



**Mull Drilling**

**November 12, 2024**

**Kendall Pelton**

**1700 N Waterfront Pkway Bldg #1200**

**Wichita**

**KS**

**67206**

**Project Name - Mauer SWD#1**

**Project Number - [none]**

Attached are your analytical results for Mauer SWD#1 received by Origins Laboratory October 24, 2024. This project is associated with Origins project number E410807-01.

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**

Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP 15 4'	E410807-01	Soil	October 23, 2024 9:45	10/24/2024 10:45
SP 15 5'	E410807-02	Soil	October 23, 2024 9:50	10/24/2024 10:45
SP 15 6'	E410807-03	Soil	October 23, 2024 9:55	10/24/2024 10:45
SP 16 4'	E410807-04	Soil	October 23, 2024 9:25	10/24/2024 10:45
SP 16 5'	E410807-05	Soil	October 23, 2024 9:30	10/24/2024 10:45
SP 16 6'	E410807-06	Soil	October 23, 2024 9:45	10/24/2024 10:45
SP 17 4'	E410807-07	Soil	October 23, 2024 8:55	10/24/2024 10:45
SP 17 5'	E410807-08	Soil	October 23, 2024 9:00	10/24/2024 10:45
SP 17 6'	E410807-09	Soil	October 23, 2024 9:05	10/24/2024 10:45
BG 6 3'	E410807-10	Soil	October 23, 2024 11:00	10/24/2024 10:45
BG 6 4'	E410807-11	Soil	October 23, 2024 11:05	10/24/2024 10:45
BG 6 6'	E410807-12	Soil	October 23, 2024 11:10	10/24/2024 10:45
BG 6 10'	E410807-13	Soil	October 23, 2024 11:20	10/24/2024 10:45

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.*

Mull Drilling  
 1700 N Waterfront Pkwy Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

Client: Mull Drilling  
 Address: 1700 N Waterfront Pkwy  
Wichita, KS 67206  
 Telephone Number: 316-441-6312  
 Email Address: klb@MULLDRILLING.COM

Project Manager: Kendall Pelton  
 Project Name: Mauer #1 SWD  
 Project Number: \_\_\_\_\_  
 Collected By: Kendall Pelton  
 Invoice Billing Info: \_\_\_\_\_

Key: \_\_\_\_\_  
 W=Water  
 GW=Groundwater  
 SW=Surface Water  
 WW=Waste Water  
 L=Liquid

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


#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix Preservative	Analysis							Comments
						Barium	Cadmium	Copper	Lead	Manganese	Nickel	Zinc	
1	SP 15 4'	10/19/14	9:45	2	UNP	X	X	X	X	X	X		
2	SP 15 5'	10/21/14	9:50	2	UNP	X	X	X	X	X	X		
3	SP 15 6'	10/21/14	9:55	2	UNP	X	X	X	X	X	X		
4	SP 16 4'	10/21/14	9:25	2	UNP	X	X	X	X	X	X		
5	SP 16 5'	10/21/14	9:30	2	UNP	X	X	X	X	X	X		
6	SP 16 6'	10/21/14	9:45	2	UNP	X	X	X	X	X	X		
7	SP 17 4'	10/23/14	8:55	2	UNP	X	X	X	X	X	X		
8	SP 17 5'	10/23/14	9:00	2	UNP	X	X	X	X	X	X		
9	SP 17 6'	10/23/14	9:05	2	UNP	X	X	X	X	X	X		
10													

Requisitioned By: Kendall Pelton Date: 10/19/14 Time: 11:40 Received By: JS Date: 10/24/14 Time: 10:15

Requisitioned By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Temp Received: 07 Received On Ice?  Yes  No

Turnaround Time:  Standard  48 Hr  72 DAY  SAME DAY  24 Hr

Origins Laboratory  


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Mull Drilling  
 1700 N Waterfront Pkwy Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

Client: Mull Drilling  
 Address: 1700 N Waterfront Pkwy  
Wichita, KS 67266  
 Project Manager: Kendall Pelton  
 Project Name: Mauer #1 SWD  
 Project Number: \_\_\_\_\_  
 Telephone Number: \_\_\_\_\_  
 Collected By: Kendall Pelton  
 Invoice/Billing Info: \_\_\_\_\_  
 Email Address: \_\_\_\_\_


S=Soil | SC=Solid | O=Oil | A=Air | G=Gas | UWP=Umpres | HCL=Hydrochloric | HNO3=Nitric | H2SO4=Sulfuric | NaOH=Sodium Hydroxide  
 L=Liquid

#	Sample ID	Date Sampled	Time Sampled	# of Containers	Matrix	Preservative	Analysis				Comments
							U	S	A	R	
1	B9 6 3'	6/23/14	11:00	2 S	UWP						
2	B9 6 4'	6/23/14	11:05	2 S	UWP						
3	B9 6 7'	6/23/14	11:10	2 S	UWP						
4	B9 6 10'	6/23/14	11:20	2 S	UWP						
5											
6											
7											
8											
9											
10											

Requisitioned By: K. Pelton Date: 6/23/14 Time: 6:40 Received By: JS Date: 6/24/14 Time: 6:15  
 Turnaround Time:  SAME DAY  24 Hr  48 Hr  72 Hr  
 Standard

Temp Received: 0.7 Received On Ice?  Yes  No

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

Origins Laboratory  


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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: E410807 Client: Mull  
 Checklist Completed by: JHD/WS Client Project ID: Mauer  
 Date/time completed: 10/24/12 Shipped Via: NO  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 1 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °C  
 Thermometer ID: 07

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

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

Reviewed by: AS (Project Manager) Date/Time Reviewed: 10/28/12

Origins Laboratory



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Mull Drilling  
 1700 N Waterfront Pkway Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

**SP 15 4'**

**10/23/2024 9:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410807-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.61	0.102	mg/L	1	B4J2808	10/28/2024	10/29/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	16.9	0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024
Magnesium	19.8	0.823	"	"	"	"	"
Sodium	66.0	0.435	"	"	"	"	"

**pH in Soil by 9045D**

pH	7.98		pH Units	1	B4J2823	10/28/2024	10/29/2024
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**SAR by 20B Saturated Paste**

SAR	15.4	0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	10.6	0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024
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**Table 915 metals by EPA 6020B**

Arsenic	6.11	0.257	mg/kg	10	B4J2535	10/25/2024	10/28/2024
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Origins Laboratory



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Mull Drilling  
 1700 N Waterfront Pkway Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

**SP 15 5'**

**10/23/2024 9:50:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410807-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.72	0.101	mg/L	1	B4J2808	10/28/2024	10/29/2024
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**Metals by Saturated Paste by EPA 6010**

Calcium	28.0	0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024
Magnesium	38.2	0.823	"	"	"	"	"
Sodium	96.8	4.35	"	100	"	"	10/30/2024

**pH in Soil by 9045D**

pH	7.91		pH Units	1	B4J2823	10/28/2024	10/29/2024
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**SAR by 20B Saturated Paste**

SAR	16.8	0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	13.2	0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024
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**Table 915 metals by EPA 6020B**

Arsenic	7.13	0.262	mg/kg	10	B4J2535	10/25/2024	10/28/2024
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Origins Laboratory



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Mull Drilling  
 1700 N Waterfront Pkway Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

**SP 15 6'**

**10/23/2024 9:55:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
 E410807-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.63		0.0986	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	22.8		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	35.7		0.823	"	"	"	"	"	
Sodium	82.4		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	7.95			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	15.2		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	12.3		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	6.75		0.285	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**SP 16 4'**

**10/23/2024 9:25:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.53		0.101	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	57.4		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	26.5		0.823	"	"	"	"	"	
Sodium	145		4.35	"	100	"	"	10/30/2024	

**pH in Soil by 9045D**

pH	7.71			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	22.4		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	19.4		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	6.41		0.262	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
 1700 N Waterfront Pkway Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

**SP 16 5'**

**10/23/2024 9:30:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory**  
**E410807-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.10		0.0982	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	43.3		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	25.0		0.823	"	"	"	"	"	
Sodium	94.7		4.35	"	100	"	"	10/30/2024	

**pH in Soil by 9045D**

pH	7.74			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	16.2		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	14.6		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	6.80		0.268	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**SP 16 6'**

**10/23/2024 9:45:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-06 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.48		0.0995	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	35.3		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	28.1		0.823	"	"	"	"	"	
Sodium	96.6		4.35	"	100	"	"	10/30/2024	

**pH in Soil by 9045D**

pH	7.80			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	17.2		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	15.0		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	9.09		0.275	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**SP 17 4'**

**10/23/2024 8:55:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-07 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	2.25		0.0997	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	29.8		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	13.2		0.823	"	"	"	"	"	
Sodium	156		4.35	"	100	"	"	10/30/2024	

**pH in Soil by 9045D**

pH	7.77			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	33.5		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	19.0		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	6.68		0.247	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**SP 17 5'**

**10/23/2024 9:00:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-08 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.42		0.101	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	20.2		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	9.22		0.823	"	"	"	"	"	
Sodium	112		4.35	"	100	"	"	10/30/2024	

**pH in Soil by 9045D**

pH	7.83			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	29.2		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	14.3		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	6.44		0.268	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**SP 17 6'**

**10/23/2024 9:05:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-09 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.51		0.101	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	17.0		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	9.21		0.823	"	"	"	"	"	
Sodium	110		4.35	"	100	"	"	10/30/2024	

**pH in Soil by 9045D**

pH	7.94			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	30.4		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	12.8		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	7.14		0.279	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**BG 6 3'**

**10/23/2024 11:00:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-10 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.775		0.100	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	0.653		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	3.22		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	8.54			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	4.11		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.530		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	7.80		0.256	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**BG 6 4'**

**10/23/2024 11:05:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-11 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.545		0.101	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	0.885		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	2.02		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	8.44			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	2.33		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.404		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	8.49		0.279	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**BG 6 6'**

**10/23/2024 11:10:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-12 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.51		0.100	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	1.18		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	1.14		0.823	"	"	"	"	"	
Sodium	9.46		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	8.44			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	8.79		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.38		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	10.5		0.270	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

**BG 6 10'**

**10/23/2024 11:20:00AM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory  
E410807-13 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	1.66		0.0981	mg/L	1	B4J2808	10/28/2024	10/29/2024	
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**Metals by Saturated Paste by EPA 6010**

Calcium	19.7		0.499	meq/L	10	[CALC]	10/28/2024	10/29/2024	
Magnesium	14.4		0.823	"	"	"	"	"	
Sodium	24.6		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	7.98			pH Units	1	B4J2823	10/28/2024	10/29/2024	
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**SAR by 20B Saturated Paste**

SAR	5.97		0.0100	SAR	1	B4J2816	10/28/2024	10/29/2024	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	5.14		0.00500	mmhos/cm	1	B4J2823	10/28/2024	10/29/2024	
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**Table 915 metals by EPA 6020B**

Arsenic	9.41		0.248	mg/kg	10	B4J2535	10/25/2024	10/28/2024	
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Origins Laboratory



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Mull Drilling  
 1700 N Waterfront Pkway Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

**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
<b>Batch B4J2535 - EPA 3050B</b>										
<b>Blank (B4J2535-BLK1)</b>					Prepared: 10/25/2024 Analyzed: 10/28/2024					
Arsenic	ND	0.290	mg/kg							
<b>LCS (B4J2535-BS1)</b>					Prepared: 10/25/2024 Analyzed: 10/28/2024					
Arsenic	5.93	0.290	mg/kg	5.00		119	80-120			
<b>Matrix Spike (B4J2535-MS1)</b>					Source: E410807-03 Prepared: 10/25/2024 Analyzed: 10/28/2024					
Arsenic	11.1	0.247	mg/kg	4.25	6.75	102	75-125			
<b>Matrix Spike Dup (B4J2535-MSD1)</b>					Source: E410807-03 Prepared: 10/25/2024 Analyzed: 10/28/2024					
Arsenic	12.3	0.257	mg/kg	4.43	6.75	125	75-125	10.4	20	

Origins Laboratory

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Mull Drilling  
 1700 N Waterfront Pkway Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

**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 B4J2808 - DTPA Sorbitol Preparation**

**Blank (B4J2808-BLK1)**

Prepared: 10/28/2024 Analyzed: 10/29/2024

Boron ND 0.100 mg/L

**Duplicate (B4J2808-DUP1)**

**Source: E410756-20**

Prepared: 10/28/2024 Analyzed: 10/29/2024

Boron 0.215 0.0990 mg/L 0.190 12.2 50

**Batch B4J2816 - Saturated Paste Metals**

**Blank (B4J2816-BLK1)**

Prepared: 10/28/2024 Analyzed: 10/29/2024

Calcium PPM ND 10.0 mg/L

SAR ND 0.0100 SAR

Magnesium PPM ND 10.0 mg/L

Sodium PPM ND 10.0 "

**Duplicate (B4J2816-DUP1)**

**Source: E410802-01**

Prepared: 10/28/2024 Analyzed: 10/29/2024

SAR ND 0.0100 SAR 6.23 200

Calcium PPM 406 10.0 mg/L 289 33.7 50

Magnesium PPM 100 10.0 " 114 12.6 50

Sodium PPM 482 10.0 " 494 2.50 50

Origins Laboratory



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Mull Drilling  
 1700 N Waterfront Pkway Bldg #1200  
 Wichita KS 67206

Kendall Pelton  
 Project Number: [none]  
 Project: Mauer SWD#1

**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 B4J2823 - Saturated Paste pH/EC**

**Blank (B4J2823-BLK1)**

Prepared: 10/28/2024 Analyzed: 10/29/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

**Duplicate (B4J2823-DUP1)**

**Source: E410802-01**

Prepared: 10/28/2024 Analyzed: 10/29/2024

Specific Conductance (EC)	4.60	0.00500	mmhos/cm		4.32		6.11	25	
pH	8.19		pH Units		8.23		0.487	25	

Origins Laboratory

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Mull Drilling  
1700 N Waterfront Pkway Bldg #1200  
Wichita KS 67206

Kendall Pelton  
Project Number: [none]  
Project: Mauer SWD#1

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**Notes and Definitions**

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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