0.200		107	70-130
Indeno (1,2,3-cd) pyrene	0.224	0.020	"	0.200		112	70-130
Naphthalene	0.211	0.002	"	0.200		105	70-130
Phenanthrene	0.205	0.020	"	0.200		103	70-130
Pyrene	0.201	0.020	"	0.200		100	70-130

Surrogate: Fluorene-d10	210		ug/kg	200		103	60-130
Surrogate: Anthracene-d10	190		"	200		95.4	60-130
Surrogate: Pyrene-d10	200		"	200		97.8	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130

Matrix Spike (B3L0622-MS1)

Source: Y312006-01

Prepared: 12/06/2023 Analyzed: 12/09/2023

1-Methylnaphthalene	0.214	0.002	mg/kg	0.200	0.0005	107	70-130
2-Methylnaphthalene	0.212	0.002	"	0.200	ND	106	70-130
Acenaphthene	0.212	0.020	"	0.200	ND	106	70-130
Anthracene	0.226	0.020	"	0.200	ND	113	70-130

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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

EPA 8270E (SW846) - Semivolatile Organic Compounds - 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 B3L0622 - EPA 3580

Matrix Spike (B3L0622-MS1)		Source: Y312006-01			Prepared: 12/06/2023 Analyzed: 12/09/2023					
Benzo (a) anthracene	0.228	0.005	mg/kg	0.200	ND	114	70-130			
Benzo (a) pyrene	0.221	0.020	"	0.200	ND	111	70-130			
Benzo (b) fluoranthene	0.212	0.020	"	0.200	ND	106	70-130			
Benzo (g,h,i) perylene	0.231	0.020	"	0.200	ND	115	70-130			
Benzo (k) fluoranthene	0.224	0.020	"	0.200	ND	112	70-130			
Chrysene	0.212	0.020	"	0.200	ND	106	70-130			
Dibenz (a,h) anthracene	0.230	0.020	"	0.200	ND	115	70-130			
Fluoranthene	0.215	0.020	"	0.200	0.002	107	70-130			
Fluorene	0.225	0.020	"	0.200	ND	112	70-130			
Indeno (1,2,3-cd) pyrene	0.226	0.020	"	0.200	ND	113	70-130			
Naphthalene	0.213	0.002	"	0.200	ND	107	70-130			
Phenanthrene	0.213	0.020	"	0.200	ND	106	70-130			
Pyrene	0.202	0.020	"	0.200	ND	101	70-130			
Surrogate: Fluorene-d10	210		ug/kg	200		103	60-130			
Surrogate: Anthracene-d10	190		"	200		97.3	60-130			
Surrogate: Pyrene-d10	190		"	200		94.2	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			

Matrix Spike Dup (B3L0622-MSD1)		Source: Y312006-01			Prepared: 12/06/2023 Analyzed: 12/09/2023					
1-Methylnaphthalene	0.212	0.002	mg/kg	0.200	0.0005	106	70-130	0.805	20	
2-Methylnaphthalene	0.208	0.002	"	0.200	ND	104	70-130	1.61	20	
Acenaphthene	0.207	0.020	"	0.200	ND	104	70-130	2.01	20	
Anthracene	0.222	0.020	"	0.200	ND	111	70-130	1.90	20	
Benzo (a) anthracene	0.197	0.005	"	0.200	ND	98.7	70-130	14.5	20	
Benzo (a) pyrene	0.216	0.020	"	0.200	ND	108	70-130	2.59	20	
Benzo (b) fluoranthene	0.211	0.020	"	0.200	ND	106	70-130	0.165	20	
Benzo (g,h,i) perylene	0.219	0.020	"	0.200	ND	110	70-130	5.04	20	

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3L0622 - EPA 3580										
Matrix Spike Dup (B3L0622-MSD1)			Source: Y312006-01		Prepared: 12/06/2023 Analyzed: 12/09/2023					
Benzo (k) fluoranthene	0.175	0.020	mg/kg	0.200	ND	87.7	70-130	24.1	20	QR-02
Chrysene	0.213	0.020	"	0.200	ND	107	70-130	0.707	20	
Dibenz (a,h) anthracene	0.226	0.020	"	0.200	ND	113	70-130	2.09	20	
Fluoranthene	0.213	0.020	"	0.200	0.002	106	70-130	1.20	20	
Fluorene	0.213	0.020	"	0.200	ND	107	70-130	5.36	20	
Indeno (1,2,3-cd) pyrene	0.230	0.020	"	0.200	ND	115	70-130	1.54	20	
Naphthalene	0.209	0.002	"	0.200	ND	104	70-130	1.95	20	
Phenanthrene	0.205	0.020	"	0.200	ND	102	70-130	3.79	20	
Pyrene	0.198	0.020	"	0.200	ND	99.2	70-130	1.64	20	
Surrogate: Fluorene-d10	210		ug/kg	200		105	60-130			
Surrogate: Anthracene-d10	190		"	200		97.0	60-130			
Surrogate: Pyrene-d10	190		"	200		94.3	60-130			
Surrogate: Benzo (a) pyrene-d12	210		"	200		104	60-130			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

Classical Chemistry Parameters - 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 B3L0802 - DTPA Sorbitol Preparation

Blank (B3L0802-BLK1)

Prepared: 12/08/2023 Analyzed: 12/11/2023

Boron ND 0.100 mg/L

Duplicate (B3L0802-DUP1)

Source: Y312120-01

Prepared: 12/08/2023 Analyzed: 12/11/2023

Boron 2.78 0.101 mg/L 2.76 0.910 50

Batch B3L0803 - DTPA Sorbitol Preparation

Blank (B3L0803-BLK1)

Prepared: 12/08/2023 Analyzed: 12/11/2023

Boron ND 0.100 mg/L

Duplicate (B3L0803-DUP1)

Source: Y312127-05

Prepared: 12/08/2023 Analyzed: 12/11/2023

Boron 0.227 0.0987 mg/L 0.204 10.5 50

Batch B3L0806 - Saturated Paste Metals

Blank (B3L0806-BLK1)

Prepared: 12/08/2023 Analyzed: 12/12/2023

SAR ND 0.0100 SAR

Calcium PPM ND 10.0 mg/L

Magnesium PPM ND 10.0 "

Sodium PPM ND 10.0 "

Duplicate (B3L0806-DUP1)

Source: Y312098-01

Prepared: 12/08/2023 Analyzed: 12/12/2023

SAR ND 0.0100 SAR 0.211 200

Calcium PPM 28.2 10.0 mg/L 24.2 15.0 50

Magnesium PPM 6.32 10.0 " 6.03 4.70 50

Sodium PPM 4.88 10.0 " 4.47 8.77 50

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3L0811 - Saturated Paste pH/EC										
Blank (B3L0811-BLK1)					Prepared: 12/08/2023 Analyzed: 12/09/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B3L0811-DUP1)					Source: Y312098-01 Prepared: 12/08/2023 Analyzed: 12/09/2023					
pH	8.27		pH Units		8.28			0.121	25	
Specific Conductance (EC)	0.297	0.00500	mmhos/cm		0.232			24.6	25	

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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 L721431 - 3050B

MSD (L 89037-MSD-L721431)			Source: 89037			Prepared: 12/08/2023 Analyzed: 12/24/2023				
Barium	95.2	0.25	mg/Kg	4.71	128	0	75-125	10.7	80	I*
Zinc	69	2.5	"	23.5	70.3	0	75-125	12.5	80	I*
Silver	0.441	0.25	"	0.471	0.0537	82	75-125	15	80	
Selenium	4.7	0.25	"	4.71	1.2	74	75-125	16.2	80	*
Nickel	14.4	0.25	"	2.35	18.4	0	75-125	12.3	80	I*
Lead	9.33	0.25	"	2.35	10.8	0	75-125	10.8	80	I*
Cadmium	0.664	0.25	"	0.471	0.333	70	75-125	10.6	80	*
Arsenic	5.36	0.25	"	2.35	4.88	20	75-125	13.2	80	*
Copper	14.7	0.25	"	2.35	18.2	0	75-125	10.3	80	I*
MS (L 89037-MS-L721431)			Source: 89037			Prepared: 12/08/2023 Analyzed: 12/24/2023				
Copper	16.3	0.25	mg/Kg	2.48	18.2	0	75-125			I*
Nickel	16.3	0.25	"	2.48	18.4	0	75-125			I*
Selenium	5.53	0.25	"	4.95	1.2	87	75-125			
Zinc	78.2	2.5	"	24.8	70.3	32	75-125			I*
Lead	10.4	0.25	"	2.48	10.8	0	75-125			I*
Barium	106	0.25	"	4.95	128	0	75-125			I*
Arsenic	6.12	0.25	"	2.48	4.88	50	75-125			*
Silver	0.513	0.25	"	0.495	0.0537	93	75-125			
Cadmium	0.739	0.25	"	0.495	0.333	82	75-125			
LCS (LCS-L721431)			Prepared: 12/08/2023 Analyzed: 12/24/2023							
Nickel	2.65	0.25	mg/Kg	2.5		106	80-120			
Zinc	25.3	2.5	"	25		101	80-120			
Selenium	5.09	0.25	"	5		102	80-120			
Lead	2.48	0.25	"	2.5		99	80-120			
Copper	2.66	0.25	"	2.5		106	80-120			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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 L721431 - 3050B

LCS (LCS-L721431)

Prepared: 12/08/2023 Analyzed: 12/24/2023

Barium	5.18	0.25	mg/Kg	5		104	80-120			
Arsenic	2.52	0.25	"	2.5		101	80-120			
Cadmium	0.507	0.25	"	0.5		101	80-120			
Silver	0.506	0.25	"	0.5		101	80-120			

LRB (LRB-L721431)

Prepared: 12/08/2023 Analyzed: 12/24/2023

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

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

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
Batch L721734 -										
DUP (L 89030-DUP)	Source: 89030				Prepared: Analyzed: 12/12/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg		89030	-		0	20	
MS (L 89030-MS)	Source: 89030				Prepared: Analyzed: 12/12/2023					
Chromium, Hexavalent	27.9	2.5	mg/Kg	39.8	89030	70	75-125			*
LCS (LCS)					Prepared: Analyzed: 12/12/2023					
Chromium, Hexavalent	7.04	0.5	mg/Kg	8		88	75-125			
LRB (LRB)					Prepared: Analyzed: 12/12/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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KP Kauffman Co. Inc.
1700 Lincoln St #4550
Denver CO 80203

John Peterson
Project Number: [none]
Project: Grant 2 Flowline

Notes and Definitions

U Sample is Non-Detect.

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

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.

Calculated results may use J-flag data (instead of reported "ND") as part of calculation to provide a more accurate result.

Origins Laboratory, Inc.



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