

TABLE 1
SOIL SAMPLE FIELD DATA SUMMARY TABLE
WCR 30 & 49 TRUCK RELEASE
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample Location	Date	Depth (ft. bgs)	PID Reading (ppm)	Visual Observation	Olfactory Observation	Latitude	Longitude	Submitted for Lab Analysis? (Y/N)
RELEASE AREA SAMPLES								
SS01@0.5'	9/13/2023	0.5	0.2	NS	NO	40.20299055	-104.6026265	Y
SS02@0.5'	9/13/2023	0.5	0.0	NS	NO	40.20309246	-104.6026307	Y
SS03@0.5'	9/13/2023	0.5	0.4	NS	NO	40.20317579	-104.6026258	Y
BACKGROUND SOIL SAMPLES								
Native-BG01@0.5'	9/13/2023	0.5	0.1	NS	NO	40.20327	-104.602725	Y
Native-BG02@0.5'	9/13/2023	0.5	0.1	NS	NO	40.202921	-104.602725	Y
Native-BG03@0.5'	9/26/2023	0.5	0.0	NS	NO	40.203441	-104.602636	Y
Native-BG04@0.5'	9/26/2023	0.5	0.0	NS	NO	40.203223	-104.602725	Y
Native-BG05@0.5'	9/26/2023	0.5	0.0	NS	NO	40.203054	-104.602725	Y
Native-BG06@0.5'	9/26/2023	0.5	0.0	NS	NO	40.202849	-104.602725	Y

Notes:

ft. - feet	NS - No Staining
bgs - below ground surface	NO - No Odor
PID - Photoionization detector	NA - Not Analyzed/Not Applicable
ppm - parts per million	

TABLE 2-1
SOIL SAMPLE ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS AND TOTAL PETROLEUM HYDROCARBONS
WCR 30 & 49 TRUCK RELEASE
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	TPH-GRO* (mg/kg)	TPH-DRO* (mg/kg)	TPH-RRO* (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4- Trimethyl benzene (mg/kg)	1,3,5- Trimethyl benzene (mg/kg)	Naphthalene (mg/kg)
Groundwater Protection Values (GPV)			500	500	500	0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038
RELEASE AREA SAMPLES												
SS01@0.5'	9/13/2023	0.5	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
SS02@0.5'	9/13/2023	0.5	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002
SS03@0.5'	9/13/2023	0.5	<0.200	<25.0	<100	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002

TABLE 2-2
SOIL SAMPLE ANALYTICAL RESULTS
POLYCYCLIC AROMATIC HYDROCARBONS
WCR 30 & 49 TRUCK RELEASE
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	Acenaphthene (mg/Kg)	Anthracene (mg/Kg)	Benzo (a) anthracene (mg/Kg)	Benzo (b) fluoranthene (mg/Kg)	Benzo (k) fluoranthene (mg/Kg)	Benzo (a) pyrene (mg/Kg)	Chrysene (mg/Kg)	Dibenz (a,h) anthracene (mg/Kg)	Fluoranthene (mg/Kg)	Fluorene (mg/Kg)	Indeno (1,2,3-cd) pyrene (mg/Kg)	1-Methyl naphthalene (mg/Kg)	2-Methyl naphthalene (mg/Kg)	Pyrene (mg/Kg)
Groundwater Protection Values (GPV)			0.55	5.8	0.011	0.3	2.9	0.24	9	0.096	8.9	0.54	0.98	0.006	0.019	1.3
RELEASE AREA SAMPLES																
SS01@0.5'	9/13/2023	0.5	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020
SS02@0.5'	9/13/2023	0.5	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020
SS03@0.5'	9/13/2023	0.5	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002	<0.020

TABLE 2-3
SOIL SAMPLE ANALYTICAL RESULTS
SOIL SUITABILITY FOR RECLAMATION
WCR 30 & 49 TRUCK RELEASE
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	EC (mmhos/cm)	SAR	pH	Boron (mg/L)
Groundwater Protection Values (GPV)			4	6	6-8.3	2
RELEASE AREA SAMPLES						
SS01@0.5'	9/13/2023	0.5	0.252	0.337	8.32*	<0.0986
SS02@0.5'	9/13/2023	0.5	1.47	0.24	8.25	0.256
SS03@0.5'	9/13/2023	0.5	0.237	0.501	8.43*	0.382
BACKGROUND SAMPLES						
Native-BG01@0.5'	9/13/2023	0.5	2.94	0.200	8.28	1.17
Native-BG02@0.5'	9/13/2023	0.5	2.37	0.295	8.12	1.35
Native-BG03@0.5'	9/26/2023	0.5	NA	NA	NA	NA
Native-BG04@0.5'	9/26/2023	0.5	NA	NA	NA	NA
Native-BG05@0.5'	9/26/2023	0.5	NA	NA	NA	NA
Native-BG06@0.5'	9/26/2023	0.5	NA	NA	NA	NA

TABLE 2-4
SOIL SAMPLE ANALYTICAL RESULTS
METALS
WCR 30 & 49 TRUCK RELEASE
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Soil Sample ID	Date	Depth (ft. bgs)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Groundwater Protection Value (GPV)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
RELEASE AREA SAMPLES												
SS01@0.5'	9/13/2023	0.5	1.90*	73.3	<0.0946	<0.516	<9.46	<9.46	<9.46	0.0984	<0.0946	<94.6
SS02@0.5'	9/13/2023	0.5	1.28*	48.5	<0.0910	<0.5	<9.10	<9.10	<9.10	<0.0910	<0.0910	<91.0
SS03@0.5'	9/13/2023	0.5	1.49*	37.0	<0.0869	<0.519	<8.69	<8.69	<8.69	0.116	<0.0869	<86.9
BACKGROUND SAMPLES												
Native-BG01@0.5'	9/13/2023	0.5	1.31	60.1	0.0958	<0.515	<9.04	<9.04	<9.04	0.118	<0.0904	<90.4
Native-BG02@0.5'	9/13/2023	0.5	1.32	56.8	<0.0910	<0.5	<9.10	<9.10	<9.10	<0.0910	<0.0910	<91.0
Native-BG03@0.5'	9/26/2023	0.5	1.33	NA	NA	NA	NA	NA	NA	NA	NA	NA
Native-BG04@0.5'	9/26/2023	0.5	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA
Native-BG05@0.5'	9/26/2023	0.5	1.79	NA	NA	NA	NA	NA	NA	NA	NA	NA
Native-BG06@0.5'	9/26/2023	0.5	1.51	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 2-5
SOIL SAMPLE ANALYTICAL RESULTS
NOTES
WCR 30 & 49 TRUCK RELEASE
WELD COUNTY, COLORADO
KERR-MCGEE OIL AND GAS ONSHORE, LP

Notes:

GPV - Groundwater Protection Values (mg/kg)

TPH - Total Petroleum Hydrocarbons

GRO - Gasoline Range Organics

DRO - Diesel Range Organics

RRO - Residual Range Organics

*Allowable level for TPH is 500 mg/kg for combined GRO, DRO, ORO

*Exceeds Table 915-1 allowable level but within analytical variability of background

EC - Electrical Conductivity

SAR - Sodium Adsorption Ratio

mmhos/cm - millimhos per centimeter

<0.00200 - less than laboratory reporting limit

NA - Not Analyzed/Not Applicable

Bold - exceeds Table 915-1 allowable level and background

September 25, 2023

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Project Name - KMG - WCR 30 & 49 Truck Release Project Number - 09A1417549

Attached are your analytical results for KMG - WCR 30 & 49 Truck Release received by Origins Laboratory, Inc. September 13, 2023. This project is associated with Origins project number Y309261-01.

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



Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417549

Project: KMG - WCR 30 & 49 Truck Release

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@0.5'	Y309261-01	Soil	September 13, 2023 13:15	09/13/2023 15:42
SS02@0.5'	Y309261-02	Soil	September 13, 2023 13:20	09/13/2023 15:42
SS03@0.5'	Y309261-03	Soil	September 13, 2023 13:25	09/13/2023 15:42
BG01@0.5'	Y309261-04	Soil	September 13, 2023 13:30	09/13/2023 15:42
BG02@0.5'	Y309261-05	Soil	September 13, 2023 13:35	09/13/2023 15:42

Origins Laboratory, Inc.



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.

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417549

Project: KMG - WCR 30 & 49 Truck Release

ORIGINS
LABORATORY, INC

www.originslaboratory.com

4309261

page 1 of 1

Client: Ensolum

Address:

Project Manager: Jeremy Espinoza

Project Name: WCR 44 & 30 & 49 Truck Release

Project Number: 180

Telephone Number: 303.665.9943

Email Address: KMG Team

Samples Collected By: Kyle Mathre

Project Name: Revised per Jeremy's email on 9/14/23

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis			Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa	Other	915	PH, EC, SAR		915 Metals
550100.5'	9/13/23	1315	3	X					X						1
550200.5'		1320													2
550300.5'		1325													3
860100.5'		1330													4
860200.5'		1335													5
															6
															7
															8
															9
															10

Relinquished By:	Date:	Time:	Received By:	Date:	Time:	Turnaround Time:
Kyle Mathre	9/13/23	1542	[Signature]	9/16/23	1542	Same Day <input checked="" type="checkbox"/> 24 Hr <input type="checkbox"/>
						48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input type="checkbox"/>

Temp Received- 3 Date Results Needed

Origins Laboratory, Inc.

Bynon

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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 43092501 Client: Ensolum
Client Project ID: WCR 49 X 30 Sp.11

Checklist Completed by: EHS Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 9/13/23 Airbill #: N/A

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

Cooler Number/Temperature: 113 °C / _____ °C (Describe) _____ °C

Thermometer ID: 1004

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

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

Reviewed by (Project Manager) Jeremy Espinoza Date/Time Reviewed 9/13/23

Origins Laboratory, Inc.

J. Bynon

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.

Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS01@0.5'

9/13/2023 1:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-01 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0986	mg/L	1	B311411	09/14/2023	09/15/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B311333	09/13/2023	09/13/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	103 %	50-150			"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B311334	09/13/2023	09/13/2023	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	96.2 %	70-130			"	"	"
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Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS01@0.5'

9/13/2023 1:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	99.9 %	70-130	B3I133 4	09/13/2023	09/13/2023
Surrogate: 4-Bromofluorobenzene	95.5 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	0.860	0.499	meq/L	10	[CALC]	09/14/2023	09/15/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3I1331	09/13/2023	09/14/2023	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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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS01@0.5'

9/13/2023 1:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-01 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B3I1331	09/13/2023	09/14/2023	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	102 %	60-130	"	"	"
Surrogate: Anthracene-d10	95.7 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	106 %	60-130	"	"	"
Surrogate: Pyrene-d10	100 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.32	pH Units	1	B3I1419	09/14/2023	09/15/2023
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SAR by 20B Saturated Paste

SAR	0.337	0.0100	SAR	1	B3I1415	09/14/2023	09/15/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.252	0.00500	mmhos/cm	1	B3I1419	09/14/2023	09/15/2023
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Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS01@0.5'

9/13/2023 1:15:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.90	0.0946	mg/kg	10	B3I1403	09/14/2023	09/18/2023
Barium	73.3	9.46	"	"	"	"	"
Cadmium	ND	0.0946	"	"	"	"	"
Copper	ND	9.46	"	"	"	"	"
Lead	ND	9.46	"	"	"	"	"
Nickel	ND	9.46	"	"	"	"	"
Selenium	0.0984	0.0946	"	"	"	"	"
Silver	ND	0.0946	"	"	"	"	"
Zinc	ND	94.6	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.251	0.516	mg/Kg	1	L705007	09/13/2023	09/18/2023
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Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS02@0.5'

9/13/2023 1:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-02 (Soil)

Boron (DTPA Sorbitol)

Boron	0.256	0.101	mg/L	1	B3I1411	09/14/2023	09/15/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3I1333	09/13/2023	09/13/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	103 %	50-150	"	"	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3I1334	09/13/2023	09/13/2023	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	97.6 %	70-130	"	"	"	"	"
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Origins Laboratory, Inc.



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.

Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS02@0.5'

9/13/2023 1:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	101 %	70-130	B3I133 4	09/13/2023	09/13/2023
Surrogate: 4-Bromofluorobenzene	94.8 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	9.91	0.499	meq/L	10	[CALC]	09/14/2023	09/15/2023
Magnesium	3.37	0.823	"	"	"	"	"
Sodium	0.628	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3I1331	09/13/2023	09/14/2023	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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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS02@0.5'

9/13/2023 1:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-02 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B3I1331	09/13/2023	09/14/2023	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	104 %	60-130	"	"	"
Surrogate: Anthracene-d10	106 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	106 %	60-130	"	"	"
Surrogate: Pyrene-d10	99.0 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.25	pH Units	1	B3I1419	09/14/2023	09/15/2023
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SAR by 20B Saturated Paste

SAR	0.244	0.0100	SAR	1	B3I1415	09/14/2023	09/15/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.47	0.00500	mmhos/cm	1	B3I1419	09/14/2023	09/15/2023
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Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS02@0.5'

9/13/2023 1:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-02 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.28	0.0910	mg/kg	10	B3I1403	09/14/2023	09/18/2023
Barium	48.5	9.10	"	"	"	"	"
Cadmium	ND	0.0910	"	"	"	"	"
Copper	ND	9.10	"	"	"	"	"
Lead	ND	9.10	"	"	"	"	"
Nickel	ND	9.10	"	"	"	"	"
Selenium	ND	0.0910	"	"	"	"	"
Silver	ND	0.0910	"	"	"	"	"
Zinc	ND	91.0	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L705007	09/13/2023	09/18/2023
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Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS03@0.5'

9/13/2023 1:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-03 (Soil)

Boron (DTPA Sorbitol)

Boron	0.382	0.100	mg/L	1	B3I1411	09/14/2023	09/15/2023	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3I1333	09/13/2023	09/13/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	100 %	50-150	"	"	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3I1334	09/13/2023	09/13/2023	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	95.4 %	70-130	"	"	"	"	"
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Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS03@0.5'

9/13/2023 1:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-03 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	103 %	70-130	B3I133 4	09/13/2023	09/13/2023
Surrogate: 4-Bromofluorobenzene	96.0 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	0.499	0.499	meq/L	10	[CALC]	09/14/2023	09/15/2023
Magnesium	1.03	0.823	"	"	"	"	"
Sodium	0.437	0.435	"	"	"	"	"

PAH by EPA 8270E

1-Methylnaphthalene	ND	0.002	mg/kg	1	B3I1331	09/13/2023	09/14/2023	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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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS03@0.5'

9/13/2023 1:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-03 (Soil)

PAH by EPA 8270E

Fluorene	ND	0.020	mg/kg	1	B3I1331	09/13/2023	09/14/2023	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	96.0 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	106 %	60-130	"	"	"
Surrogate: Pyrene-d10	92.2 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.43	pH Units	1	B3I1419	09/14/2023	09/15/2023
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SAR by 20B Saturated Paste

SAR	0.501	0.0100	SAR	1	B3I1415	09/14/2023	09/15/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.237	0.00500	mmhos/cm	1	B3I1419	09/14/2023	09/15/2023
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Table 915 metals by EPA 6020B

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

SS03@0.5'

9/13/2023 1:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-03 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.49	0.0869	mg/kg	10	B3I1403	09/14/2023	09/18/2023
Barium	37.0	8.69	"	"	"	"	"
Cadmium	ND	0.0869	"	"	"	"	"
Copper	ND	8.69	"	"	"	"	"
Lead	ND	8.69	"	"	"	"	"
Nickel	ND	8.69	"	"	"	"	"
Selenium	0.116	0.0869	"	"	"	"	"
Silver	ND	0.0869	"	"	"	"	"
Zinc	ND	86.9	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.253	0.519	mg/Kg	1	L705007	09/13/2023	09/18/2023
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Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

BG01@0.5'

9/13/2023 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-04 (Soil)

Boron (DTPA Sorbitol)

Boron	1.17	0.100	mg/L	1	B3I1411	09/14/2023	09/15/2023
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Metals by Saturated Paste by EPA 6010

Calcium	30.5	0.499	meq/L	10	[CALC]	09/14/2023	09/15/2023
Magnesium	5.50	0.823	"	"	"	"	"
Sodium	0.848	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.28		pH Units	1	B3I1419	09/14/2023	09/15/2023
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SAR by 20B Saturated Paste

SAR	0.200	0.0100	SAR	1	B3I1415	09/14/2023	09/15/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.94	0.00500	mmhos/cm	1	B3I1419	09/14/2023	09/15/2023
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Table 915 metals by EPA 6020B

Arsenic	1.31	0.0904	mg/kg	10	B3I1403	09/14/2023	09/18/2023
Barium	60.1	9.04	"	"	"	"	"
Cadmium	0.0958	0.0904	"	"	"	"	"
Copper	ND	9.04	"	"	"	"	"

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

BG01@0.5'

9/13/2023 1:30:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-04 (Soil)

Table 915 metals by EPA 6020B

Lead	ND	9.04	mg/kg	10	B3I1403	09/14/2023	09/18/2023
Nickel	ND	9.04	"	"	"	"	"
Selenium	0.118	0.0904	"	"	"	"	"
Silver	ND	0.0904	"	"	"	"	"
Zinc	ND	90.4	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.251	0.515	mg/Kg	1	L705008	09/13/2023	09/18/2023
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Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

BG02@0.5'

9/13/2023 1:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. Y309261-05 (Soil)

Boron (DTPA Sorbitol)

Boron	1.35	0.101	mg/L	1	B3I1411	09/14/2023	09/15/2023
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Metals by Saturated Paste by EPA 6010

Calcium	21.6	0.499	meq/L	10	[CALC]	09/14/2023	09/15/2023
Magnesium	5.31	0.823	"	"	"	"	"
Sodium	1.08	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.12		pH Units	1	B3I1419	09/14/2023	09/15/2023
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SAR by 20B Saturated Paste

SAR	0.295	0.0100	SAR	1	B3I1415	09/14/2023	09/15/2023
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.37	0.00500	mmhos/cm	1	B3I1419	09/14/2023	09/15/2023
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Table 915 metals by EPA 6020B

Arsenic	1.32	0.0910	mg/kg	10	B3I1403	09/14/2023	09/18/2023
Barium	56.8	9.10	"	"	"	"	"
Cadmium	ND	0.0910	"	"	"	"	"
Copper	ND	9.10	"	"	"	"	"

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

BG02@0.5'

9/13/2023 1:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.
Y309261-05 (Soil)

Table 915 metals by EPA 6020B

Lead	ND	9.10	mg/kg	10	B3I1403	09/14/2023	09/18/2023
Nickel	ND	9.10	"	"	"	"	"
Selenium	ND	0.0910	"	"	"	"	"
Silver	ND	0.0910	"	"	"	"	"
Zinc	ND	91.0	"	"	"	"	"

Total Metals by 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L705008	09/13/2023	09/18/2023
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Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 B3I1333 - EPA 3550B										
Blank (B3I1333-BLK1)					Prepared: 09/13/2023 Analyzed: 09/13/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	24		"	24.9		96.1	50-150			

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 B3I1333 - EPA 3550B

LCS (B3I1333-BS1)

Prepared: 09/13/2023 Analyzed: 09/13/2023

Diesel (C10-C28)	1010	50.0	mg/kg	1000		101	70-130			
Residual Range Organics (C28-C40)	1020	200	"	1000		102	70-130			
Surrogate: o-Terphenyl	59		"	49.8		118	50-150			

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 B3I1333 - EPA 3550B

Matrix Spike (B3I1333-MS1)		Source: Y309254-01			Prepared: 09/13/2023 Analyzed: 09/13/2023					
Diesel (C10-C28)	956	50.0	mg/kg	1000	ND	95.6	70-130			
Residual Range Organics (C28-C40)	974	200	"	1000	ND	97.4	70-130			
Surrogate: o-Terphenyl	46		"	49.8		93.3	50-150			

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 B3I1333 - EPA 3550B

Matrix Spike Dup (B3I1333-MSD1)		Source: Y309254-01			Prepared: 09/13/2023 Analyzed: 09/13/2023					
Diesel (C10-C28)	951	50.0	mg/kg	1000	ND	95.1	70-130	0.543	35	
Residual Range Organics (C28-C40)	970	200	"	1000	ND	97.0	70-130	0.409	35	
Surrogate: o-Terphenyl	53		"	49.8		107	50-150			

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 B3I1334 - EPA 5030 (soil)										
Blank (B3I1334-BLK1)					Prepared: 09/13/2023 Analyzed: 09/13/2023					
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		94.5	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		107	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		93.1	70-130			

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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 B3I1334 - EPA 5030 (soil)										
LCS (B3I1334-BS1)					Prepared: 09/13/2023 Analyzed: 09/13/2023					
1,2,4-Trimethylbenzene	0.115	0.00200	mg/kg	0.100		115	70-130			
1,3,5-Trimethylbenzene	0.117	0.00200	"	0.100		117	70-130			
Benzene	0.107	0.00200	"	0.100		107	70-130			
Ethylbenzene	0.100	0.00200	"	0.100		100	70-130			
Naphthalene	0.103	0.00380	"	0.100		103	70-130			
Toluene	0.101	0.00200	"	0.100		101	70-130			
o-Xylene	0.0956	0.00200	"	0.100		95.6	70-130			
m,p-Xylene	0.212	0.00400	"	0.200		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		91.8	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		101	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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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 B3I1334 - EPA 5030 (soil)										
Matrix Spike (B3I1334-MS1)		Source: Y309250-01			Prepared: 09/13/2023 Analyzed: 09/13/2023					
1,2,4-Trimethylbenzene	0.108	0.00200	mg/kg	0.100	ND	108	70-130			
1,3,5-Trimethylbenzene	0.107	0.00200	"	0.100	ND	107	70-130			
Benzene	0.103	0.00200	"	0.100	ND	103	70-130			
Ethylbenzene	0.0988	0.00200	"	0.100	ND	98.8	70-130			
Naphthalene	0.0873	0.00380	"	0.100	ND	87.3	70-130			
Toluene	0.0960	0.00200	"	0.100	ND	96.0	70-130			
o-Xylene	0.0915	0.00200	"	0.100	ND	91.5	70-130			
m,p-Xylene	0.208	0.00400	"	0.200	ND	104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

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Project: KMG - WCR 30 & 49 Truck Release

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 B3I1334 - EPA 5030 (soil)										
Matrix Spike Dup (B3I1334-MSD1)	Source: Y309250-01				Prepared: 09/13/2023 Analyzed: 09/13/2023					
1,2,4-Trimethylbenzene	0.115	0.00200	mg/kg	0.100	ND	115	70-130	5.58	20	
1,3,5-Trimethylbenzene	0.114	0.00200	"	0.100	ND	114	70-130	6.59	20	
Benzene	0.104	0.00200	"	0.100	ND	104	70-130	0.426	20	
Ethylbenzene	0.105	0.00200	"	0.100	ND	105	70-130	6.24	20	
Naphthalene	0.0987	0.00380	"	0.100	ND	98.7	70-130	12.3	20	
Toluene	0.0970	0.00200	"	0.100	ND	97.0	70-130	1.04	20	
o-Xylene	0.0982	0.00200	"	0.100	ND	98.2	70-130	7.11	20	
m,p-Xylene	0.220	0.00400	"	0.200	ND	110	70-130	5.20	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		94.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		105	70-130			

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

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Metals by EPA 6000/7000 Series Methods - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3I1403 - EPA 3050B

Blank (B3I1403-BLK1)

Prepared: 09/14/2023 Analyzed: 09/18/2023

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

LCS (B3I1403-BS1)

Prepared: 09/14/2023 Analyzed: 09/18/2023

Arsenic	0.0474	0.000100	mg/kg	0.0500	94.9	80-120
Barium	4.89	0.0100	"	5.00	97.7	80-120
Cadmium	0.0485	0.000100	"	0.0500	97.1	80-120
Copper	0.497	0.0100	"	0.500	99.5	80-120
Lead	0.0465	0.0100	"	0.0500	93.1	80-120
Nickel	0.0497	0.0100	"	0.0500	99.5	80-120
Selenium	0.0481	0.000100	"	0.0500	96.2	80-120
Silver	0.0496	0.000100	"	0.0500	99.3	80-120
Zinc	0.454	0.100	"	0.500	90.9	80-120

Matrix Spike (B3I1403-MS1)

Source: Y309253-01

Prepared: 09/14/2023 Analyzed: 09/18/2023

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Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

Metals by EPA 6000/7000 Series Methods - Quality Control

Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3I1403 - EPA 3050B

Matrix Spike (B3I1403-MS1)		Source: Y309253-01			Prepared: 09/14/2023 Analyzed: 09/18/2023					
Arsenic	7.13	0.0907	mg/kg	4.53	1.90	115	75-125			
Barium	552	9.07	"	453	59.1	109	75-125			
Cadmium	4.76	0.0907	"	4.53	0.0987	103	75-125			
Copper	48.3	9.07	"	45.3	ND	107	75-125			
Lead	12.4	9.07	"	4.53	6.21	136	75-125			QM-07
Nickel	16.4	9.07	"	4.53	5.21	247	75-125			QM-07
Selenium	4.96	0.0907	"	4.53	0.0770	108	75-125			
Silver	4.58	0.0907	"	4.53	0.00905	101	75-125			
Zinc	78.0	90.7	"	45.3	21.9	124	75-125			
Matrix Spike Dup (B3I1403-MSD1)		Source: Y309253-01			Prepared: 09/14/2023 Analyzed: 09/18/2023					
Arsenic	6.92	0.0936	mg/kg	4.68	1.90	107	75-125	3.00	20	
Barium	544	9.36	"	468	59.1	104	75-125	1.42	20	
Cadmium	4.88	0.0936	"	4.68	0.0987	102	75-125	2.46	20	
Copper	47.6	9.36	"	46.8	ND	102	75-125	1.44	20	
Lead	11.2	9.36	"	4.68	6.21	106	75-125	10.2	20	
Nickel	10.1	9.36	"	4.68	5.21	105	75-125	47.4	20	QM-07
Selenium	4.71	0.0936	"	4.68	0.0770	99.1	75-125	5.13	20	
Silver	4.89	0.0936	"	4.68	0.00905	104	75-125	6.38	20	
Zinc	69.4	93.6	"	46.8	21.9	101	75-125	11.7	20	

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Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 B3I1331 - EPA 3580

Blank (B3I1331-BLK1)

Prepared: 09/13/2023 Analyzed: 09/14/2023

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		104	60-130			
Surrogate: Anthracene-d10	190		"	200		95.9	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			
Surrogate: Pyrene-d10	200		"	200		99.1	60-130			

LCS (B3I1331-BS1)

Prepared: 09/13/2023 Analyzed: 09/14/2023

1-Methylnaphthalene	0.191	0.002	mg/kg	0.200		95.4	70-130			
2-Methylnaphthalene	0.190	0.002	"	0.200		95.1	70-130			
Acenaphthene	0.181	0.020	"	0.200		90.7	70-130			
Anthracene	0.173	0.020	"	0.200		86.3	70-130			

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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 B3I1331 - EPA 3580

LCS (B3I1331-BS1)

Prepared: 09/13/2023 Analyzed: 09/14/2023

Benzo (a) anthracene	0.174	0.005	mg/kg	0.200		87.0	70-130
Benzo (a) pyrene	0.194	0.020	"	0.200		97.1	70-130
Benzo (b) fluoranthene	0.205	0.020	"	0.200		102	70-130
Benzo (g,h,i) perylene	0.213	0.020	"	0.200		106	70-130
Benzo (k) fluoranthene	0.166	0.020	"	0.200		83.1	70-130
Chrysene	0.167	0.020	"	0.200		83.5	70-130
Dibenz (a,h) anthracene	0.188	0.020	"	0.200		93.8	70-130
Fluoranthene	0.201	0.020	"	0.200		101	70-130
Fluorene	0.192	0.020	"	0.200		96.1	70-130
Indeno (1,2,3-cd) pyrene	0.194	0.020	"	0.200		97.1	70-130
Naphthalene	0.186	0.002	"	0.200		93.2	70-130
Phenanthrene	0.174	0.020	"	0.200		86.8	70-130
Pyrene	0.171	0.020	"	0.200		85.5	70-130
Surrogate: Fluorene-d10	210		ug/kg	200		105	60-130
Surrogate: Anthracene-d10	190		"	200		95.9	60-130
Surrogate: Benzo (a) pyrene-d12	210		"	200		105	60-130
Surrogate: Pyrene-d10	180		"	200		89.5	60-130

Matrix Spike (B3I1331-MS1)

Source: Y309048-01

Prepared: 09/13/2023 Analyzed: 09/14/2023

1-Methylnaphthalene	0.196	0.002	mg/kg	0.200	ND	97.9	70-130
2-Methylnaphthalene	0.195	0.002	"	0.200	0.002	96.4	70-130
Acenaphthene	0.182	0.020	"	0.200	ND	91.2	70-130
Anthracene	0.162	0.020	"	0.200	ND	80.8	70-130
Benzo (a) anthracene	0.174	0.005	"	0.200	ND	87.0	70-130
Benzo (a) pyrene	0.183	0.020	"	0.200	ND	91.7	70-130
Benzo (b) fluoranthene	0.242	0.020	"	0.200	ND	121	70-130
Benzo (g,h,i) perylene	0.222	0.020	"	0.200	ND	111	70-130

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Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 B3I1331 - EPA 3580

Matrix Spike (B3I1331-MS1)		Source: Y309048-01			Prepared: 09/13/2023 Analyzed: 09/14/2023					
Benzo (k) fluoranthene	0.184	0.020	mg/kg	0.200	ND	91.8	70-130			
Chrysene	0.179	0.020	"	0.200	0.017	80.7	70-130			
Dibenz (a,h) anthracene	0.185	0.020	"	0.200	ND	92.7	70-130			
Fluoranthene	0.159	0.020	"	0.200	0.004	77.3	70-130			
Fluorene	0.187	0.020	"	0.200	ND	93.3	70-130			
Indeno (1,2,3-cd) pyrene	0.233	0.020	"	0.200	ND	116	70-130			
Naphthalene	0.188	0.002	"	0.200	ND	94.2	70-130			
Phenanthrene	0.181	0.020	"	0.200	ND	90.5	70-130			
Pyrene	0.227	0.020	"	0.200	0.002	113	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	190		"	200		97.4	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		102	60-130			
Surrogate: Pyrene-d10	230		"	200		117	60-130			

Matrix Spike Dup (B3I1331-MSD1)		Source: Y309048-01			Prepared: 09/13/2023 Analyzed: 09/14/2023					
1-Methylnaphthalene	0.199	0.002	mg/kg	0.200	ND	99.5	70-130	1.64	20	
2-Methylnaphthalene	0.200	0.002	"	0.200	0.002	98.9	70-130	2.51	20	
Acenaphthene	0.190	0.020	"	0.200	ND	95.2	70-130	4.30	20	
Anthracene	0.165	0.020	"	0.200	ND	82.7	70-130	2.34	20	
Benzo (a) anthracene	0.191	0.005	"	0.200	ND	95.7	70-130	9.59	20	
Benzo (a) pyrene	0.226	0.020	"	0.200	ND	113	70-130	20.7	20	QR-02
Benzo (b) fluoranthene	0.229	0.020	"	0.200	ND	115	70-130	5.27	20	
Benzo (g,h,i) perylene	0.221	0.020	"	0.200	ND	110	70-130	0.524	20	
Benzo (k) fluoranthene	0.176	0.020	"	0.200	ND	87.9	70-130	4.38	20	
Chrysene	0.188	0.020	"	0.200	0.017	85.2	70-130	4.95	20	
Dibenz (a,h) anthracene	0.185	0.020	"	0.200	ND	92.4	70-130	0.359	20	
Fluoranthene	0.153	0.020	"	0.200	0.004	74.3	70-130	3.87	20	

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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
Batch B3I1331 - EPA 3580										
Matrix Spike Dup (B3I1331-MSD1)	Source: Y309048-01				Prepared: 09/13/2023 Analyzed: 09/14/2023					
Fluorene	0.194	0.020	mg/kg	0.200	ND	97.1	70-130	4.02	20	
Indeno (1,2,3-cd) pyrene	0.177	0.020	"	0.200	ND	88.4	70-130	27.4	20	QR-02
Naphthalene	0.198	0.002	"	0.200	ND	98.9	70-130	4.88	20	
Phenanthrene	0.185	0.020	"	0.200	ND	92.4	70-130	2.08	20	
Pyrene	0.240	0.020	"	0.200	0.002	119	70-130	5.36	20	
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	190		"	200		96.3	60-130			
Surrogate: Benzo (a) pyrene-d12	220		"	200		108	60-130			
Surrogate: Pyrene-d10	240		"	200		122	60-130			

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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 B3I1411 - DTPA Sorbitol Preparation

Blank (B3I1411-BLK1)

Prepared: 09/14/2023 Analyzed: 09/19/2023

Boron ND 0.100 mg/L

Duplicate (B3I1411-DUP1)

Source: Y309252-13

Prepared: 09/14/2023 Analyzed: 09/15/2023

Boron ND 0.100 mg/L ND 50

Batch B3I1415 - Saturated Paste Metals

Blank (B3I1415-BLK1)

Prepared: 09/14/2023 Analyzed: 09/15/2023

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

Duplicate (B3I1415-DUP1)

Source: Y309252-11

Prepared: 09/14/2023 Analyzed: 09/15/2023

Calcium PPM 48.9 10.0 mg/L 43.9 10.7 50
SAR ND 0.0100 SAR 0.551 200
Magnesium PPM 10.6 10.0 mg/L 9.59 10.2 50
Sodium PPM 16.5 10.0 " 15.5 6.33 50

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Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3I1419 - Saturated Paste pH/EC										
Blank (B3I1419-BLK1)					Prepared: 09/14/2023 Analyzed: 09/15/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B3I1419-DUP1)					Source: Y309252-11 Prepared: 09/14/2023 Analyzed: 09/15/2023					
Specific Conductance (EC)	0.602	0.00500	mmhos/cm		0.536			11.6	25	
pH	7.99		pH Units		8.13			1.74	25	

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Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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 L705008 -										
DUP (L 90359-DUP)		Source: 90359			Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500	-		0	20	
MS (L 90359-MS)		Source: 90359			Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	36.1	2.53	mg/Kg	40.5	<1.23	89	75-125			
LCS (LCS)					Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	6.29	0.5	mg/Kg	8		79	75-125			
LRB (LRB)					Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

Origins Laboratory, Inc.



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.

Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417549
Project: KMG - WCR 30 & 49 Truck Release

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
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Batch L705007 -

DUP (L 90327-DUP)		Source: 90327			Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500		-	0	20	
MS (L 90327-MS)		Source: 90327			Prepared: Analyzed: 09/18/2023					
Chromium, Hexavalent	36.9	2.5	mg/Kg	40.1	<1.22	92	75-125			

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417549

Project: KMG - WCR 30 & 49 Truck Release

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.

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

ND 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.



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.

October 10, 2023

Ensolum

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Project Name - KMG - WCR 30 & 49 Truck Release Project Number - [none]

Attached are your analytical results for KMG - WCR 30 & 49 Truck Release received by Origins Laboratory, Inc. September 26, 2023. This project is associated with Origins project number Y309619-01.

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



Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: [none]

Project: KMG - WCR 30 & 49 Truck Release

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG03@0.5'	Y309619-01	Soil	September 26, 2023 13:00	09/26/2023 16:06
BG04@0.5'	Y309619-02	Soil	September 26, 2023 13:05	09/26/2023 16:06
BG05@0.5'	Y309619-03	Soil	September 26, 2023 13:10	09/26/2023 16:06
BG06@0.5'	Y309619-04	Soil	September 26, 2023 13:15	09/26/2023 16:06

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: [none]

Project: KMG - WCR 30 & 49 Truck Release

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 13091619

Client: Ensolum

Client Project ID: WCR 30 & 49 Truck Release

Checklist Completed by: JEH/ACN

Shipped Via: FedEx

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 9/2/08

Airbill #: N/A

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

Cooler Number/Temperature: 11 °C 1 °C 1 °C (Describe) _____ °C

Thermometer ID: _____

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"/>		<u>SP</u>
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			<input checked="" type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			<input checked="" type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) JEH

Date/Time Reviewed 9/2/08

Origins Laboratory, Inc.

Jen Pellegrini

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.

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: [none]

Project: KMG - WCR 30 & 49 Truck Release

BG03@0.5'

9/26/2023 1:00:00PM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y309619-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.33	0.0929	mg/kg	10	B312704	CIH	09/27/2023	10/09/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: [none]

Project: KMG - WCR 30 & 49 Truck Release

BG04@0.5'

9/26/2023 1:05:00PM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
Y309619-02 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.37	0.0935	mg/kg	10	B312704	CIH	09/27/2023	10/09/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: [none]

Project: KMG - WCR 30 & 49 Truck Release

BG05@0.5'

9/26/2023 1:10:00PM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.
Y309619-03 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.79	0.0962	mg/kg	10	B312704	CIH	09/27/2023	10/09/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: [none]

Project: KMG - WCR 30 & 49 Truck Release

BG06@0.5'

9/26/2023 1:15:00PM

Analyte	Result	Reporting	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
		Limit							

Origins Laboratory, Inc.

Y309619-04 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.51	0.0864	mg/kg	10	B312704	CIH	09/27/2023	10/09/2023
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: [none]
Project: KMG - WCR 30 & 49 Truck Release

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B3I2704 - EPA 3050B

Blank (B3I2704-BLK1)

Prepared: 09/27/2023 Analyzed: 10/09/2023

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

LCS (B3I2704-BS1)

Prepared: 09/27/2023 Analyzed: 10/09/2023

Arsenic	0.0498	0.000100	mg/kg	0.0500		99.6	80-120
Barium	5.38	0.0100	"	5.00		108	80-120
Cadmium	0.0521	0.000100	"	0.0500		104	80-120
Copper	0.549	0.0100	"	0.500		110	80-120
Lead	0.0498	0.0100	"	0.0500		99.5	80-120
Nickel	0.0513	0.0100	"	0.0500		103	80-120
Selenium	0.0484	0.000100	"	0.0500		96.7	80-120
Silver	0.0505	0.000100	"	0.0500		101	80-120
Zinc	0.480	0.100	"	0.500		96.1	80-120

Matrix Spike (B3I2704-MS1)

Source: Y309617-08

Prepared: 09/27/2023 Analyzed: 10/09/2023

Arsenic	8.53	0.0863	mg/kg	4.31	4.34	97.1	75-125
Barium	737	8.63	"	431	196	125	75-125
Cadmium	4.57	0.0863	"	4.31	0.182	102	75-125
Copper	49.5	8.63	"	43.1	9.12	93.5	75-125
Lead	12.5	8.63	"	4.31	7.96	104	75-125

Origins Laboratory, Inc.



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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: [none]
Project: KMG - WCR 30 & 49 Truck Release

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B3I2704 - EPA 3050B										
Matrix Spike (B3I2704-MS1)		Source: Y309617-08			Prepared: 09/27/2023 Analyzed: 10/09/2023					
Nickel	15.3	8.63	mg/kg	4.31	10.7	107	75-125			
Selenium	4.15	0.0863	"	4.31	0.0862	94.3	75-125			
Silver	4.18	0.0863	"	4.31	0.0215	96.4	75-125			
Zinc	75.8	86.3	"	43.1	36.1	91.9	75-125			U
Matrix Spike Dup (B3I2704-MSD1)		Source: Y309617-08			Prepared: 09/27/2023 Analyzed: 10/09/2023					
Arsenic	9.17	0.0925	mg/kg	4.62	4.34	104	75-125	7.20	20	
Barium	665	9.25	"	462	196	102	75-125	10.2	20	
Cadmium	4.97	0.0925	"	4.62	0.182	104	75-125	8.35	20	
Copper	53.7	9.25	"	46.2	9.12	96.3	75-125	8.12	20	
Lead	13.2	9.25	"	4.62	7.96	114	75-125	6.07	20	
Nickel	16.3	9.25	"	4.62	10.7	121	75-125	6.14	20	
Selenium	4.32	0.0925	"	4.62	0.0862	91.7	75-125	4.04	20	
Silver	4.51	0.0925	"	4.62	0.0215	97.1	75-125	7.54	20	
Zinc	80.6	92.5	"	46.2	36.1	96.3	75-125	6.21	20	U

Origins Laboratory, Inc.



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: [none]

Project: KMG - WCR 30 & 49 Truck Release

Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager