



Ensolum

October 28, 2024

Jeremy Espinoza

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Project Name - KMG - Madrigal 02-22 Facility

Project Number - 09A1417840

Attached are your analytical results for KMG - Madrigal 02-22 Facility received by Origins Laboratory September 27, 2024. This project is associated with Origins project number E409863-01.

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

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

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

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

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

Origins Laboratory
303.433.1322
projectmanager@originslab.com



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

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@0.5'	E409863-01	Soil	September 27, 2024 9:45	09/27/2024 16:26
PWV-B01@4'	E409863-02	Soil	September 27, 2024 9:55	09/27/2024 16:26
PWV-B01@4'-V	E409863-03	Soil	September 27, 2024 10:00	09/27/2024 16:26
PWV-N01@2'	E409863-04	Soil	September 27, 2024 10:05	09/27/2024 16:26
PWV-N01@2'-V	E409863-05	Soil	September 27, 2024 10:10	09/27/2024 16:26
TB-BG01@0.5'	E409863-06	Soil	September 27, 2024 10:15	09/27/2024 16:26
AST01@0.5'-V	E409863-07	Soil	September 27, 2024 9:50	09/27/2024 16:26
SEP01-INLET@3'	E409863-08	Soil	September 27, 2024 10:20	09/27/2024 16:26
SEP01-OUTLET@3'	E409863-09	Soil	September 27, 2024 10:25	09/27/2024 16:26
NATIVE-BG01@3'	E409863-10	Soil	September 27, 2024 10:30	09/27/2024 16:26
NATIVE-BG01@6'	E409863-11	Soil	September 27, 2024 10:40	09/27/2024 16:26
NATIVE-BG02@3'	E409863-12	Soil	September 27, 2024 10:45	09/27/2024 16:26
NATIVE-BG02@6'	E409863-13	Soil	September 27, 2024 10:50	09/27/2024 16:26
NATIVE-BG03@3'	E409863-14	Soil	September 27, 2024 10:55	09/27/2024 16:26

Origins Laboratory



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NATIVE-BG03@6'	E409863-15	Soil	September 27, 2024 11:00	09/27/2024 16:26
NATIVE-BG04@3'	E409863-16	Soil	September 27, 2024 11:05	09/27/2024 16:26
NATIVE-BG04@6'	E409863-17	Soil	September 27, 2024 11:10	09/27/2024 16:26
NATIVE-BG05@3'	E409863-18	Soil	September 27, 2024 11:15	09/27/2024 16:26
NATIVE-BG05@6'	E409863-19	Soil	September 27, 2024 11:20	09/27/2024 16:26
NATIVE-BG06@3'	E409863-20	Soil	September 27, 2024 11:25	09/27/2024 16:26
NATIVE-BG06@6'	E409863-21	Soil	September 27, 2024 11:30	09/27/2024 16:26

Origins Laboratory

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

ORIGINS

ORIGINS WORK ORDER #

6409863

Page 1 of 3

LABORATORY INC

Client: Ensolum

Address:

Project Manager: Jeremy Espinoza

Key:

Project Name: Madrigal 02-22 Facility

W=Water

Project Number: 09A1417840

GW=Groundwater

Collected By: Jordan Bynon

SW=Surface Water

Telephone Number: (720) 590-2834

Invoice/Billing Info: Ensolum

WM=Waste Water

Email Address:

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

L=Liquid

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix Preservative	Analysis										Comments
						GC/MS	H2O	SPR	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
1	AST01-005'	9/21/14	0945	3	UNP	X										
2	AST01-005'		0955	3		X										
3	AST01-005'		1000	3		X										
4	AST01-005'		1005	3		X										
5	AST01-005'		1010	3		X										
6	AST01-005'		1015	3		X	X	X	X	X						
7	AST01-005'		0950	3		X										
8	AST01-005'		1020	3		X										
9	AST01-005'		1025	3		X										
10	AST01-005'		1030	3		X	X	X	X	X						

1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com | Temp Received- 3.4 Received On Ice? ☒ Yes ☐ No

For Lab Sample Receiving Only:

Standard

48 Hr 72 Hr

SAME DAY

Turnaround Time

Origins Laboratory

Bynon

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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

ORIGINS

ORIGINS WORK ORDER #

E409863

Page 2 of 3

Client: Ensolum

Address:

Project Manager: Jeremy Espinoza

Key:

Project Name: Madrigal 02-22 Facility

W=Water

Project Number: 09A1417840

GW=Groundwater

Telephone Number: (720) 590-7134

Collected By: Jordan Corrao

SW=Surface Water

Email Address:

kmh@ensolum.com

Invoice/Billing Info: J1719

WW=Waste Water

S=Soil | SO=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

L=Liquid

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix	Preservative	Analysis					Comments
							CH	EC	DO	Barion	GIS Metals	
1	Water-Sp01@C1	9/27/14	1040	3	5	UNP	X	X	X	X	X	
2	Water-Sp02@C1		1045									
3	Water-Sp03@C1		1050									
4	Water-Sp04@C1		1055									
5	Water-Sp05@C1		1100									
6	Water-Sp06@C1		1105									
7	Water-Sp07@C1		1110									
8	Water-Sp08@C1		1115									
9	Water-Sp09@C1		1120									
10	Water-Sp10@C1		1125									

1725 Elk Place Denver, Co. 80211 | # 303.433.1322 | originslab.com

For Lab Sample Receiving Only:

Temp Received: 34 Received On Ice? ☒ Yes ☐ No

Standard ☐ 48 Hr ☐ 72 Hr

Turnaround Time ☒ SAME DAY ☐ 24 Hr

Origins Laboratory

J. Bynon

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

ORIGINS

ORIGINAL WORK ORDER #

6409803

Page 2 of 3

LABORATORY INC

Client:

Ensolum

Address:

Project Manager: Jeremy Espinoza

Key:

Project Name: Madrigal 02-22 Facility

W=Water

Project Number: 09A1417840

GW=Groundwater

Collected By: Jennifer Carter

SW=Surface Water

Telephone Number:

(970) 590-2134

Invoice/Billing Info:

Ensolum

WW=Waste Water

S=Soil | SC=Solid | O=Oil | A=Air | G=Gas | UNP=Unpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide

L=Liquid

#	Sample ID	Date	Sampled	Time	# of Containers	Matrix	Preservative	Analysis										Comments	
								PH	OC	SPK	Boron	GIS metals							
1	MHW-5706 (C)	9/27/24	1130	3	5	UNP	X	X	X	X	X								
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Relinquished By: [Signature] Date: 9/27/24 Time: 1426 Received By: [Signature] Date: 9/27/24 Time: 1626

For Lab Sample Receiving Only:

Temp Received: 3.9 Received On Ice? ☒ Yes ☐ No

Standard ☐ 48 Hr ☐ 72 Hr

Turnaround Time ☒ SAME DAY ☐ 24 Hr

Origins Laboratory

[Signature]

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ORIGINS LABORATORY

Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: E40 4863

Client: ENSOLUM

Client Project ID: Madrigal

Checklist Completed by: EH

Shipped Via: HO

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

Date/time completed: 9/27/24

Airbill #: N/A

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

Cooler Number/Temperature: 1 / 3.4 °C _____ / _____ °C _____ / _____ °C (Describe) _____ °C

Thermometer ID: 1005

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"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<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 type="checkbox"/>	<input type="checkbox"/>	<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) EH

Date/Time Reviewed 9/27/24

Origins Laboratory

J. Bynon

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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

AST01@0.5'

9/27/2024 9:45:00AM

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

E409863-01 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0985	mg/L	1	B413017	09/30/2024	10/01/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B412747	09/27/2024	09/27/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	72.5 %	50-150	"	"	"	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B412748	09/27/2024	09/28/2024	Ua
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Toluene	ND	0.00200	"	"	"	"	"	Ua
Xylenes, total	ND	0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	90.8 %	70-130	"	"	"	"	"	"
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Origins Laboratory



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

AST01@0.5'

9/27/2024 9:45:00AM

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

E409863-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	99.1 %	70-130	B4I274 8	09/27/2024	09/28/2024
Surrogate: 4-Bromofluorobenzene	96.8 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4I2802	09/28/2024	09/28/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	Ua

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

AST01@0.5'

9/27/2024 9:45:00AM

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

E409863-01 (Soil)

PAH by EPA 8270E extracted via 3580A

Fluorene	ND	0.020	mg/kg	1	B4I2802	09/28/2024	09/28/2024	Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	99.6 %	60-130	"	"	"
Surrogate: Anthracene-d10	96.1 %	60-130	"	"	"
Surrogate: Pyrene-d10	110 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	98.0 %	60-130	"	"	"

pH in Soil by 9045D

pH	4.40	pH Units	1	B4J0743	10/07/2024	10/10/2024
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SAR by 20B Saturated Paste

SAR	0.138	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.0780	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Origins Laboratory



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

AST01@0.5'

9/27/2024 9:45:00AM

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

E409863-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	1.01	0.273	mg/kg	10	B412746	09/27/2024	09/28/2024
Barium	15.3	9.43	"	"	"	"	"
Cadmium	ND	0.0943	"	"	"	"	"
Copper	ND	9.43	"	"	"	"	"
Lead	2.25	0.943	"	"	"	"	"
Nickel	2.20	0.943	"	"	"	"	"
Selenium	ND	0.245	"	"	"	"	"
Silver	ND	0.0943	"	"	"	"	"
Zinc	ND	34.9	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	ND	0.108	0.269	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

PWV-B01@4'

9/27/2024 9:55:00AM

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

E409863-02 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0988	mg/L	1	B413017	09/30/2024	10/01/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B412747	09/27/2024	09/27/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	69.0 %	50-150	"	"	"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B412748	09/27/2024	09/27/2024	Ua
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Toluene	ND	0.00200	"	"	"	"	"	Ua
Xylenes, total	ND	0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	93.7 %	70-130	"	"	"	"	"	
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Origins Laboratory



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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

PWV-B01@4'

9/27/2024 9:55:00AM

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

E409863-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.5 %	70-130	B4I274 8	09/27/2024	09/27/2024
Surrogate: 4-Bromofluorobenzene	100 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.39	0.435	"	"	"	"	"

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4I2802	09/28/2024	09/28/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	Ua

Origins Laboratory



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

PWV-B01@4'

9/27/2024 9:55:00AM

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

E409863-02 (Soil)

PAH by EPA 8270E extracted via 3580A

Fluorene	ND	0.020	mg/kg	1	B4I2802	09/28/2024	09/28/2024	Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	98.9 %	60-130	"	"	"
Surrogate: Anthracene-d10	94.4 %	60-130	"	"	"
Surrogate: Pyrene-d10	101 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	106 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.46	pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	2.67	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.262	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Origins Laboratory



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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

PWV-B01@4'

9/27/2024 9:55:00AM

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

E409863-02 (Soil)

Table 915 metals by EPA 6020B

Arsenic	2.30	0.242	mg/kg	10	B412746	09/27/2024	09/28/2024
Barium	56.7	8.36	"	"	"	"	"
Cadmium	0.111	0.0836	"	"	"	"	"
Copper	ND	8.36	"	"	"	"	"
Lead	6.43	0.836	"	"	"	"	"
Nickel	5.42	0.836	"	"	"	"	"
Selenium	ND	0.217	"	"	"	"	"
Silver	ND	0.0836	"	"	"	"	"
Zinc	ND	30.9	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	0.166	0.0983	0.246	mg/kg dry	1	2688970	10/22/2024	10/24/2024	J
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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

PWV-B01@4'-V

9/27/2024 10:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-03 (Soil)

pH in Soil by 9045D

pH	8.02			pH Units	1	B4J0743	10/07/2024	10/10/2024	
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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

PWV-N01@2'

9/27/2024 10:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-04 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.0999	mg/L	1	B413017	09/30/2024	10/01/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B412747	09/27/2024	09/27/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	73.9 %	50-150			"	"	"	
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B412748	09/27/2024	09/27/2024	Ua
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Toluene	ND	0.00200	"	"	"	"	"	Ua
Xylenes, total	ND	0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	95.4 %	70-130			"	"	"	
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

PWV-N01@2'

9/27/2024 10:05:00AM

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

E409863-04 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	98.8 %	70-130	B4I274 8	09/27/2024	09/27/2024
Surrogate: 4-Bromofluorobenzene	99.3 %	70-130	"	"	"

Metals by Saturated Paste by EPA 6010

Calcium	1.49	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4I2802	09/28/2024	09/28/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	Ua

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

PWV-N01@2'

9/27/2024 10:05:00AM

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

E409863-04 (Soil)

PAH by EPA 8270E extracted via 3580A

Fluorene	ND	0.020	mg/kg	1	B4I2802	09/28/2024	09/28/2024	Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	101 %	60-130	"	"	"
Surrogate: Anthracene-d10	99.4 %	60-130	"	"	"
Surrogate: Pyrene-d10	103 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	98.1 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.24	pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	0.0245	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.199	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

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Jeremy Espinoza
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Project: KMG - Madrigal 02-22 Facility

PWV-N01@2'

9/27/2024 10:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-04 (Soil)

Table 915 metals by EPA 6020B

Arsenic	2.17	0.247	mg/kg	10	B412746	09/27/2024	09/28/2024
Barium	67.1	8.51	"	"	"	"	"
Cadmium	0.148	0.0851	"	"	"	"	"
Copper	ND	8.51	"	"	"	"	"
Lead	8.13	0.851	"	"	"	"	"
Nickel	5.93	0.851	"	"	"	"	"
Selenium	ND	0.221	"	"	"	"	"
Silver	ND	0.0851	"	"	"	"	"
Zinc	ND	31.5	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	ND	0.130	0.325	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

PWV-N01@2'-V

9/27/2024 10:10:00AM

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

E409863-05 (Soil)

pH in Soil by 9045D

pH	8.44		pH Units	1	B4J0743	10/07/2024	10/10/2024
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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

TB-BG01@0.5'

9/27/2024 10:15:00AM

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

E409863-06 (Soil)

Boron (DTPA Sorbitol)

Boron	ND	0.102	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	1.32	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.23		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	0.129	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.220	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	2.16	0.246	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	53.3	8.49	"	"	"	"	"
Cadmium	0.102	0.0849	"	"	"	"	"

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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

TB-BG01@0.5'

9/27/2024 10:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-06 (Soil)

Table 915 metals by EPA 6020B

Copper	ND	8.49	mg/kg	10	B412746	09/27/2024	09/28/2024
Lead	6.25	0.849	"	"	"	"	"
Nickel	5.31	0.849	"	"	"	"	"
Selenium	ND	0.221	"	"	"	"	"
Silver	ND	0.0849	"	"	"	"	"
Zinc	ND	31.4	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	0.231	0.131	0.328	mg/kg dry	1	2688970	10/22/2024	10/24/2024	J
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Wheat Ridge CO 80033

Jeremy Espinoza
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Project: KMG - Madrigal 02-22 Facility

AST01@0.5'-V

9/27/2024 9:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-07 (Soil)

pH in Soil by 9045D

pH	4.35			pH Units	1	B4J0743	10/07/2024	10/10/2024	
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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

SEP01-INLET@3'

9/27/2024 10:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-08 (Soil)

Boron (DTPA Sorbitol)

Boron	0.125	0.0999	mg/L	1	B4I3017	09/30/2024	10/01/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4I2747	09/27/2024	09/27/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	69.6 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4I2748	09/27/2024	09/27/2024	Ua
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Toluene	ND	0.00200	"	"	"	"	"	Ua
Xylenes, total	ND	0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	100 %	70-130	"	"	"
Surrogate: Toluene-d8	99.0 %	70-130	"	"	"

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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

SEP01-INLET@3'

9/27/2024 10:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-08 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	98.6 %	70-130	B41274 8	09/27/2024	09/27/2024
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Metals by Saturated Paste by EPA 6010

Calcium	3.82	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	1.17	0.823	"	"	"	"	"
Sodium	1.09	0.435	"	"	"	"	"

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B412802	09/28/2024	09/28/2024	Ua
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	Ua
Acenaphthene	ND	0.020	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	Ua
Fluorene	ND	0.020	"	"	"	"	"	Ua

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Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

SEP01-INLET@3'

9/27/2024 10:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-08 (Soil)

PAH by EPA 8270E extracted via 3580A

Indeno (1,2,3-cd) pyrene	ND	0.020	mg/kg	1	B4I2802	09/28/2024	09/28/2024	Ua
Naphthalene	ND	0.002	"	"	"	"	"	Ua
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	95.6 %	60-130	"	"	"
Surrogate: Anthracene-d10	96.4 %	60-130	"	"	"
Surrogate: Pyrene-d10	113 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	98.8 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.12	pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	0.688	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.681	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	3.62	0.271	mg/kg	10	B4I2746	09/27/2024	09/28/2024
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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

SEP01-INLET@3'

9/27/2024 10:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-08 (Soil)

Table 915 metals by EPA 6020B

Barium	75.3		9.33	mg/kg	10	B412746	09/27/2024	09/28/2024	
Cadmium	0.195		0.0933	"	"	"	"	"	
Copper	ND		9.33	"	"	"	"	"	
Lead	7.77		0.933	"	"	"	"	"	
Nickel	6.28		0.933	"	"	"	"	"	
Selenium	ND		0.243	"	"	"	"	"	
Silver	ND		0.0933	"	"	"	"	"	
Zinc	ND		34.5	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.104	0.259	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

SEP01-OUTLET@3'

9/27/2024 10:25:00AM

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

E409863-09 (Soil)

Boron (DTPA Sorbitol)

Boron	0.135	0.0999	mg/L	1	B4I3017	09/30/2024	10/01/2024	
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DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B4I2747	09/27/2024	09/27/2024	Ua
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	71.0 %	50-150	"	"	"
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GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B4I2748	09/27/2024	09/27/2024	Ua
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Benzene	ND	0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND	0.00200	"	"	"	"	"	Ua
Toluene	ND	0.00200	"	"	"	"	"	Ua
Xylenes, total	ND	0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	Ua

Surrogate: 1,2-Dichloroethane-d4	111 %	70-130	"	"	"
Surrogate: Toluene-d8	96.5 %	70-130	"	"	"

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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

SEP01-OUTLET@3'

9/27/2024 10:25:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-09 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	98.1 %	70-130	B41274 8	09/27/2024	09/27/2024
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Metals by Saturated Paste by EPA 6010

Calcium	6.46	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	1.68	0.823	"	"	"	"	"
Sodium	1.90	0.435	"	"	"	"	"

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B412802	09/28/2024	09/28/2024	Ua
2-Methylnaphthalene	0.003	0.002	"	"	"	"	"	
Acenaphthene	ND	0.020	"	"	"	"	"	Ua
Anthracene	ND	0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	Ua
Chrysene	ND	0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	Ua
Fluoranthene	ND	0.020	"	"	"	"	"	Ua
Fluorene	ND	0.020	"	"	"	"	"	Ua

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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

SEP01-OUTLET@3'

9/27/2024 10:25:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-09 (Soil)

PAH by EPA 8270E extracted via 3580A

Indeno (1,2,3-cd) pyrene	ND	0.020	mg/kg	1	B4I2802	09/28/2024	09/28/2024	Ua
Naphthalene	0.002	0.002	"	"	"	"	"	
Pyrene	ND	0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	99.2 %	60-130	"	"	"
Surrogate: Anthracene-d10	92.1 %	60-130	"	"	"
Surrogate: Pyrene-d10	103 %	60-130	"	"	"
Surrogate: Benzo (a) pyrene-d12	89.9 %	60-130	"	"	"

pH in Soil by 9045D

pH	8.09	pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	0.940	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.04	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	2.36	0.248	mg/kg	10	B4I2746	09/27/2024	09/28/2024
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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

SEP01-OUTLET@3'

9/27/2024 10:25:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-09 (Soil)

Table 915 metals by EPA 6020B

Barium	67.6		8.57	mg/kg	10	B412746	09/27/2024	09/28/2024	
Cadmium	0.170		0.0857	"	"	"	"	"	
Copper	ND		8.57	"	"	"	"	"	
Lead	7.47		0.857	"	"	"	"	"	
Nickel	5.81		0.857	"	"	"	"	"	
Selenium	ND		0.223	"	"	"	"	"	
Silver	ND		0.0857	"	"	"	"	"	
Zinc	ND		31.7	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	0.152	0.123	0.307	mg/kg dry	1	2688970	10/22/2024	10/24/2024	J
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

NATIVE-BG01@3'

9/27/2024 10:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-10 (Soil)

Boron (DTPA Sorbitol)

Boron	0.877	0.0983	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	6.57	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	9.02		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	17.0	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.566	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	3.03	0.276	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	118	9.51	"	"	"	"	"
Cadmium	0.178	0.0951	"	"	"	"	"
Copper	ND	9.51	"	"	"	"	"

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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG01@3'

9/27/2024 10:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-10 (Soil)

Table 915 metals by EPA 6020B

Lead	6.40		0.951	mg/kg	10	B412746	09/27/2024	09/28/2024	
Nickel	6.55		0.951	"	"	"	"	"	
Selenium	ND		0.247	"	"	"	"	"	
Silver	ND		0.0951	"	"	"	"	"	
Zinc	ND		35.2	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.141	0.353	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

NATIVE-BG01@6'

9/27/2024 10:40:00AM

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

E409863-11 (Soil)

Boron (DTPA Sorbitol)

Boron	1.27	0.101	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	1.10	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	1.01	0.823	"	"	"	"	"
Sodium	8.86	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.43		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	8.62	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.27	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	4.21	0.286	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	115	9.86	"	"	"	"	"
Cadmium	0.139	0.0986	"	"	"	"	"
Copper	10.5	9.86	"	"	"	"	"

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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG01@6'

9/27/2024 10:40:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-11 (Soil)

Table 915 metals by EPA 6020B

Lead	9.16	0.986	mg/kg	10	B412746	09/27/2024	09/28/2024
Nickel	11.7	0.986	"	"	"	"	"
Selenium	0.399	0.256	"	"	"	"	"
Silver	ND	0.0986	"	"	"	"	"
Zinc	40.6	36.5	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	ND	0.173	0.433	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG02@3'

9/27/2024 10:45:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-12 (Soil)

Boron (DTPA Sorbitol)

Boron	1.99	0.101	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	3.28	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	1.83	0.823	"	"	"	"	"
Sodium	19.9	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.30		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	12.5	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.51	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	1.59	0.271	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	131	9.34	"	"	"	"	"
Cadmium	0.327	0.0934	"	"	"	"	"
Copper	14.7	9.34	"	"	"	"	"

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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG02@3'

9/27/2024 10:45:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-12 (Soil)

Table 915 metals by EPA 6020B

Lead	11.0		0.934	mg/kg	10	B412746	09/27/2024	09/28/2024	
Nickel	10.2		0.934	"	"	"	"	"	
Selenium	ND		0.243	"	"	"	"	"	
Silver	ND		0.0934	"	"	"	"	"	
Zinc	73.6		34.5	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.114	0.286	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG02@6'

9/27/2024 10:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-13 (Soil)

Boron (DTPA Sorbitol)

Boron	2.27	0.100	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	4.01	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	2.58	0.823	"	"	"	"	"
Sodium	15.1	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.18		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	8.30	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.14	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	4.97	0.260	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	200	8.96	"	"	"	"	"
Cadmium	0.198	0.0896	"	"	"	"	"
Copper	12.4	8.96	"	"	"	"	"

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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG02@6'

9/27/2024 10:50:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-13 (Soil)

Table 915 metals by EPA 6020B

Lead	12.7		0.896	mg/kg	10	B412746	09/27/2024	09/28/2024	
Nickel	12.3		0.896	"	"	"	"	"	
Selenium	0.264		0.233	"	"	"	"	"	
Silver	ND		0.0896	"	"	"	"	"	
Zinc	56.6		33.1	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	0.159	0.129	0.322	mg/kg dry	1	2688970	10/22/2024	10/24/2024	J
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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG03@3'

9/27/2024 10:55:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-14 (Soil)

Boron (DTPA Sorbitol)

Boron	1.27	0.100	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	1.21	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	0.978	0.823	"	"	"	"	"
Sodium	18.1	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.52		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	17.3	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	2.08	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	4.41	0.262	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	592	9.03	"	"	"	"	"
Cadmium	0.259	0.0903	"	"	"	"	"
Copper	13.0	9.03	"	"	"	"	"

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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG03@3'

9/27/2024 10:55:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-14 (Soil)

Table 915 metals by EPA 6020B

Lead	11.1	0.903	mg/kg	10	B412746	09/27/2024	09/28/2024
Nickel	17.6	0.903	"	"	"	"	"
Selenium	ND	0.235	"	"	"	"	"
Silver	ND	0.0903	"	"	"	"	"
Zinc	53.7	33.4	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	ND	0.157	0.393	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG03@6'

9/27/2024 11:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-15 (Soil)

Boron (DTPA Sorbitol)

Boron	1.82	0.100	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	5.09	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	8.00	0.823	"	"	"	"	"
Sodium	26.5	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.22		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	10.4	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	3.76	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	2.71	0.286	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	101	9.87	"	"	"	"	"
Cadmium	0.119	0.0987	"	"	"	"	"
Copper	ND	9.87	"	"	"	"	"

Origins Laboratory



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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG03@6'

9/27/2024 11:00:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-15 (Soil)

Table 915 metals by EPA 6020B

Lead	5.69		0.987	mg/kg	10	B412746	09/27/2024	09/28/2024	
Nickel	6.85		0.987	"	"	"	"	"	
Selenium	ND		0.257	"	"	"	"	"	
Silver	ND		0.0987	"	"	"	"	"	
Zinc	ND		36.5	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	0.192	0.128	0.320	mg/kg dry	1	2688970	10/22/2024	10/24/2024	J
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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

NATIVE-BG04@3'

9/27/2024 11:05:00AM

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

E409863-16 (Soil)

Boron (DTPA Sorbitol)

Boron	0.925	0.0981	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	0.595	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	2.71	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.52		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	3.79	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.428	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	2.56	0.278	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	79.3	9.60	"	"	"	"	"
Cadmium	0.0970	0.0960	"	"	"	"	"
Copper	ND	9.60	"	"	"	"	"

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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG04@3'

9/27/2024 11:05:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-16 (Soil)

Table 915 metals by EPA 6020B

Lead	4.84		0.960	mg/kg	10	B412746	09/27/2024	09/28/2024	
Nickel	5.29		0.960	"	"	"	"	"	
Selenium	ND		0.250	"	"	"	"	"	
Silver	ND		0.0960	"	"	"	"	"	
Zinc	ND		35.5	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.117	0.294	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Ensolum
11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG04@6'

9/27/2024 11:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-17 (Soil)

Boron (DTPA Sorbitol)

Boron	2.46	0.0986	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	3.71	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	11.3	0.823	"	"	"	"	"
Sodium	30.9	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.31		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	11.3	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	4.22	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	3.65	0.285	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	150	9.83	"	"	"	"	"
Cadmium	0.216	0.0983	"	"	"	"	"
Copper	12.2	9.83	"	"	"	"	"

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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG04@6'

9/27/2024 11:10:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-17 (Soil)

Table 915 metals by EPA 6020B

Lead	10.3		0.983	mg/kg	10	B412746	09/27/2024	09/28/2024	
Nickel	13.1		0.983	"	"	"	"	"	
Selenium	ND		0.256	"	"	"	"	"	
Silver	ND		0.0983	"	"	"	"	"	
Zinc	47.0		36.4	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.143	0.357	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG05@3'

9/27/2024 11:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-18 (Soil)

Boron (DTPA Sorbitol)

Boron	0.112	0.101	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	0.824	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.37		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	0.167	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.169	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	3.19	0.284	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	95.6	9.81	"	"	"	"	"
Cadmium	ND	0.0981	"	"	"	"	"

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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG05@3'

9/27/2024 11:15:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-18 (Soil)

Table 915 metals by EPA 6020B

Copper	ND	9.81	mg/kg	10	B412746	09/27/2024	09/28/2024
Lead	5.95	0.981	"	"	"	"	"
Nickel	6.53	0.981	"	"	"	"	"
Selenium	ND	0.255	"	"	"	"	"
Silver	ND	0.0981	"	"	"	"	"
Zinc	ND	36.3	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	ND	0.189	0.473	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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11049 W 44th Avenue, Suite 103
Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG05@6'

9/27/2024 11:20:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory E409863-19 (Soil)

Boron (DTPA Sorbitol)

Boron	0.251	0.101	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	1.32	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.63		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	2.44	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.232	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	1.99	0.287	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	77.3	9.91	"	"	"	"	"
Cadmium	ND	0.0991	"	"	"	"	"

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

NATIVE-BG05@6'

9/27/2024 11:20:00AM

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

E409863-19 (Soil)

Table 915 metals by EPA 6020B

Copper	ND	9.91	mg/kg	10	B412746	09/27/2024	09/28/2024
Lead	5.84	0.991	"	"	"	"	"
Nickel	5.78	0.991	"	"	"	"	"
Selenium	ND	0.258	"	"	"	"	"
Silver	ND	0.0991	"	"	"	"	"
Zinc	ND	36.7	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	ND	0.151	0.377	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

NATIVE-BG06@3'

9/27/2024 11:25:00AM

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

E409863-20 (Soil)

Boron (DTPA Sorbitol)

Boron	0.244	0.0988	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	0.727	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	2.06	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	7.79	pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	2.90	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.299	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	1.93	0.281	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	87.2	9.70	"	"	"	"	"
Cadmium	0.170	0.0970	"	"	"	"	"
Copper	ND	9.70	"	"	"	"	"

Origins Laboratory



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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG06@3'

9/27/2024 11:25:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-20 (Soil)

Table 915 metals by EPA 6020B

Lead	7.67		0.970	mg/kg	10	B412746	09/27/2024	09/28/2024	
Nickel	5.66		0.970	"	"	"	"	"	
Selenium	ND		0.252	"	"	"	"	"	
Silver	ND		0.0970	"	"	"	"	"	
Zinc	ND		35.9	"	"	"	"	"	

Total Metals 7196A

Hexavalent Chromium	ND	0.134	0.336	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG06@6'

9/27/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-21 (Soil)

Boron (DTPA Sorbitol)

Boron	0.933	0.101	mg/L	1	B4I3017	09/30/2024	10/01/2024
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Metals by Saturated Paste by EPA 6010

Calcium	ND	0.499	meq/L	10	[CALC]	09/30/2024	10/01/2024
Magnesium	ND	0.823	"	"	"	"	"
Sodium	12.3	0.435	"	"	"	"	"

pH in Soil by 9045D

pH	8.77		pH Units	1	B4I3013	09/30/2024	10/01/2024
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SAR by 20B Saturated Paste

SAR	22.1	0.0100	SAR	1	B4I3009	09/30/2024	10/01/2024
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Specific Conductance Mod. 9050A

Specific Conductance (EC)	1.58	0.00500	mmhos/cm	1	B4I3013	09/30/2024	10/01/2024
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Table 915 metals by EPA 6020B

Arsenic	2.83	0.266	mg/kg	10	B4I2746	09/27/2024	09/28/2024
Barium	58.4	9.16	"	"	"	"	"
Cadmium	ND	0.0916	"	"	"	"	"

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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

NATIVE-BG06@6'

9/27/2024 11:30:00AM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory
E409863-21 (Soil)

Table 915 metals by EPA 6020B

Copper	ND	9.16	mg/kg	10	B412746	09/27/2024	09/28/2024
Lead	6.03	0.916	"	"	"	"	"
Nickel	5.41	0.916	"	"	"	"	"
Selenium	ND	0.238	"	"	"	"	"
Silver	ND	0.0916	"	"	"	"	"
Zinc	ND	33.9	"	"	"	"	"

Total Metals 7196A

Hexavalent Chromium	ND	0.140	0.351	mg/kg dry	1	2688970	10/22/2024	10/24/2024	U
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Origins Laboratory

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Wheat Ridge CO 80033

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4I2747 - EPA 3550B										
Blank (B4I2747-BLK1)					Prepared: 09/27/2024 Analyzed: 09/27/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	22		"	24.9		88.9	50-150			

Origins Laboratory

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I2747 - EPA 3550B

LCS (B4I2747-BS1)

Prepared: 09/27/2024 Analyzed: 09/27/2024

Diesel (C10-C28)	981	50.0	mg/kg	1000		98.1	70-130			
Residual Range Organics (C28-C40)	1130	200	"	1000		113	70-130			
Surrogate: o-Terphenyl	44		"	49.8		89.1	50-150			

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Jordan A. Bynon For Jen Pellegrini, Project Manager



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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I2747 - EPA 3550B

Matrix Spike (B4I2747-MS1)		Source: E409863-01			Prepared: 09/27/2024 Analyzed: 09/27/2024					
Diesel (C10-C28)	1070	50.0	mg/kg	1000	ND	107	70-130			
Residual Range Organics (C28-C40)	1260	200	"	1000	ND	126	70-130			
Surrogate: o-Terphenyl	45		"	49.8		90.9	50-150			

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11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I2747 - EPA 3550B

Matrix Spike Dup (B4I2747-MSD1)		Source: E409863-01			Prepared: 09/27/2024 Analyzed: 09/27/2024					
Diesel (C10-C28)	913	50.0	mg/kg	1000	ND	91.3	70-130	16.3	35	
Residual Range Organics (C28-C40)	1070	200	"	1000	ND	107	70-130	16.3	35	
Surrogate: o-Terphenyl	36		"	49.8		73.2	50-150			

Origins Laboratory

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Jordan A. Bynon For Jen Pellegrini, Project Manager



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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

Extractable Petroleum Hydrocarbons by 8015D - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4I2748 - EPA 5030 (soil)										
Blank (B4I2748-BLK1)					Prepared: 09/27/2024 Analyzed: 09/27/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		91.2	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.8	70-130			

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Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B412748 - EPA 5030 (soil)

LCS (B412748-BS1)

Prepared: 09/27/2024 Analyzed: 09/27/2024

1,2,4-Trimethylbenzene	0.0952	0.00200	mg/kg	0.100		95.2	70-130			
1,3,5-Trimethylbenzene	0.0900	0.00200	"	0.100		90.0	70-130			
Benzene	0.0886	0.00200	"	0.100		88.6	70-130			
Ethylbenzene	0.0804	0.00200	"	0.100		80.4	70-130			
Naphthalene	0.121	0.00380	"	0.100		121	70-130			
Toluene	0.0829	0.00200	"	0.100		82.9	70-130			
o-Xylene	0.0937	0.00200	"	0.100		93.7	70-130			
m,p-Xylene	0.168	0.00400	"	0.200		84.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		93.6	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.5	70-130			

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Jordan A. Bynon For Jen Pellegrini, Project Manager



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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4I2748 - EPA 5030 (soil)										
Matrix Spike (B4I2748-MS1)		Source: E409863-01			Prepared: 09/27/2024 Analyzed: 09/27/2024					
1,2,4-Trimethylbenzene	0.112	0.00200	mg/kg	0.100	ND	112	70-130			
1,3,5-Trimethylbenzene	0.112	0.00200	"	0.100	ND	112	70-130			
Benzene	0.113	0.00200	"	0.100	ND	113	70-130			
Ethylbenzene	0.108	0.00200	"	0.100	ND	108	70-130			
Naphthalene	0.108	0.00380	"	0.100	ND	108	70-130			
Toluene	0.107	0.00200	"	0.100	ND	107	70-130			
o-Xylene	0.109	0.00200	"	0.100	ND	109	70-130			
m,p-Xylene	0.226	0.00400	"	0.200	ND	113	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		89.2	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.4	70-130			

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

Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4I2748 - EPA 5030 (soil)										
Matrix Spike Dup (B4I2748-MSD1)		Source: E409863-01			Prepared: 09/27/2024 Analyzed: 09/27/2024					
1,2,4-Trimethylbenzene	0.109	0.00200	mg/kg	0.100	ND	109	70-130	2.81	20	
1,3,5-Trimethylbenzene	0.109	0.00200	"	0.100	ND	109	70-130	2.47	20	
Benzene	0.111	0.00200	"	0.100	ND	111	70-130	1.41	20	
Ethylbenzene	0.107	0.00200	"	0.100	ND	107	70-130	1.38	20	
Naphthalene	0.103	0.00380	"	0.100	ND	103	70-130	5.09	20	
Toluene	0.105	0.00200	"	0.100	ND	105	70-130	2.17	20	
o-Xylene	0.107	0.00200	"	0.100	ND	107	70-130	2.20	20	
m,p-Xylene	0.220	0.00400	"	0.200	ND	110	70-130	2.78	20	
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		90.3	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.3	70-130			

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

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I2746 - EPA 3050B

Blank (B4I2746-BLK1)

Prepared: 09/27/2024 Analyzed: 09/28/2024

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

LCS (B4I2746-BS1)

Prepared: 09/27/2024 Analyzed: 09/28/2024

Arsenic	5.25	0.290	mg/kg	5.00	105	80-120
Barium	532	10.0	"	500	106	80-120
Cadmium	5.76	0.100	"	5.00	115	80-120
Copper	58.2	10.0	"	50.0	116	80-120
Lead	5.43	1.00	"	5.00	109	80-120
Nickel	5.38	1.00	"	5.00	108	80-120
Selenium	5.85	0.260	"	5.00	117	80-120
Silver	5.21	0.100	"	5.00	104	80-120
Zinc	58.4	37.0	"	50.0	117	80-120

Matrix Spike (B4I2746-MS1)

Source: E409863-06

Prepared: 09/27/2024 Analyzed: 09/28/2024

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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I2746 - EPA 3050B

Matrix Spike (B4I2746-MS1)		Source: E409863-06			Prepared: 09/27/2024 Analyzed: 09/28/2024					
Arsenic	7.29	0.245	mg/kg	4.23	2.16	121	75-125			
Barium	543	8.46	"	423	53.3	116	75-125			
Cadmium	5.09	0.0846	"	4.23	0.102	118	75-125			
Copper	55.1	8.46	"	42.3	5.89	116	75-125			
Lead	11.4	0.846	"	4.23	6.25	122	75-125			
Nickel	11.4	0.846	"	4.23	5.31	144	75-125			QM-07
Selenium	4.94	0.220	"	4.23	0.0823	115	75-125			
Silver	4.55	0.0846	"	4.23	0.0204	107	75-125			
Zinc	84.1	31.3	"	42.3	22.5	146	75-125			QM-07
Matrix Spike Dup (B4I2746-MSD1)		Source: E409863-06			Prepared: 09/27/2024 Analyzed: 09/28/2024					
Arsenic	7.94	0.281	mg/kg	4.84	2.16	119	75-125	8.58	20	
Barium	548	9.69	"	484	53.3	102	75-125	0.820	20	
Cadmium	5.36	0.0969	"	4.84	0.102	109	75-125	5.25	20	
Copper	56.9	9.69	"	48.4	5.89	105	75-125	3.22	20	
Lead	11.5	0.969	"	4.84	6.25	108	75-125	0.417	20	
Nickel	11.3	0.969	"	4.84	5.31	124	75-125	1.08	20	
Selenium	5.26	0.252	"	4.84	0.0823	107	75-125	6.41	20	
Silver	4.83	0.0969	"	4.84	0.0204	99.2	75-125	5.91	20	
Zinc	79.2	35.8	"	48.4	22.5	117	75-125	6.07	20	

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Project: KMG - Madrigal 02-22 Facility

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I2802 - EPA 3580

Blank (B4I2802-BLK1)

Prepared: 09/28/2024 Analyzed: 09/28/2024

1-Methylnaphthalene	ND	0.002	mg/kg							Ua
2-Methylnaphthalene	ND	0.002	"							Ua
Acenaphthene	ND	0.020	"							Ua
Anthracene	ND	0.020	"							Ua
Benzo (a) anthracene	ND	0.005	"							Ua
Benzo (a) pyrene	ND	0.020	"							Ua
Benzo (b) fluoranthene	ND	0.020	"							Ua
Benzo (g,h,i) perylene	ND	0.020	"							Ua
Benzo (k) fluoranthene	ND	0.020	"							Ua
Chrysene	ND	0.020	"							Ua
Dibenz (a,h) anthracene	ND	0.020	"							Ua
Fluoranthene	ND	0.020	"							Ua
Fluorene	ND	0.020	"							Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"							Ua
Naphthalene	ND	0.002	"							Ua
Phenanthrene	ND	0.020	"							Ua
Pyrene	ND	0.020	"							Ua
Surrogate: Fluorene-d10	200		ug/kg	200		98.7	60-130			
Surrogate: Anthracene-d10	190		"	200		95.0	60-130			
Surrogate: Pyrene-d10	220		"	200		110	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		95.3	60-130			

LCS (B4I2802-BS1)

Prepared: 09/28/2024 Analyzed: 09/28/2024

1-Methylnaphthalene	0.181	0.002	mg/kg	0.200		90.3	70-130			
2-Methylnaphthalene	0.180	0.002	"	0.200		90.0	70-130			
Acenaphthene	0.194	0.020	"	0.200		96.8	70-130			
Anthracene	0.179	0.020	"	0.200		89.3	70-130			

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B412802 - EPA 3580

LCS (B412802-BS1)

Prepared: 09/28/2024 Analyzed: 09/28/2024

Benzo (a) anthracene	0.199	0.005	mg/kg	0.200		99.4	70-130
Benzo (a) pyrene	0.211	0.020	"	0.200		106	70-130
Benzo (b) fluoranthene	0.191	0.020	"	0.200		95.7	70-130
Benzo (g,h,i) perylene	0.186	0.020	"	0.200		93.1	70-130
Benzo (k) fluoranthene	0.161	0.020	"	0.200		80.5	70-130
Chrysene	0.192	0.020	"	0.200		95.8	70-130
Dibenz (a,h) anthracene	0.195	0.020	"	0.200		97.4	70-130
Fluoranthene	0.208	0.020	"	0.200		104	70-130
Fluorene	0.196	0.020	"	0.200		97.9	70-130
Indeno (1,2,3-cd) pyrene	0.193	0.020	"	0.200		96.6	70-130
Naphthalene	0.194	0.002	"	0.200		97.1	70-130
Phenanthrene	0.196	0.020	"	0.200		98.1	70-130
Pyrene	0.213	0.020	"	0.200		107	70-130
Surrogate: Fluorene-d10	200		ug/kg	200		98.4	60-130
Surrogate: Anthracene-d10	190		"	200		93.9	60-130
Surrogate: Pyrene-d10	210		"	200		106	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.7	60-130

Matrix Spike (B412802-MS1)

Source: E409863-01

Prepared: 09/28/2024 Analyzed: 09/28/2024

1-Methylnaphthalene	0.187	0.002	mg/kg	0.200	ND	93.5	70-130
2-Methylnaphthalene	0.186	0.002	"	0.200	ND	92.9	70-130
Acenaphthene	0.200	0.020	"	0.200	ND	100	70-130
Anthracene	0.206	0.020	"	0.200	ND	103	70-130
Benzo (a) anthracene	0.205	0.005	"	0.200	0.0004	102	70-130
Benzo (a) pyrene	0.205	0.020	"	0.200	ND	102	70-130
Benzo (b) fluoranthene	0.192	0.020	"	0.200	ND	96.1	70-130
Benzo (g,h,i) perylene	0.178	0.020	"	0.200	ND	89.1	70-130

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Project: KMG - Madrigal 02-22 Facility

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I2802 - EPA 3580

Matrix Spike (B4I2802-MS1)		Source: E409863-01			Prepared: 09/28/2024 Analyzed: 09/28/2024					
Benzo (k) fluoranthene	0.167	0.020	mg/kg	0.200	0.0008	83.2	70-130			
Chrysene	0.187	0.020	"	0.200	0.0005	93.0	70-130			
Dibenz (a,h) anthracene	0.188	0.020	"	0.200	0.0008	93.6	70-130			
Fluoranthene	0.211	0.020	"	0.200	0.0005	105	70-130			
Fluorene	0.201	0.020	"	0.200	ND	100	70-130			
Indeno (1,2,3-cd) pyrene	0.192	0.020	"	0.200	ND	95.9	70-130			
Naphthalene	0.197	0.002	"	0.200	ND	98.6	70-130			
Phenanthrene	0.201	0.020	"	0.200	ND	101	70-130			
Pyrene	0.219	0.020	"	0.200	ND	110	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		98.5	60-130			
Surrogate: Anthracene-d10	190		"	200		95.9	60-130			
Surrogate: Pyrene-d10	210		"	200		107	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		93.7	60-130			

Matrix Spike Dup (B4I2802-MSD1)		Source: E409863-01			Prepared: 09/28/2024 Analyzed: 09/28/2024					
1-Methylnaphthalene	0.190	0.002	mg/kg	0.200	ND	94.9	70-130	1.46	20	
2-Methylnaphthalene	0.188	0.002	"	0.200	ND	94.1	70-130	1.30	20	
Acenaphthene	0.203	0.020	"	0.200	ND	101	70-130	1.28	20	
Anthracene	0.193	0.020	"	0.200	ND	96.7	70-130	6.34	20	
Benzo (a) anthracene	0.213	0.005	"	0.200	0.0004	106	70-130	3.85	20	
Benzo (a) pyrene	0.210	0.020	"	0.200	ND	105	70-130	2.49	20	
Benzo (b) fluoranthene	0.193	0.020	"	0.200	ND	96.7	70-130	0.695	20	
Benzo (g,h,i) perylene	0.186	0.020	"	0.200	ND	92.8	70-130	4.04	20	
Benzo (k) fluoranthene	0.168	0.020	"	0.200	0.0008	83.8	70-130	0.633	20	
Chrysene	0.194	0.020	"	0.200	0.0005	96.8	70-130	3.97	20	
Dibenz (a,h) anthracene	0.202	0.020	"	0.200	0.0008	101	70-130	7.41	20	
Fluoranthene	0.211	0.020	"	0.200	0.0005	105	70-130	0.334	20	

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I2802 - EPA 3580

Matrix Spike Dup (B4I2802-MSD1)		Source: E409863-01			Prepared: 09/28/2024 Analyzed: 09/28/2024					
Fluorene	0.208	0.020	mg/kg	0.200	ND	104	70-130	3.46	20	
Indeno (1,2,3-cd) pyrene	0.189	0.020	"	0.200	ND	94.4	70-130	1.53	20	
Naphthalene	0.203	0.002	"	0.200	ND	101	70-130	2.88	20	
Phenanthrene	0.206	0.020	"	0.200	ND	103	70-130	2.34	20	
Pyrene	0.219	0.020	"	0.200	ND	109	70-130	0.339	20	
Surrogate: Fluorene-d10	200		ug/kg	200		99.3	60-130			
Surrogate: Anthracene-d10	190		"	200		96.3	60-130			
Surrogate: Pyrene-d10	210		"	200		103	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		93.1	60-130			

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Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I3009 - Saturated Paste Metals

Blank (B4I3009-BLK1)

Prepared: 09/30/2024 Analyzed: 10/01/2024

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

Duplicate (B4I3009-DUP1)

Source: E409863-01

Prepared: 09/30/2024 Analyzed: 10/01/2024

SAR	ND	0.0100	SAR	0.138		200
Calcium PPM	3.17	10.0	mg/L	4.49	34.5	50
Magnesium PPM	0.710	10.0	"	0.710	0.00	50
Sodium PPM	1.05	10.0	"	1.19	12.5	50

Batch B4I3017 - DTPA Sorbitol Preparation

Blank (B4I3017-BLK1)

Prepared: 09/30/2024 Analyzed: 10/01/2024

Boron	ND	0.100	mg/L
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Duplicate (B4I3017-DUP1)

Source: E409863-01

Prepared: 09/30/2024 Analyzed: 10/01/2024

Boron	ND	0.100	mg/L	ND		50
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Jordan A. Bynon For Jen Pellegrini, Project Manager



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Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B4I3013 - Saturated Paste pH/EC

Blank (B4I3013-BLK1)

Prepared: 09/30/2024 Analyzed: 10/01/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

Duplicate (B4I3013-DUP1)

Source: E409863-01

Prepared: 09/30/2024 Analyzed: 10/01/2024

pH	4.33		pH Units	4.62			6.48	25
Specific Conductance (EC)	0.0909	0.00500	mmhos/cm	0.0780			15.3	25

Batch B4J0743 - Saturated Paste pH/EC

Duplicate (B4J0743-DUP1)

Source: E409863-01

Prepared: 10/07/2024 Analyzed: 10/10/2024

pH	4.52		pH Units	4.40			2.69	25
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Origins Laboratory

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

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

Jeremy Espinoza
Project Number: 09A1417840
Project: KMG - Madrigal 02-22 Facility

Total Metals 7196A - Quality Control GEL Laboratories, LLC

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2688970 - SW846 3060A										
BLANK (1205888532-BLK)					Prepared: 10/22/2024 Analyzed: 10/24/2024					
Hexavalent Chromium	ND	0.347	mg/kg				-			U
LCS (1205888533-BKS)					Prepared: 10/22/2024 Analyzed: 10/24/2024					
Hexavalent Chromium	3.11	0.322	mg/kg	3.22		96.6	80-120			
DUP (1205888534 D)					Prepared: 10/22/2024 Analyzed: 10/24/2024					
Source: E409863-01										
Hexavalent Chromium	ND	0.269	mg/kg dry		<0.108		0-50	N/A	50	U
MS (1205888535 S)					Prepared: 10/22/2024 Analyzed: 10/24/2024					
Source: E409863-01										
Hexavalent Chromium	2.26	0.269	mg/kg dry	2.69	<0.108	80.2	75-125			
DUP (1205888536 D)					Prepared: 10/22/2024 Analyzed: 10/24/2024					
Source: E409863-02										
Hexavalent Chromium	0.142	0.248	mg/kg dry		0.166		0-50	16.1	50	J
MS (1205888537 S)					Prepared: 10/22/2024 Analyzed: 10/24/2024					
Source: E409863-02										
Hexavalent Chromium	1.84	0.248	mg/kg dry	2.48	0.166	67.7	75-125			
ILCS (1205888538-ILCS)					Prepared: 10/22/2024 Analyzed: 10/24/2024					
Source: E409863-02										
Hexavalent Chromium	7.41	0.372	mg/kg	7.47		99.2	80-120			

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Ensolum

11049 W 44th Avenue, Suite 103

Wheat Ridge CO 80033

Jeremy Espinoza

Project Number: 09A1417840

Project: KMG - Madrigal 02-22 Facility

Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

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

J Greater than the detection limit but less than the reporting limit

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

Origins Laboratory



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