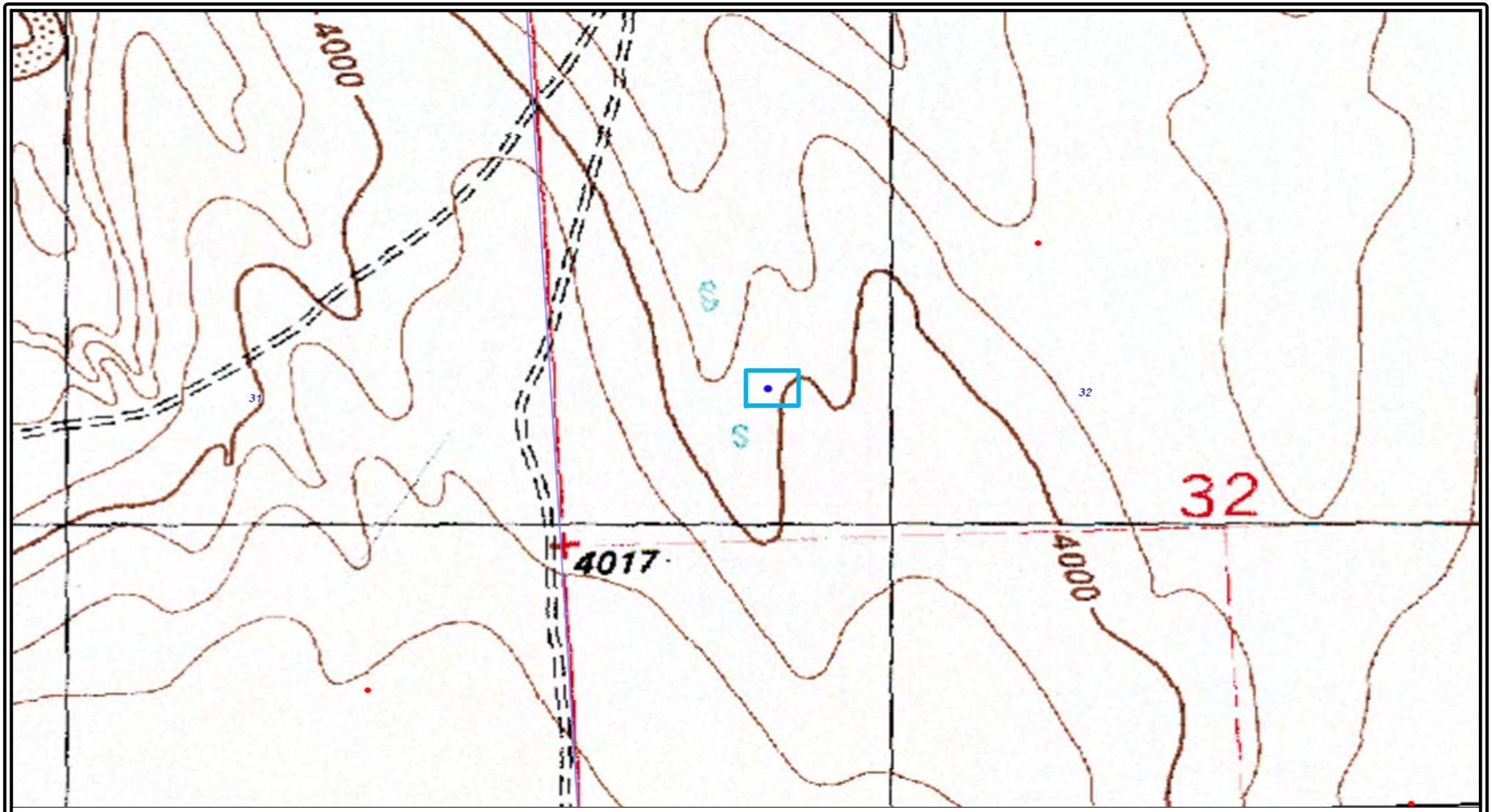
FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Soil Sample Location Map



MULL DRILLING COMPANY, INC.
NORTHWEST ARAPAHOE UNIT #37
API 05-017-07151
SWNW S32, T13S R42W, CHEYENNE COUNTY
TOPOGRAPHIC MAP

Legend

Location Boundary

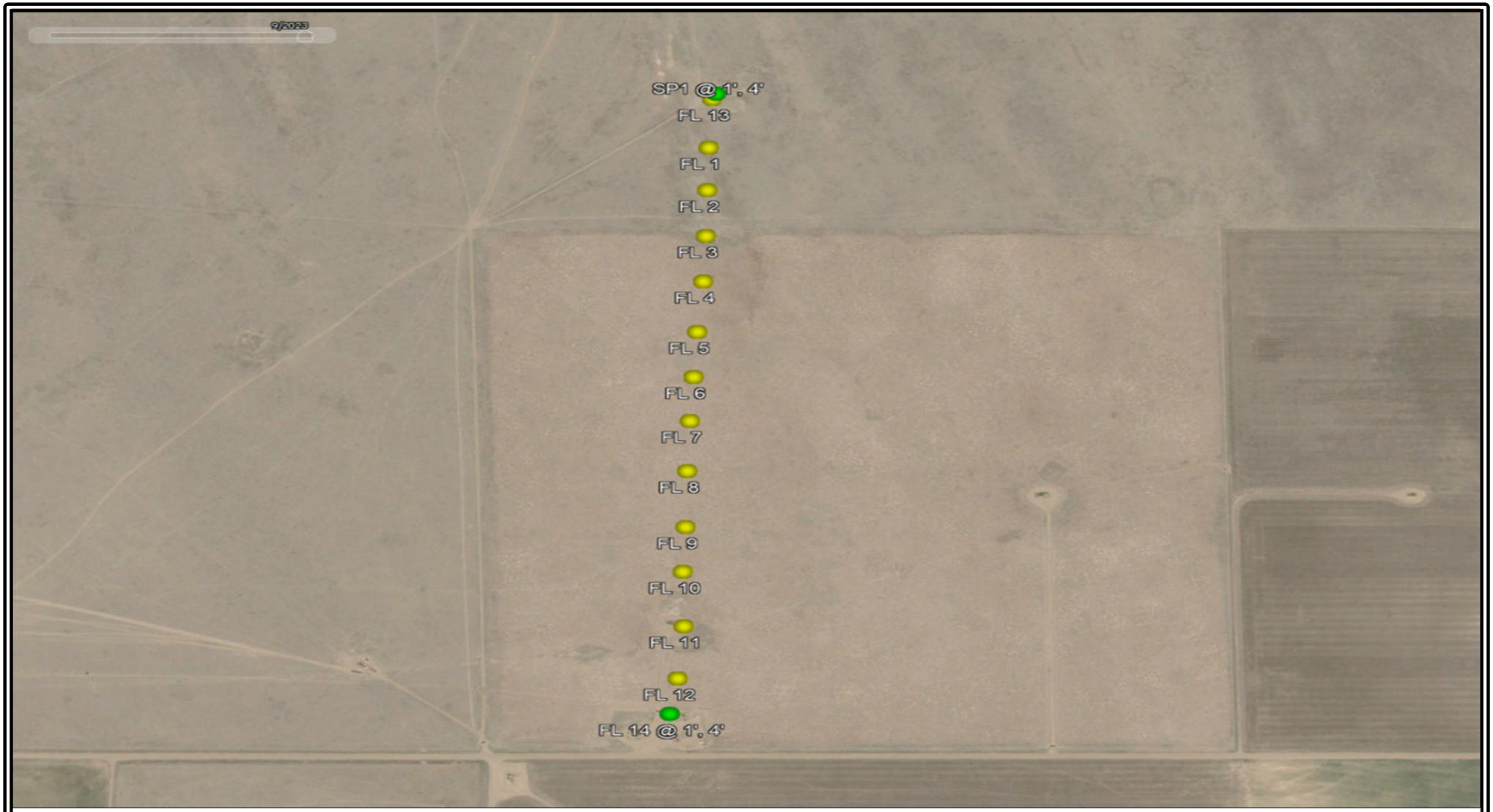
N

0 ft 350 ft 700 ft

ARDOR

Prepared By:
Ardor Environmental LLC

December 26, 2023



MULL DRILLING COMPANY, INC.
NORTHWEST ARAPAHOE UNIT #37
API 05-017-07151
SWNW S32, T13S R42W, CHEYENNE COUNTY
2024 FLOWLINE PID SCREENING LOCATIONS

Legend

FL PID Screening Locations
(Collected 4/10/2024)

N

0 ft 50 ft
APPROXIMATE SCALE IN FEET

Imagery Source: Google Earth 2023

ARDOR

Prepared By:
Ardor Environmental LLC

November 4, 2024

MULL DRILLING COMPANY, INC.
NORTHWEST ARAPAHOE UNIT #37
API 05-017-07151
SWNW S32, T13S R42W, CHEYENNE COUNTY
FLOWLINE ENDPOINT SOIL SAMPLE LOCATION

Legend

- Flowline Field Screening Locations
- Background Soil Sample
- Soil Sample In Compliance With Table 915-1

N

0 ft 50 ft

APPROXIMATE SCALE IN FEET

Imagery Source: Google Earth 2023

ARDOR

Prepared By:
Ardor Environmental LLC

November 4 , 2024

MULL DRILLING COMPANY, INC.
NORTHWEST ARAPAHOE UNIT #37
API 05-017-07151
SWNW S32, T13S R42W, CHEYENNE COUNTY
WELLHEAD SOIL SAMPLE LOCATIONS

Legend

- Background Soil Sample
- Soil Sample In Compliance With Table 915-1

N

0 ft 50 ft

APPROXIMATE SCALE IN FEET

Imagery Source: Google Earth 2023

ARDOR

Prepared By:
Ardor Environmental LLC

November 4 , 2024

TABLES

Table 1: Flowline Photoionization Detector Reading Summary

Table 2: Combined Analytical Results

NWAU 37 Table 915-1			4/13/2023								10/26/2023				2/29/2024				10/3/2024					
CLEANUP CONCENTRATIONS			**SP1 0'-1'**	**SP1 4'**	**SP2 0'-1'**	**SP3 0'-1'**	**SP4 0'-1'**	**SP5 0'-1' (Background)**	**SP6 0'-1' (Background)**	**DUPLICATE A**	**SP 5 4' (Background)**	**SP 7 0'-1'**	**SP 8**	**SP 9**	**SP2 @3'**	**SP2 @4'**	**BG-01 @3'**	**BG-01 @4'**	**FL 14 @ 1'**	**FL 14 @4'**	**BG 02 @ 1'**	**BG 02 @ 4'**	**BG 03 @1'**	**BG 03 @ 4'**
Contaminant of Concern	**Concentrations**		**38.880577, -102.143284**	**38.880577, -102.143284**	**38.880475, -102.143108**	**38.880794, -102.143211**	**38.880406, -102.143348**	**38.880194, -102.142844**	**38.881013, -102.143673**	**38.880794, -102.143211**	**38.880194, -102.142844**	**38.880318, -102.142904**	**38.880237, -102.142789**	**38.880222, -102.142904**	**38.880475, -102.143108**	**38.880475, -102.143108**	**38.880236 -102.142831**	**38.880236 -102.142831**	**38.871970, -102.143864**	**38.871970, -102.143864**	**38.872146, -102.142967**	**38.872146, -102.142967**	**38.872146, -102.142967**	**38.872146, -102.142967**
Soil TPH (total volatile [C6-C10] and extractable [C10-C36] hydrocarbons)	500mg/kg		29.3J	6.9 J	16J	109.1	44.7	35J	42.6	49.1	ERO 3.1 GRO U	ERO 8.0 GRO U	ERO 26 GRO U	ERO 5.0 GRO U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
PID READING	below visual detection limits		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.1 ppm	5.9 ppm	0.7 ppm	0.7 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
Soil Suitability for Reclamation																								
Electrical conductivity (EC) (by saturated paste method)	<4mmhos/cm		0.319	1.7	0.162	0.275	0.223	0.138	0.268	0.221	0.5	0.58	0.44	0.51	NA	NA	NA	NA	0.36	0.36	0.28	0.45	0.45	0.31
Sodium adsorption ratio (SAR) (by saturated paste method)	<6		0.104	0.366	1.25	0.096	0.0553	0.0706	0.0553	0.0926	1.6	0.1	0.36	0.2	NA	NA	0.102	0.1	0.04	0.062	0.222	2.94	0.05	0.518
pH (by saturated paste method)	6–8.3		8.1	7.88	8.22	8.07	8.08	**8.33**	8.08	8.03	**8.52**	8.29	7.23	7.6	NA	NA	8.1	8.26	8.23	8.29	**8.37**	**8.38**	8.11	**8.33**
boron (hot water soluble soil extract)	2mg/l		0.289	0.36	0.301	0.244	0.233	0.180J	0.233	0.297	0.64	0.34	0.44	0.34	NA	NA	NA	NA	0.197	0.142	0.36	0.737	ND	0.456
Organic Compounds in Groundwater																								
benzene	5µg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
toluene	560 to 1,000µg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ethylbenzene	700µg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
xylenes (sum of o-, m- and p- isomers = total xylenes)	1,400 to 10,000µg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
naphthalene	140µg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2,4-trimethylbenzene	67µg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-trimethylbenzene	67µg/l		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Groundwater Inorganic Parameters																								
total dissolved solids (TDS)	<1.25 X local background		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
chloride ion	250mg/l or <1.25 X local background		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
sulfate ion	250mg/l or <1.25 X local background		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Soils	**Residential Soil Screening Level Concentrations (mg/kg)**	**Protection of Groundwater Soil Screening Level Concentrations (mg/kg)**	**SP1 0'-1'**	**SP1 4'**	**SP2 0'-1'**	**SP3 0'-1'**	**SP4 0'-1'**	**SP5 0'-1' (Background)**	**SP6 0'-1' (Background)**	**DUPLICATE A**	**SP 5 4'**	**SP 7 0'-1'**	**SP 8**	**SP 9**	**SP2 @3'**	**SP2 @4'**	**BG-01 @3'**	**BG-01 @3'**	**FL 14 @ 1'**	**FL 14 @4'**	**BG 02 @ 1'**	**BG 02 @ 4'**	**BG 03 @1'**	**BG 03 @ 4'**
Organic Compounds in Soils																								
benzene	1.2	0.0026 (M)	ND	ND	ND	0.00071J	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
toluene	490	0.69 (M)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	0.11	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
ethylbenzene	5.8	0.78 (M)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
xylenes (sum of o-, m- and p- isomers = total xylenes)	58	9.9 (M)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	0.35	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,2,4-trimethylbenzene	30	0.0081 (R)	0.0013J	0.00080J	ND	ND	ND	ND	ND	ND	U	U	U	0.11	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
1,3,5-trimethylbenzene	27	0.0087 (R)	0.00052J	ND	ND	ND	ND	ND	0.0014J	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
acenaphthene	360	0.55 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
anthracene	1800	5.8 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
benz(a)anthracene	1.1	0.011 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
benzo(b)fluoranthene	1.1	0.3 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
benzo(k)fluoranthene	11	2.9 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
benzo(a)pyrene	0.11	0.24 (M)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
chrysene	110	9 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
dibenzo(a,h)anthracene	0.11	0.096 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
fluoranthene	240	8.9 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
fluorene	240	0.54 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
indeno(1,2,3-cd)pyrene	1.1	0.98 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	18	0.006 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	24	0.019 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
naphthalene	2	0.0038 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
pyrene	180	1.3 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
Metals in Soils																								
arsenic	0.68	0.29 (M)	**4.5**	**4.9**	**6.0**	**4.5**	**4.7**	**4.5**	**4.1**	**4.3**	**3.2**	**3.6**	**3.1**	**2.3**	**5.11**	**5.78**	**6.46**	**6.6**	**4.06**	**4.37**	**4.41**	**4.94**	**4.31**	**4.68**
barium	15000	82 (M)	155	574	158	151	147	156	128	143	170	140	130	96	NA	NA	NA	NA	184	251	169	323	197	267
cadmium	71	0.38 (M)	0.6	0.57	0.64	0.51	0.54	0.51	0.51	0.49	0.052 J	0.11 J	0.096	0.11	NA	NA	NA	NA	0.191	ND	0.21	0.228	0.225	0.206
chromium (VI)	0.3	0.00067 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
copper	3100	46 (M)	9.4	9.4	11.2	9.3	9.1	8.6	8	9.1	6.1	6.6	5.8	4.8	NA	NA	NA	NA	9.49	10.1	10	10.7	10.7	11.8
lead	400	14 (M)	15.1	8.2	9.4	10.9	8.6	7.6	8.1	14.6	7.9	9.9	9.7	8.3	NA	NA	NA	NA	9.31	12.4	9.82	10.9	11.4	10.8
nickel	1500	26 (R)	8.9	9.9	12.5	9.4	9.1	8.9	8.3	8.7	6.8	7.3	7	5	NA	NA	NA	NA	12.6	ND	12.5	13.8	14.2	14.3
selenium	390	0.26 (M)	ND	ND	ND	ND	ND	ND	ND	ND	U	0.37	0.35	0.29	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
silver	390	0.8 (R)	ND	ND	ND	ND	ND	ND	ND	ND	U	U'	U	U	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND
zinc	23000	370 (R)	40.3	33.5	39.9	39	35.8	28.7	32.9	42.8	22	25	25	19	NA	NA	NA	NA	ND	ND	35.4	39.9	42.1	43.2

*The letter "(**R**)" following a protection of Groundwater soil screening level indicates the concentration is derived from a risk-based approach. The letter "(**M**)" following a protection of Groundwater soil screening level indicates the*
Quantifier "J" indicated analyte is present at an estimated concentration between the MDL and Reporting Limit.
Quantifier "U" indicates analyzed but not detected above the MDL.
Values presented in **BOLD** contained concentrations exceeding ECMC Table 915-1 Residential Soil Screening Level limits, but are within Background results.
Values presented in **BOLD** contained concentrations exceeding ECMC Table 915-1 Residential Soil Screening Level limits, and Background results.
*Arsenic is naturally occurring in Colorado at concentrations above ECMC Table 915-1, Local Clean-Up Level is 1.25xBG (6.60 mg/kg) = 8.25 mg/kg

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
NW ARAPAHOE UNIT 24 FLOWLINE SYSTEM
38.777362, -102.661389
NWNE S3 T15S R47W
CHEYENNE COUNTY, COLORADO
FACILITY ID 482884

Sample Location (Lat/Long)	Sample Date	Approximate Depth	PID Reading (ppm)	Lab Submission (Y/N)
FL 1 38.873186, -102.143689	4/10/2024	4'	0.0	N
FL 2 38.877272, -102.610186	4/10/2024	4'	0.0	N
FL 3 38.872461, -102.143764	4/10/2024	4'	0.0	N
FL 4 38.874564, -102.010331	4/10/2024	4'	0.0	N
FL 5 38.876036, -102.143611	4/10/2024	4'	0.0	N
FL 6 38.879828, -102.143375	4/10/2024	4'	0.0	N
FL 7 38.877969, -102.143444	4/10/2024	4'	0.0	N
FL 8 38.876644, -102.143564	4/10/2024	4'	0.0	N
FL 9 38.880503, -102.143331	4/10/2024	4'	0.0	N
FL 10 38.8786000, -102.143411	4/10/2024	4'	0.0	N
FL 11 38.875339, -102.143644	4/10/2024	4'	0.0	N
FL 12 38.873942, -102.1437000	4/10/2024	4'	0.0	N
FL 13 38.879239, -102.143392	4/10/2024	4'	0.0	N

ATTACHMENT A

Laboratory Analytical Reports

ORIGINS LABORATORY

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

November 01, 2024

Project Name - NWAU #37 **Project Number - [one]**

Attached are your analytical results for NWAU #37 received by Origins Laboratory October 04, 2024. This project is associated with Origins project number E410163-01.

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

THE NELAC INSTITUTE

ACCREDITED
TESTING CERT # 3494.01

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL 14 1'	E410163-01	Soil	October 3, 2024 13:20	10/04/2024 12:55
FL 14 4'	E410163-02	Soil	October 3, 2024 13:25	10/04/2024 12:55
BG 02 1'	E410163-03	Soil	October 3, 2024 13:35	10/04/2024 12:55
BG 02 4'	E410163-04	Soil	October 3, 2024 13:40	10/04/2024 12:55
BG 03 1'	E410163-05	Soil	October 3, 2024 13:50	10/04/2024 12:55
BG 03 4'	E410163-06	Soil	October 3, 2024 13:55	10/04/2024 12:55

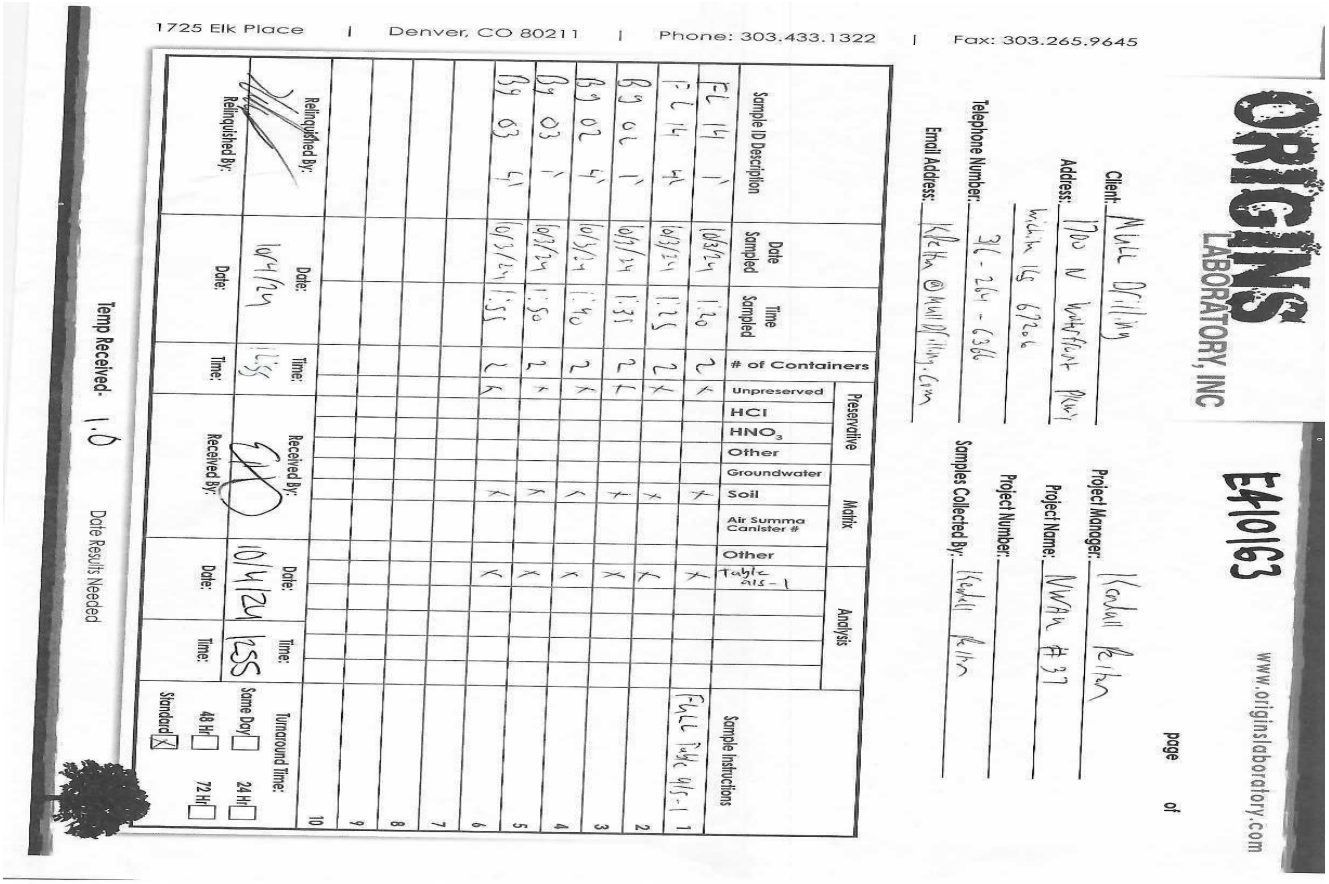
Origins Laboratory

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37



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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: E410163

Client: Mull Drilling
Client Project ID: NWAU #37

Checklist Completed by: WS
Date/time completed: 10/04/24

Shipped Via: _____ (UPS, FedEx, Hand Delivered, Pick-up, etc.)
Airbill #: N/A

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

Cooler Number/Temperature: 1 / 1.0 °c ____/____ °c ____/____ °c ____/____ °c (Describe)

Thermometer ID: T004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C[1]?	✓			
Is there ice present (document if blue ice is used)	✓			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Were all samples received intact[1]?	✓			
Was adequate sample volume provided[1]?	✓			
Are short holding time analytes or samples with HTs due within 48 hours present[1]?		✓		
Is a chain-of-custody (COC) present and filled out completely[1]?	✓			
Does the COC agree with the number and type of sample bottles received[1]?	✓			
Do the sample IDs on the bottle labels match the COC[1]?	✓			
Is the COC properly relinquished by the client with date and time recorded[1]?	✓			
For volatiles in water – is there headspace (> ¼ inch bubble) present? **If yes, contact client and note in narrative.**			✓	
Are samples preserved that require preservation and was it checked[1]? *(note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCl, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)*			✓	

Additional Comments (if any): Samples received in plastic jars

[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) _____ Date/Time Reviewed 10/8/24

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

FL 14 1'
10/3/2024 1:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-01 (Soil)									
Boron (DTPA Sorbitol)									
Boron	**0.197**		0.0986	mg/L	1	B4J0808	10/08/2024	10/09/2024	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J0735	10/07/2024	10/07/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	*81.5 %*		*50-150*			"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J0505	10/05/2024	10/08/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	*95.8 %*		*70-130*			"	"	"	
Surrogate: Toluene-d8	*96.7 %*		*70-130*			"	"	"	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

FL 14 1'
10/3/2024 1:20:00PM

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

Origins Laboratory

E410163-01 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	*104 %*		*70-130*			*B4J0505*	*10/05/2024*	*10/08/2024*	

Metals by Saturated Paste by EPA 6010

Calcium	**1.96**	0.499	meq/L	10	[CALC]	10/07/2024	10/08/2024	
Magnesium	ND	0.823	"	"	"	"	"	
Sodium	ND	0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

FL 14 1'
10/3/2024 1:20:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-01 (Soil)									
PAH by EPA 8270E extracted via 3580A									
Indeno (1,2,3-cd) pyrene	ND		0.020	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	*101 %*		*60-130*			"	"	"	
Surrogate: Anthracene-d10	*77.6 %*		*60-130*			"	"	"	
Surrogate: Pyrene-d10	*117 %*		*60-130*			"	"	"	
Surrogate: Benzo (a) pyrene-d12	*99.8 %*		*60-130*			"	"	"	
pH in Soil by 9045D									
pH	**8.23**			pH Units	1	B4J0723	10/07/2024	10/08/2024	
SAR by 20B Saturated Paste									
SAR	**0.0402**		0.0100	SAR	1	B4J0709	10/07/2024	10/08/2024	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	**0.357**		0.00500	mmhos/cm	1	B4J0723	10/07/2024	10/08/2024	
Table 915 metals by EPA 6020B									
Arsenic	**4.06**		0.272	mg/kg	10	B4J0942	10/09/2024	10/12/2024	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

FL 14 1'
10/3/2024 1:20:00PM

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

Origins Laboratory
E410163-01 (Soil)

Table 915 metals by EPA 6020B

Barium	**184**		9.37	mg/kg	10	B4J0942	10/09/2024	10/12/2024
Cadmium	**0.191**		0.0937	"	"	"	"	"
Copper	**9.49**		9.37	"	"	"	"	"
Lead	**9.31**		0.937	"	"	"	"	"
Nickel	**12.6**		0.937	"	"	"	"	"
Selenium	ND		0.244	"	"	"	"	"
Silver	ND		0.0937	"	"	"	"	"
Zinc	ND		34.7	"	"	"	"	"

Total Metals 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L780757	10/03/2024	10/29/2024

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

FL 14 4'
10/3/2024 1:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-02 (Soil)									
Boron (DTPA Sorbitol)									
Boron	**0.142**		0.101	mg/L	1	B4J0808	10/08/2024	10/09/2024	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J0735	10/07/2024	10/07/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	*81.3 %*		*50-150*			"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J0505	10/05/2024	10/08/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	*94.7 %*		*70-130*			"	"	"	
Surrogate: Toluene-d8	*97.8 %*		*70-130*			"	"	"	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

FL 14 4'
10/3/2024 1:25:00PM

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

Origins Laboratory
E410163-02 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	*104 %*		*70-130*			*B4J0505*	*10/05/2024*	*10/08/2024*	

Metals by Saturated Paste by EPA 6010

Calcium	**1.38**	0.499	meq/L	10	[CALC]	10/07/2024	10/08/2024	
Magnesium	**1.02**	0.823	"	"	"	"	"	
Sodium	ND	0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

FL 14 4'
10/3/2024 1:25:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-02 (Soil)									
PAH by EPA 8270E extracted via 3580A									
Indeno (1,2,3-cd) pyrene	ND		0.020	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	*100 %*		*60-130*			"	"	"	
Surrogate: Anthracene-d10	*81.4 %*		*60-130*			"	"	"	
Surrogate: Pyrene-d10	*115 %*		*60-130*			"	"	"	
Surrogate: Benzo (a) pyrene-d12	*96.4 %*		*60-130*			"	"	"	
pH in Soil by 9045D									
pH	**8.29**			pH Units	1	B4J0723	10/07/2024	10/08/2024	
SAR by 20B Saturated Paste									
SAR	**0.0620**		0.0100	SAR	1	B4J0709	10/07/2024	10/08/2024	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	**0.362**		0.00500	mmhos/cm	1	B4J0723	10/07/2024	10/08/2024	
Table 915 metals by EPA 6020B									
Arsenic	**4.37**		0.290	mg/kg	10	B4J0942	10/09/2024	10/12/2024	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

FL 14 4'
10/3/2024 1:25:00PM

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

Origins Laboratory
E410163-02 (Soil)

Table 915 metals by EPA 6020B

Barium	**251**		10.0	mg/kg	10	B4J0942	10/09/2024	10/12/2024
Cadmium	**0.200**		0.100	"	"	"	"	"
Copper	ND		10.0	"	"	"	"	"
Lead	**10.1**		1.00	"	"	"	"	"
Nickel	**12.4**		1.00	"	"	"	"	"
Selenium	ND		0.260	"	"	"	"	"
Silver	ND		0.100	"	"	"	"	"
Zinc	ND		37.0	"	"	"	"	"

Total Metals 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L780757	10/03/2024	10/29/2024

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 02 1'
10/3/2024 1:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-03 (Soil)									
Boron (DTPA Sorbitol)									
Boron	**0.357**		0.0996	mg/L	1	B4J0808	10/08/2024	10/09/2024	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J0735	10/07/2024	10/07/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	*111 %*		*50-150*			"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J0505	10/05/2024	10/08/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	*101 %*		*70-130*			"	"	"	
Surrogate: Toluene-d8	*95.8 %*		*70-130*			"	"	"	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 02 1'
10/3/2024 1:35:00PM

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

Origins Laboratory
E410163-03 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	*103 %*		*70-130*			*B4J0505*	*10/05/2024*	*10/08/2024*	

Metals by Saturated Paste by EPA 6010

Calcium	**1.17**	0.499	meq/L	10	[CALC]	10/07/2024	10/08/2024	
Magnesium	ND	0.823	"	"	"	"	"	
Sodium	ND	0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 02 1'
10/3/2024 1:35:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-03 (Soil)									
PAH by EPA 8270E extracted via 3580A									
Indeno (1,2,3-cd) pyrene	ND		0.020	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	*102 %*		*60-130*			"	"	"	
Surrogate: Anthracene-d10	*85.8 %*		*60-130*			"	"	"	
Surrogate: Pyrene-d10	*112 %*		*60-130*			"	"	"	
Surrogate: Benzo (a) pyrene-d12	*95.6 %*		*60-130*			"	"	"	
pH in Soil by 9045D									
pH	**8.37**			pH Units	1	B4J0723	10/07/2024	10/08/2024	
SAR by 20B Saturated Paste									
SAR	**0.222**		0.0100	SAR	1	B4J0709	10/07/2024	10/08/2024	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	**0.275**		0.00500	mmhos/cm	1	B4J0723	10/07/2024	10/08/2024	
Table 915 metals by EPA 6020B									
Arsenic	**4.41**		0.255	mg/kg	10	B4J0942	10/09/2024	10/12/2024	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 02 1'
10/3/2024 1:35:00PM

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

Origins Laboratory
E410163-03 (Soil)

Table 915 metals by EPA 6020B

Barium	**169**		8.80	mg/kg	10	B4J0942	10/09/2024	10/12/2024
Cadmium	**0.210**		0.0880	"	"	"	"	"
Copper	**10.0**		8.80	"	"	"	"	"
Lead	**9.82**		0.880	"	"	"	"	"
Nickel	**12.5**		0.880	"	"	"	"	"
Selenium	ND		0.229	"	"	"	"	"
Silver	ND		0.0880	"	"	"	"	"
Zinc	**35.4**		32.5	"	"	"	"	"

Total Metals 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L780757	10/03/2024	10/29/2024

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 02 4'
10/3/2024 1:40:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-04 (Soil)									
Boron (DTPA Sorbitol)									
Boron	**0.737**		0.101	mg/L	1	B4J0808	10/08/2024	10/09/2024	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J0735	10/07/2024	10/07/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	*82.1 %*		*50-150*			"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J0505	10/05/2024	10/08/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	*97.8 %*		*70-130*			"	"	"	
Surrogate: Toluene-d8	*99.5 %*		*70-130*			"	"	"	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 02 4'
10/3/2024 1:40:00PM

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

Origins Laboratory
E410163-04 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	*104 %*		*70-130*			*B4J0505*	*10/05/2024*	*10/08/2024*	

Metals by Saturated Paste by EPA 6010

Calcium	**0.826**	0.499	meq/L	10	[CALC]	10/07/2024	10/08/2024	
Magnesium	ND	0.823	"	"	"	"	"	
Sodium	**2.41**	0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 02 4'
10/3/2024 1:40:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-04 (Soil)									
PAH by EPA 8270E extracted via 3580A									
Indeno (1,2,3-cd) pyrene	ND		0.020	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	*100 %*		*60-130*			"	"	"	
Surrogate: Anthracene-d10	*83.1 %*		*60-130*			"	"	"	
Surrogate: Pyrene-d10	*114 %*		*60-130*			"	"	"	
Surrogate: Benzo (a) pyrene-d12	*97.9 %*		*60-130*			"	"	"	
pH in Soil by 9045D									
pH	**8.38**			pH Units	1	B4J0723	10/07/2024	10/08/2024	
SAR by 20B Saturated Paste									
SAR	**2.94**		0.0100	SAR	1	B4J0709	10/07/2024	10/08/2024	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	**0.453**		0.00500	mmhos/cm	1	B4J0723	10/07/2024	10/08/2024	
Table 915 metals by EPA 6020B									
Arsenic	**4.94**		0.286	mg/kg	10	B4J0942	10/09/2024	10/12/2024	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 02 4'
10/3/2024 1:40:00PM

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

Origins Laboratory
E410163-04 (Soil)

Table 915 metals by EPA 6020B

Barium	**323**		9.86	mg/kg	10	B4J0942	10/09/2024	10/12/2024
Cadmium	**0.228**		0.0986	"	"	"	"	"
Copper	**10.7**		9.86	"	"	"	"	"
Lead	**10.9**		0.986	"	"	"	"	"
Nickel	**13.8**		0.986	"	"	"	"	"
Selenium	ND		0.256	"	"	"	"	"
Silver	ND		0.0986	"	"	"	"	"
Zinc	**39.9**		36.5	"	"	"	"	"

Total Metals 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L780757	10/03/2024	10/29/2024

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 03 1'
10/3/2024 1:50:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-05 (Soil)									
Boron (DTPA Sorbitol)									
Boron	ND		1.01	mg/L	10	B4J0808	10/08/2024	10/09/2024	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J0735	10/07/2024	10/07/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	*90.5 %*		*50-150*			"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J0505	10/05/2024	10/08/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	*100 %*		*70-130*			"	"	"	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 03 1'
10/3/2024 1:50:00PM

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

Origins Laboratory
E410163-05 (Soil)

GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	*95.5 %*		*70-130*			*B4J0505*	*10/05/2024*	*10/08/2024*	
Surrogate: 4-Bromofluorobenzene	*104 %*		*70-130*			*"*	*"*	*"*	

Metals by Saturated Paste by EPA 6010

Calcium	**3.29**	0.499	meq/L	10	[CALC]	10/07/2024	10/08/2024	
Magnesium	**0.833**	0.823	"	"	"	"	"	
Sodium	ND	0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U

Origins Laboratory

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 03 1'
10/3/2024 1:50:00PM

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

Origins Laboratory
E410163-05 (Soil)

PAH by EPA 8270E extracted via 3580A

Fluorene	ND	0.020	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
Indeno (1,2,3-cd) pyrene	ND	0.020	"	"	"	"	"	U
Naphthalene	ND	0.002	"	"	"	"	"	U
Pyrene	ND	0.020	"	"	"	"	"	U

Surrogate: Fluorene-d10	*101 %*	*60-130*	"	"	"
Surrogate: Anthracene-d10	*83.0 %*	*60-130*	"	"	"
Surrogate: Pyrene-d10	*111 %*	*60-130*	"	"	"
Surrogate: Benzo (a) pyrene-d12	*94.4 %*	*60-130*	"	"	"

pH in Soil by 9045D

pH	**8.11**		pH Units	1	B4J0723	10/07/2024	10/08/2024

SAR by 20B Saturated Paste

SAR	**0.0509**	0.0100	SAR	1	B4J0709	10/07/2024	10/08/2024

Specific Conductance Mod. 9050A

Specific Conductance (EC)	**0.448**	0.00500	mmhos/cm	1	B4J0723	10/07/2024	10/08/2024

Table 915 metals by EPA 6020B

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 03 1'
10/3/2024 1:50:00PM

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

Origins Laboratory
E410163-05 (Soil)

Table 915 metals by EPA 6020B

Arsenic	**4.31**		0.257	mg/kg	10	B4J0942	10/09/2024	10/12/2024
Barium	**197**		8.86	"	"	"	"	"
Cadmium	**0.225**		0.0886	"	"	"	"	"
Copper	**10.7**		8.86	"	"	"	"	"
Lead	**11.4**		0.886	"	"	"	"	"
Nickel	**14.2**		0.886	"	"	"	"	"
Selenium	ND		0.230	"	"	"	"	"
Silver	ND		0.0886	"	"	"	"	"
Zinc	**42.1**		32.8	"	"	"	"	"

Total Metals 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L780758	10/03/2024	10/29/2024

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 03 4'
10/3/2024 1:55:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-06 (Soil)									
Boron (DTPA Sorbitol)									
Boron	**0.456**		0.100	mg/L	1	B4J0808	10/08/2024	10/09/2024	
DRO/ORO by EPA 8015D									
Diesel (C10-C28)	ND		25.0	mg/kg	1	B4J0735	10/07/2024	10/07/2024	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U
Surrogate: o-Terphenyl	*87.6 %*		*50-150*			"	"	"	
GBTEX+TMBs by 8260D									
1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4J0505	10/05/2024	10/08/2024	U
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	ND		0.00200	"	"	"	"	"	U
Xylenes, total	ND		0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	U
Surrogate: 1,2-Dichloroethane-d4	*98.7 %*		*70-130*			"	"	"	
Surrogate: Toluene-d8	*97.6 %*		*70-130*			"	"	"	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 03 4'
10/3/2024 1:55:00PM

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

Origins Laboratory
E410163-06 (Soil)

GBTEX+TMBs by 8260D

Surrogate: 4-Bromofluorobenzene	*104 %*		*70-130*			*B4J0505*	*10/05/2024*	*10/08/2024*	

Metals by Saturated Paste by EPA 6010

Calcium	**1.19**	0.499	meq/L	10	[CALC]	10/07/2024	10/08/2024	
Magnesium	ND	0.823	"	"	"	"	"	
Sodium	**0.483**	0.435	"	"	"	"	"	

PAH by EPA 8270E extracted via 3580A

1-Methylnaphthalene	ND	0.002	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
2-Methylnaphthalene	ND	0.002	"	"	"	"	"	U
Acenaphthene	ND	0.020	"	"	"	"	"	U
Anthracene	ND	0.020	"	"	"	"	"	U
Benzo (a) anthracene	ND	0.005	"	"	"	"	"	U
Benzo (a) pyrene	ND	0.020	"	"	"	"	"	U
Benzo (b) fluoranthene	ND	0.020	"	"	"	"	"	U
Benzo (k) fluoranthene	ND	0.020	"	"	"	"	"	U
Chrysene	ND	0.020	"	"	"	"	"	U
Dibenz (a,h) anthracene	ND	0.020	"	"	"	"	"	U
Fluoranthene	ND	0.020	"	"	"	"	"	U
Fluorene	ND	0.020	"	"	"	"	"	U

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 03 4'
10/3/2024 1:55:00PM

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
Origins Laboratory									
E410163-06 (Soil)									
PAH by EPA 8270E extracted via 3580A									
Indeno (1,2,3-cd) pyrene	ND		0.020	mg/kg	1	B4J0838	10/08/2024	10/10/2024	U
Naphthalene	ND		0.002	"	"	"	"	"	U
Pyrene	ND		0.020	"	"	"	"	"	U
Surrogate: Fluorene-d10	*99.4 %*		*60-130*			"	"	"	
Surrogate: Anthracene-d10	*82.5 %*		*60-130*			"	"	"	
Surrogate: Pyrene-d10	*112 %*		*60-130*			"	"	"	
Surrogate: Benzo (a) pyrene-d12	*97.7 %*		*60-130*			"	"	"	
pH in Soil by 9045D									
pH	**8.33**			pH Units	1	B4J0723	10/07/2024	10/08/2024	
SAR by 20B Saturated Paste									
SAR	**0.518**		0.0100	SAR	1	B4J0709	10/07/2024	10/08/2024	
Specific Conductance Mod. 9050A									
Specific Conductance (EC)	**0.306**		0.00500	mmhos/cm	1	B4J0723	10/07/2024	10/08/2024	
Table 915 metals by EPA 6020B									
Arsenic	**4.68**		0.267	mg/kg	10	B4J0942	10/09/2024	10/12/2024	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

BG 03 4'
10/3/2024 1:55:00PM

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

Origins Laboratory
E410163-06 (Soil)

Table 915 metals by EPA 6020B

Barium	**267**		9.21	mg/kg	10	B4J0942	10/09/2024	10/12/2024
Cadmium	**0.206**		0.0921	"	"	"	"	"
Copper	**11.8**		9.21	"	"	"	"	"
Lead	**10.8**		0.921	"	"	"	"	"
Nickel	**14.3**		0.921	"	"	"	"	"
Selenium	ND		0.239	"	"	"	"	"
Silver	ND		0.0921	"	"	"	"	"
Zinc	**43.2**		34.1	"	"	"	"	"

Total Metals 7196A

Chromium, Hexavalent	ND	0.244	0.5	mg/Kg	1	L780758	10/03/2024	10/29/2024

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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 B4J0505 - EPA 5030 (soil)										
Blank (B4J0505-BLK1)					Prepared: 10/05/2024 Analyzed: 10/07/2024					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	*0.12*		"	*0.125*		*94.6*	*70-130*			
Surrogate: Toluene-d8	*0.12*		"	*0.125*		*97.0*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.13*		"	*0.125*		*102*	*70-130*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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 B4J0505 - EPA 5030 (soil)										
LCS (B4J0505-BS1)					Prepared: 10/05/2024 Analyzed: 10/07/2024					
1,2,4-Trimethylbenzene	0.0872	0.00200	mg/kg	0.100		87.2	70-130			
1,3,5-Trimethylbenzene	0.0856	0.00200	"	0.100		85.6	70-130			
Benzene	0.0877	0.00200	"	0.100		87.7	70-130			
Ethylbenzene	0.0855	0.00200	"	0.100		85.5	70-130			
Naphthalene	0.0843	0.00380	"	0.100		84.3	70-130			
Toluene	0.0837	0.00200	"	0.100		83.7	70-130			
o-Xylene	0.0849	0.00200	"	0.100		84.9	70-130			
m,p-Xylene	0.172	0.00400	"	0.200		86.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.12*		"	*0.125*		*92.3*	*70-130*			
Surrogate: Toluene-d8	*0.12*		"	*0.125*		*97.8*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.12*		"	*0.125*		*99.3*	*70-130*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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 B4J0505 - EPA 5030 (soil)										
Matrix Spike (B4J0505-MS1)		**Source: E410014-02**			Prepared: 10/05/2024 Analyzed: 10/07/2024					
1,2,4-Trimethylbenzene	0.0840	0.00200	mg/kg	0.100	ND	84.0	70-130			
1,3,5-Trimethylbenzene	0.0819	0.00200	"	0.100	ND	81.9	70-130			
Benzene	0.0865	0.00200	"	0.100	ND	86.5	70-130			
Ethylbenzene	0.0819	0.00200	"	0.100	ND	81.9	70-130			
Naphthalene	0.0802	0.00380	"	0.100	ND	80.2	70-130			
Toluene	0.0804	0.00200	"	0.100	ND	80.4	70-130			
o-Xylene	0.0816	0.00200	"	0.100	ND	81.6	70-130			
m,p-Xylene	0.165	0.00400	"	0.200	ND	82.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	*0.12*		"	*0.125*		*96.0*	*70-130*			
Surrogate: Toluene-d8	*0.12*		"	*0.125*		*95.8*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.12*		"	*0.125*		*99.0*	*70-130*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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 B4J0505 - EPA 5030 (soil)										
Matrix Spike Dup (B4J0505-MSD1)		**Source: E410014-02**			Prepared: 10/05/2024 Analyzed: 10/07/2024					
1,2,4-Trimethylbenzene	0.0858	0.00200	mg/kg	0.100	ND	85.8	70-130	2.17	20	
1,3,5-Trimethylbenzene	0.0837	0.00200	"	0.100	ND	83.7	70-130	2.17	20	
Benzene	0.0891	0.00200	"	0.100	ND	89.1	70-130	2.92	20	
Ethylbenzene	0.0830	0.00200	"	0.100	ND	83.0	70-130	1.33	20	
Naphthalene	0.0889	0.00380	"	0.100	ND	88.9	70-130	10.3	20	
Toluene	0.0833	0.00200	"	0.100	ND	83.3	70-130	3.59	20	
o-Xylene	0.0836	0.00200	"	0.100	ND	83.6	70-130	2.37	20	
m,p-Xylene	0.168	0.00400	"	0.200	ND	84.1	70-130	2.16	20	
Surrogate: 1,2-Dichloroethane-d4	*0.12*		"	*0.125*		*98.4*	*70-130*			
Surrogate: Toluene-d8	*0.12*		"	*0.125*		*96.9*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*0.12*		"	*0.125*		*98.5*	*70-130*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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 B4J0735 - EPA 3550B										
Blank (B4J0735-BLK1)					Prepared: 10/07/2024 Analyzed: 10/07/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	*21*		*"*	*24.9*		*82.7*	*50-150*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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 B4J0735 - EPA 3550B										
LCS (B4J0735-BS1)					Prepared: 10/07/2024 Analyzed: 10/07/2024					
Diesel (C10-C28)	1060	50.0	mg/kg	1000		106	70-130			
Residual Range Organics (C28-C40)	1090	200	"	1000		109	70-130			
Surrogate: o-Terphenyl	*54*		*"*	*49.8*		*109*	*50-150*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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 B4J0735 - EPA 3550B										
Matrix Spike (B4J0735-MS1)		**Source: E410163-01**			Prepared: 10/07/2024 Analyzed: 10/07/2024					
Diesel (C10-C28)	1120	50.0	mg/kg	1000	ND	112	70-130			
Residual Range Organics (C28-C40)	1180	200	"	1000	ND	118	70-130			
Surrogate: o-Terphenyl	*54*		*"*	*49.8*		*108*	*50-150*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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 B4J0735 - EPA 3550B										
Matrix Spike Dup (B4J0735-MSD1)		**Source: E410163-01**			Prepared: 10/07/2024 Analyzed: 10/07/2024					
Diesel (C10-C28)	1090	50.0	mg/kg	1000	ND	109	70-130	2.69	35	
Residual Range Organics (C28-C40)	1150	200	"	1000	ND	115	70-130	2.97	35	
Surrogate: o-Terphenyl	*52*		*"*	*49.8*		*105*	*50-150*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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

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
Batch B4J0942 - EPA 3050B										
Blank (B4J0942-BLK1)					Prepared: 10/09/2024 Analyzed: 10/12/2024					
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 (B4J0942-BS1)					Prepared: 10/09/2024 Analyzed: 10/12/2024					
Arsenic	4.26	0.290	mg/kg	5.00		85.2	80-120			
Barium	511	10.0	"	500		102	80-120			
Cadmium	5.17	0.100	"	5.00		103	80-120			
Copper	45.1	10.0	"	50.0		90.2	80-120			
Lead	5.11	1.00	"	5.00		102	80-120			
Nickel	5.38	1.00	"	5.00		108	80-120			
Selenium	5.06	0.260	"	5.00		101	80-120			
Silver	5.59	0.100	"	5.00		112	80-120			
Zinc	43.3	37.0	"	50.0		86.5	80-120			
Matrix Spike (B4J0942-MS1)		**Source: E410232-01**			Prepared: 10/09/2024 Analyzed: 10/12/2024					

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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
Batch B4J0942 - EPA 3050B										
Matrix Spike (B4J0942-MS1)		**Source: E410232-01**			Prepared: 10/09/2024 Analyzed: 10/12/2024					
Arsenic	7.90	0.277	mg/kg	4.78	3.08	101	75-125			
Barium	569	9.57	"	478	34.3	112	75-125			
Cadmium	5.47	0.0957	"	4.78	0.0475	113	75-125			
Copper	51.2	9.57	"	47.8	3.09	101	75-125			
Lead	11.7	0.957	"	4.78	4.85	142	75-125			QM-07
Nickel	13.6	0.957	"	4.78	6.01	159	75-125			QM-07
Selenium	5.34	0.249	"	4.78	0.0418	111	75-125			
Silver	6.01	0.0957	"	4.78	ND	126	75-125			QM-07
Zinc	72.3	35.4	"	47.8	27.1	94.5	75-125			
Matrix Spike Dup (B4J0942-MSD1)		**Source: E410232-01**			Prepared: 10/09/2024 Analyzed: 10/12/2024					
Arsenic	6.87	0.259	mg/kg	4.47	3.08	84.7	75-125	13.9	20	
Barium	514	8.94	"	447	34.3	107	75-125	10.1	20	
Cadmium	4.75	0.0894	"	4.47	0.0475	105	75-125	14.1	20	
Copper	45.0	8.94	"	44.7	3.09	93.8	75-125	12.8	20	
Lead	11.1	0.894	"	4.47	4.85	140	75-125	4.96	20	QM-07
Nickel	12.1	0.894	"	4.47	6.01	136	75-125	11.9	20	QM-07
Selenium	4.87	0.232	"	4.47	0.0418	108	75-125	9.32	20	
Silver	5.09	0.0894	"	4.47	ND	114	75-125	16.4	20	
Zinc	64.0	33.1	"	44.7	27.1	82.6	75-125	12.1	20	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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
Batch B4J0838 - EPA 3580										
Blank (B4J0838-BLK1)					Prepared: 10/08/2024 Analyzed: 10/10/2024					
1-Methylnaphthalene	ND	0.002	mg/kg							U
2-Methylnaphthalene	ND	0.002	"							U
Acenaphthene	ND	0.020	"							U
Anthracene	ND	0.020	"							U
Benzo (a) anthracene	ND	0.005	"							U
Benzo (a) pyrene	ND	0.020	"							U
Benzo (b) fluoranthene	ND	0.020	"							U
Benzo (g,h,i) perylene	ND	0.020	"							U
Benzo (k) fluoranthene	ND	0.020	"							U
Chrysene	ND	0.020	"							U
Dibenz (a,h) anthracene	ND	0.020	"							U
Fluoranthene	ND	0.020	"							U
Fluorene	ND	0.020	"							U
Indeno (1,2,3-cd) pyrene	ND	0.020	"							U
Naphthalene	ND	0.002	"							U
Phenanthrene	ND	0.020	"							U
Pyrene	ND	0.020	"							U
Surrogate: Fluorene-d10	*200*		*ug/kg*	*200*		*101*	*60-130*			
Surrogate: Anthracene-d10	*160*		*"*	*200*		*81.7*	*60-130*			
Surrogate: Pyrene-d10	*220*		*"*	*200*		*111*	*60-130*			
Surrogate: Benzo (a) pyrene-d12	*190*		*"*	*200*		*97.4*	*60-130*			
LCS (B4J0838-BS1)					Prepared: 10/08/2024 Analyzed: 10/10/2024					
1-Methylnaphthalene	0.190	0.002	mg/kg	0.200		95.0	70-130			
2-Methylnaphthalene	0.192	0.002	"	0.200		95.9	70-130			
Acenaphthene	0.190	0.020	"	0.200		95.1	70-130			
Anthracene	0.164	0.020	"	0.200		82.1	70-130			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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
Batch B4J0838 - EPA 3580										
LCS (B4J0838-BS1)					Prepared: 10/08/2024 Analyzed: 10/10/2024					
Benzo (a) anthracene	0.192	0.005	mg/kg	0.200		96.0	70-130			
Benzo (a) pyrene	0.189	0.020	"	0.200		94.5	70-130			
Benzo (b) fluoranthene	0.211	0.020	"	0.200		105	70-130			
Benzo (g,h,i) perylene	0.195	0.020	"	0.200		97.3	70-130			
Benzo (k) fluoranthene	0.198	0.020	"	0.200		98.8	70-130			
Chrysene	0.191	0.020	"	0.200		95.3	70-130			
Dibenz (a,h) anthracene	0.187	0.020	"	0.200		93.3	70-130			
Fluoranthene	0.205	0.020	"	0.200		102	70-130			
Fluorene	0.194	0.020	"	0.200		96.9	70-130			
Indeno (1,2,3-cd) pyrene	0.190	0.020	"	0.200		95.0	70-130			
Naphthalene	0.197	0.002	"	0.200		98.7	70-130			
Phenanthrene	0.176	0.020	"	0.200		88.0	70-130			
Pyrene	0.226	0.020	"	0.200		113	70-130			
Surrogate: Fluorene-d10	*210*		*ug/kg*	*200*		*104*	*60-130*			
Surrogate: Anthracene-d10	*160*		*"*	*200*		*80.7*	*60-130*			
Surrogate: Pyrene-d10	*220*		*"*	*200*		*108*	*60-130*			
Surrogate: Benzo (a) pyrene-d12	*200*		*"*	*200*		*101*	*60-130*			
Matrix Spike (B4J0838-MS1)		**Source: E410151-14**			Prepared: 10/08/2024 Analyzed: 10/10/2024					
1-Methylnaphthalene	0.183	0.002	mg/kg	0.200	ND	91.4	70-130			
2-Methylnaphthalene	0.187	0.002	"	0.200	ND	93.3	70-130			
Acenaphthene	0.188	0.020	"	0.200	ND	94.1	70-130			
Anthracene	0.161	0.020	"	0.200	ND	80.4	70-130			
Benzo (a) anthracene	0.203	0.005	"	0.200	0.004	99.4	70-130			
Benzo (a) pyrene	0.176	0.020	"	0.200	0.006	85.4	70-130			
Benzo (b) fluoranthene	0.224	0.020	"	0.200	0.006	109	70-130			
Benzo (g,h,i) perylene	0.188	0.020	"	0.200	0.005	91.6	70-130			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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
Batch B4J0838 - EPA 3580										
Matrix Spike (B4J0838-MS1)		**Source: E410151-14**			Prepared: 10/08/2024 Analyzed: 10/10/2024					
Benzo (k) fluoranthene	0.217	0.020	mg/kg	0.200	0.003	107	70-130			
Chrysene	0.194	0.020	"	0.200	0.007	93.7	70-130			
Dibenz (a,h) anthracene	0.172	0.020	"	0.200	0.005	83.8	70-130			
Fluoranthene	0.216	0.020	"	0.200	0.007	105	70-130			
Fluorene	0.194	0.020	"	0.200	ND	96.8	70-130			
Indeno (1,2,3-cd) pyrene	0.214	0.020	"	0.200	0.006	104	70-130			
Naphthalene	0.206	0.002	"	0.200	ND	103	70-130			
Phenanthrene	0.178	0.020	"	0.200	0.003	87.6	70-130			
Pyrene	0.231	0.020	"	0.200	0.006	113	70-130			
Surrogate: Fluorene-d10	*210*		*ug/kg*	*200*		*104*	*60-130*			
Surrogate: Anthracene-d10	*160*		*"*	*200*		*79.1*	*60-130*			
Surrogate: Pyrene-d10	*220*		*"*	*200*		*110*	*60-130*			
Surrogate: Benzo (a) pyrene-d12	*190*		*"*	*200*		*92.9*	*60-130*			
Matrix Spike Dup (B4J0838-MSD1)		**Source: E410151-14**			Prepared: 10/08/2024 Analyzed: 10/10/2024					
1-Methylnaphthalene	0.184	0.002	mg/kg	0.200	ND	91.9	70-130	0.522	20	
2-Methylnaphthalene	0.187	0.002	"	0.200	ND	93.7	70-130	0.472	20	
Acenaphthene	0.186	0.020	"	0.200	ND	93.1	70-130	1.05	20	
Anthracene	0.159	0.020	"	0.200	ND	79.4	70-130	1.16	20	
Benzo (a) anthracene	0.190	0.005	"	0.200	0.004	93.3	70-130	6.20	20	
Benzo (a) pyrene	0.186	0.020	"	0.200	0.006	90.4	70-130	5.49	20	
Benzo (b) fluoranthene	0.217	0.020	"	0.200	0.006	105	70-130	3.22	20	
Benzo (g,h,i) perylene	0.187	0.020	"	0.200	0.005	90.8	70-130	0.829	20	
Benzo (k) fluoranthene	0.189	0.020	"	0.200	0.003	92.8	70-130	13.9	20	
Chrysene	0.192	0.020	"	0.200	0.007	92.8	70-130	0.968	20	
Dibenz (a,h) anthracene	0.181	0.020	"	0.200	0.005	88.4	70-130	5.22	20	
Fluoranthene	0.214	0.020	"	0.200	0.007	103	70-130	1.06	20	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

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
Batch B4J0838 - EPA 3580										
Matrix Spike Dup (B4J0838-MSD1)		**Source: E410151-14**			Prepared: 10/08/2024 Analyzed: 10/10/2024					
Fluorene	0.191	0.020	mg/kg	0.200	ND	95.7	70-130	1.14	20	
Indeno (1,2,3-cd) pyrene	0.181	0.020	"	0.200	0.006	87.6	70-130	16.6	20	
Naphthalene	0.190	0.002	"	0.200	ND	95.2	70-130	7.83	20	
Phenanthrene	0.176	0.020	"	0.200	0.003	86.2	70-130	1.61	20	
Pyrene	0.229	0.020	"	0.200	0.006	111	70-130	1.10	20	
Surrogate: Fluorene-d10	*200*		*ug/kg*	*200*		*99.6*	*60-130*			
Surrogate: Anthracene-d10	*170*		*"*	*200*		*83.2*	*60-130*			
Surrogate: Pyrene-d10	*220*		*"*	*200*		*111*	*60-130*			
Surrogate: Benzo (a) pyrene-d12	*190*		*"*	*200*		*96.9*	*60-130*			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

Classical Chemistry Parameters - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4J0709 - Saturated Paste Metals										
Blank (B4J0709-BLK1)					Prepared: 10/07/2024 Analyzed: 10/08/2024					
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 (B4J0709-DUP1)		**Source: E410151-16**			Prepared: 10/07/2024 Analyzed: 10/08/2024					
SAR	ND	0.0100	SAR		6.49				200	
Calcium PPM	30.7	10.0	mg/L		31.0			0.811	50	
Magnesium PPM	10.7	10.0	"		10.8			1.02	50	
Sodium PPM	164	10.0	"		164			0.207	50	
Batch B4J0808 - DTPA Sorbitol Preparation										
Blank (B4J0808-BLK1)					Prepared: 10/08/2024 Analyzed: 10/09/2024					
Boron	ND	0.100	mg/L							
Duplicate (B4J0808-DUP1)		**Source: E410163-01**			Prepared: 10/08/2024 Analyzed: 10/09/2024					
Boron	0.202	0.101	mg/L		0.197			2.39	50	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

Saturated Paste - Quality Control
Origins Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4J0723 - Saturated Paste pH/EC										
Blank (B4J0723-BLK1)					Prepared: 10/07/2024 Analyzed: 10/08/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
Duplicate (B4J0723-DUP1)		**Source: E410151-16**			Prepared: 10/07/2024 Analyzed: 10/08/2024					
pH	8.33		pH Units		8.33			0.00	25	
Specific Conductance (EC)	1.78	0.00500	mmhos/cm		1.79			0.504	25	

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

Total Metals 7196A - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L780758 -										
DUP (L 83199-DUP)		**Source: 83199**			Prepared: Analyzed: 10/29/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500		-	0	20	
MS (L 83199-MS)		**Source: 83199**			Prepared: Analyzed: 10/29/2024					
Chromium, Hexavalent	29.7	2.5	mg/Kg	39.3	< 0.244	76	75-125			
LCS (LCS)					Prepared: Analyzed: 10/29/2024					
Chromium, Hexavalent	6.65	0.5	mg/Kg	8		83	75-125			
LRB (LRB)					Prepared: Analyzed: 10/29/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

Total Metals 7196A - Quality Control
Waypoint Analytical, LLC.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch L780757 -										
DUP (L 83223-DUP)		**Source: E410163-02**			Prepared: Analyzed: 10/29/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500		-	0	20	
MS (L 83223-MS)		**Source: E410163-02**			Prepared: Analyzed: 10/29/2024					
Chromium, Hexavalent	30.2	2.5	mg/Kg	39.3	< 0.244	77	75-125			
LCS (LCS)					Prepared: Analyzed: 10/29/2024					
Chromium, Hexavalent	6.63	0.5	mg/Kg	8		83	75-125			
LRB (LRB)					Prepared: Analyzed: 10/29/2024					
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Kendall Pelton
Project Number: [none]
Project: NWAU #37

Notes and Definitions

U Sample is Non-Detect.

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

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on a wet weight basis.

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

March 12, 2024

Mull Drilling

Trisha Fanning

1700 N Waterfront Pkway Bldg #1200

Wichita KS 67206

Project Name - NWAU37-1 **Project Number - [none]**

Attached are your analytical results for NWAU37-1 received by Origins Laboratory, Inc. March 01, 2024. This project is associated with Origins project number Y403010-01.

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

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

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

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

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

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com

THE NELAC INSTITUTE

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP2@3'	Y403010-01	Soil	February 29, 2024 11:58	03/01/2024 11:30

Origins Laboratory, Inc.

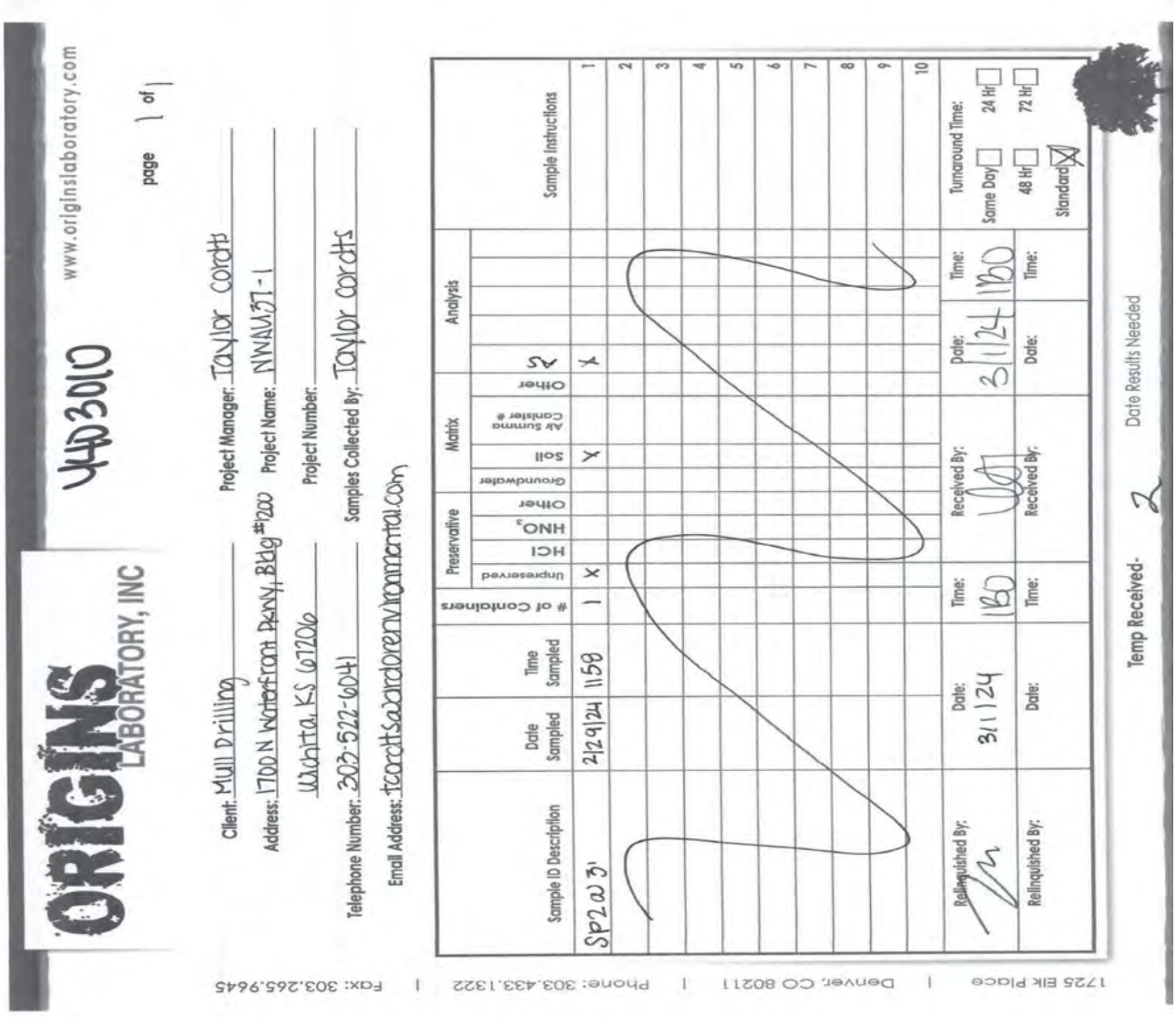
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-1



Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-1

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 408060
Client: Mull Drilling
Client Project ID: NWAU37-1

Checklist Completed by: TSH/BJS
Shipped Via: HD (UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 3/01/24
Airbill #: N/A

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

Cooler Number/Temperature: 1, 2 °C ____/____ °C ____/____ °C ____/____ °C (Describe)

Thermometer ID: 7004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C[1]?	✓			
Is there ice present (document if blue ice is used)	✓			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Were all samples received intact[1]?	✓			
Was adequate sample volume provided[1]?	✓			
Are short holding time analytes or samples with HTs due within 48 hours present[1]?		✓		
Is a chain-of-custody (COC) present and filled out completely[1]?	✓			
Does the COC agree with the number and type of sample bottles received[1]?	✓			
Do the sample IDs on the bottle labels match the COC[1]?	✓			
Is the COC properly relinquished by the client with date and time recorded[1]?	✓			
For volatiles in water – is there headspace (> ¼ inch bubble) present? **If yes, contact client and note in narrative.**			✓	
Are samples preserved that require preservation and was it checked [1]? *(note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)*			✓	
Additional Comments (if any):				

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

Reviewed by (Project Manager)

3/4/24
Date/Time Reviewed

Origins Laboratory, Inc.

JBynon

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-1

SP2@3'
2/29/2024 11:58:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

Y403010-01 (Soil)

Table 915 metals by EPA 6020B

Arsenic	**5.11**	0.259	mg/kg	10	B4C0125	HJD	03/01/2024	03/08/2024	

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4C0125 - EPA 3050B										
Blank (B4C0125-BLK1)					Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	ND	0.290	mg/kg							
LCS (B4C0125-BS1)					Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	5.56	0.290	mg/kg	5.00		111	80-120			
Matrix Spike (B4C0125-MS1)		**Source: Y403011-02**			Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	19.5	0.265	mg/kg	4.57	15.0	99.8	75-125			
Matrix Spike Dup (B4C0125-MSD1)		**Source: Y403011-02**			Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	19.4	0.255	mg/kg	4.39	15.0	101	75-125	0.690	20	

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-1

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

March 12, 2024

Mull Drilling

Trisha Fanning

1700 N Waterfront Pkway Bldg #1200

Wichita KS 67206

Project Name - NWAU37-2 **Project Number - [none]**

Attached are your analytical results for NWAU37-2 received by Origins Laboratory, Inc. March 01, 2024. This project is associated with Origins project number Y403012-01.

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

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

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

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

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

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com

THE NELAC INSTITUTE

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-2

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP2@4'	Y403012-01	Soil	February 29, 2024 11:59	03/01/2024 11:30

Origins Laboratory, Inc.

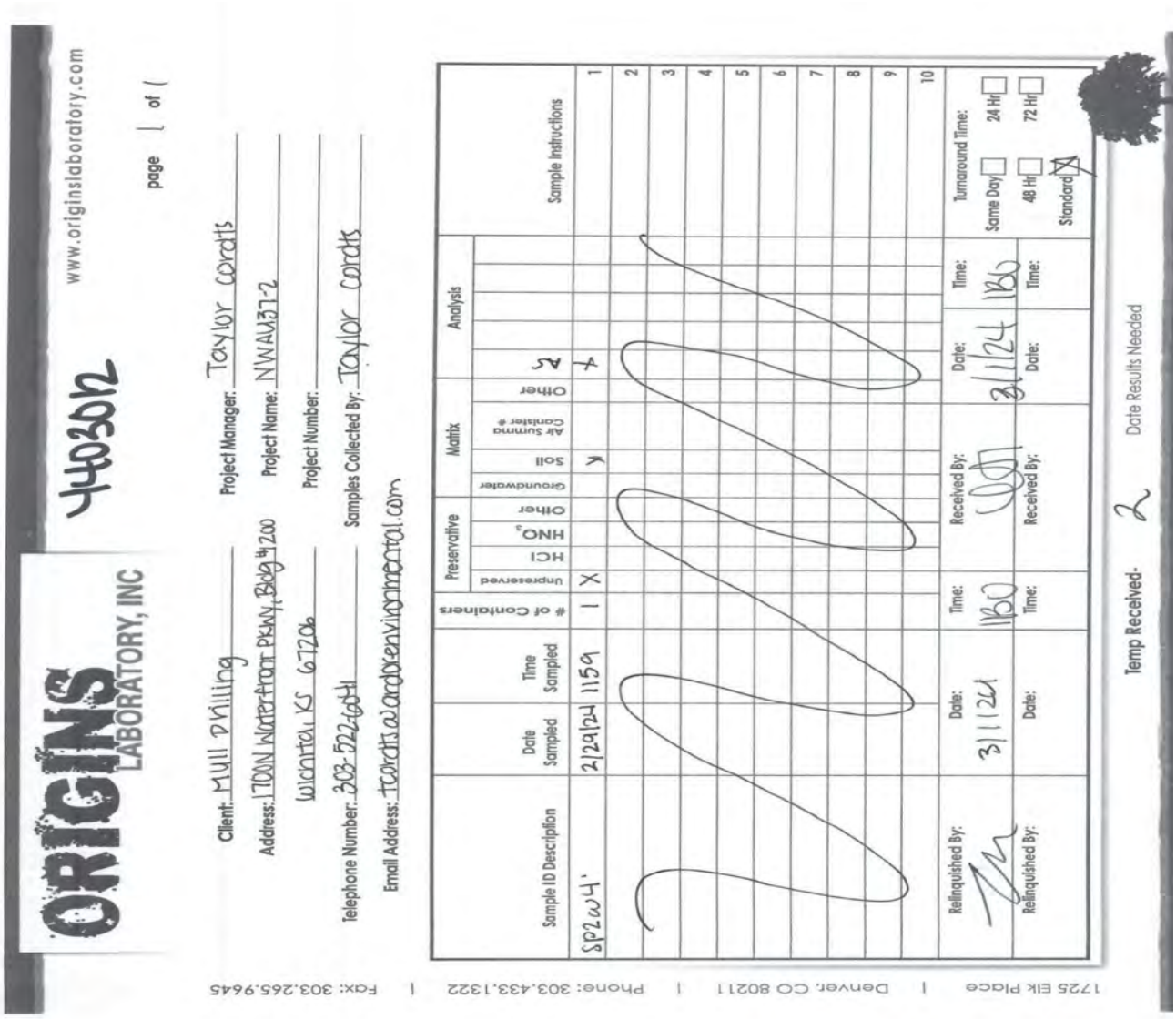
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-2



Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-2

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 403102

Client: MULL Drilling
Client Project ID: NWAU37-2

Checklist Completed by: TH VEHS
Date/time completed: 3/01 124

Shipped Via: HD
(UPS, FedEx, Hand Delivered, Pick-up, etc.)
Airbill #: N/A

Matrix(s) Received: (Check all that apply): X Soil/Solid ____Water ____Other:____
(Describe)

Cooler Number/Temperature: 1 / 2 °C ____/____°C ____/____°C ____/____°C

Thermometer ID: 7004

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C[1]?	✓			
Is there ice present (document if blue ice is used)	✓			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Were all samples received intact[1]?	✓			
Was adequate sample volume provided[1]?	✓			
Are short holding time analytes or samples with HTs due within 48 hours present[1]?		✓		
Is a chain-of-custody (COC) present and filled out completely[1]?	✓			
Does the COC agree with the number and type of sample bottles received[1]?	✓			
Do the sample IDs on the bottle labels match the COC[1]?	✓			
Is the COC properly relinquished by the client with date and time recorded[1]?	✓			
For volatiles in water – is there headspace (> ¼ inch bubble) present? **If yes, contact client and note in narrative.**			✓	
Are samples preserved that require preservation and was it checked [1]? *(note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)*			✓	
Additional Comments (if any):				

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

Reviewed by (Project Manager)

3/4 124
Date/Time Reviewed

Origins Laboratory, Inc.

JByron

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-2

SP2@4'
2/29/2024 11:59:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
Origins Laboratory, Inc.									
Y403012-01 (Soil)									
Table 915 metals by EPA 6020B									
Arsenic	**5.78**	0.251	mg/kg	10	B4C0125	HJD	03/01/2024	03/08/2024	

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-2

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4C0125 - EPA 3050B										
Blank (B4C0125-BLK1)					Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	ND	0.290	mg/kg							
LCS (B4C0125-BS1)					Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	5.56	0.290	mg/kg	5.00		111	80-120			
Matrix Spike (B4C0125-MS1)		**Source: Y403011-02**			Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	19.5	0.265	mg/kg	4.57	15.0	99.8	75-125			
Matrix Spike Dup (B4C0125-MSD1)		**Source: Y403011-02**			Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	19.4	0.255	mg/kg	4.39	15.0	101	75-125	0.690	20	

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37-2

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

March 14, 2024

Mull Drilling

Trisha Fanning

1700 N Waterfront Pkway Bldg #1200

Wichita KS 67206

Project Name - NWAU37 BG **Project Number - [none]**

Attached are your analytical results for NWAU37 BG received by Origins Laboratory, Inc. March 01, 2024. This project is associated with Origins project number Y403009-01.

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

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

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

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

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

Origins Laboratory, Inc.
303.433.1322
o-squad@oelabinc.com

THE NELAC INSTITUTE

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG-01@3'	Y403009-01	Soil	February 29, 2024 11:43	03/01/2024 11:30
BG-01@4'	Y403009-02	Soil	February 29, 2024 11:46	03/01/2024 11:30

Origins Laboratory, Inc.

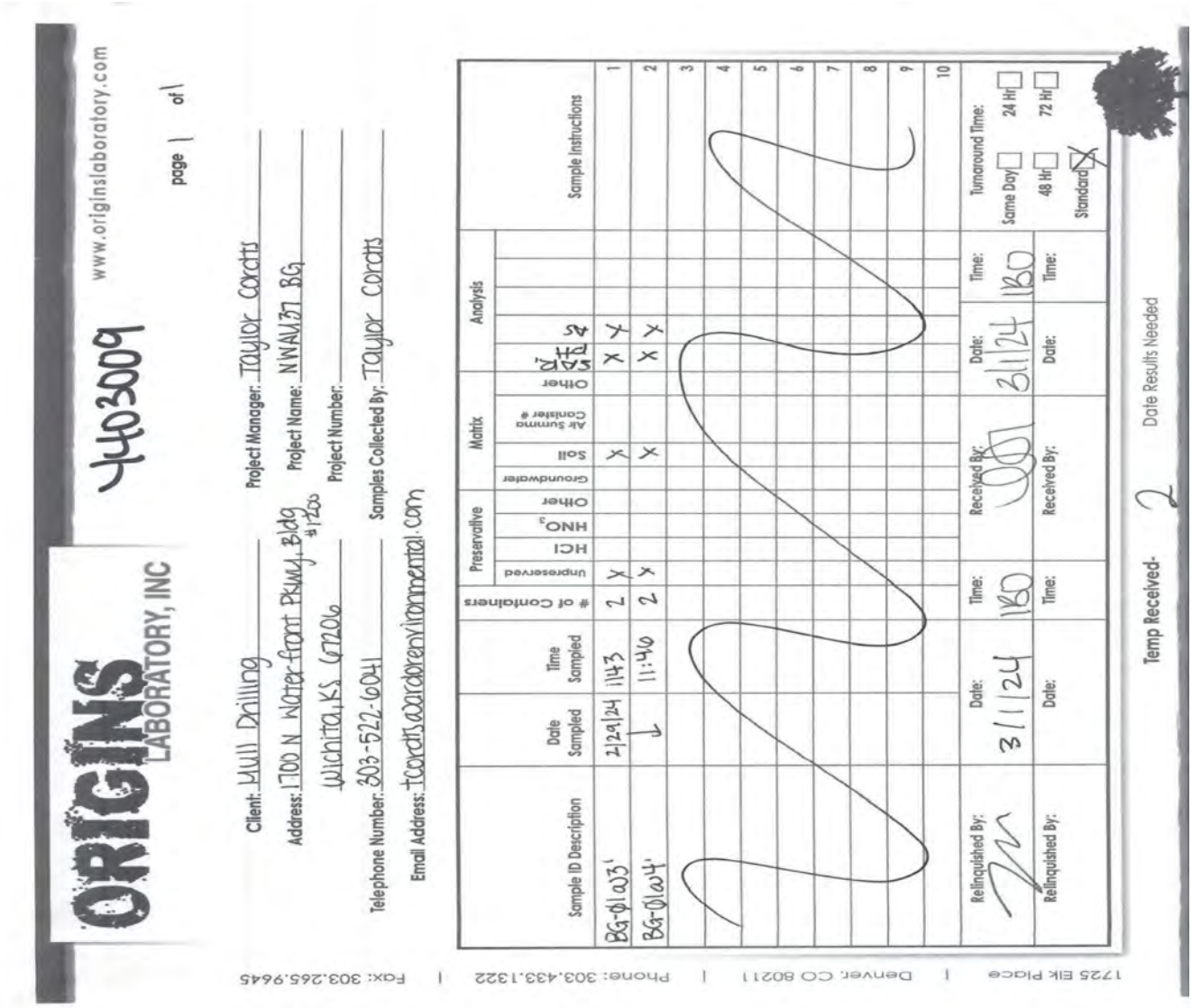
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG



Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: 1402009
Client: Mull Drilling
Client Project ID: NWAU37 BG

Checklist Completed by: TSTV/EHS
Shipped Via: HD (UPS, FedEx, Hand Delivered, Pick-up, etc.)
Date/time completed: 3/01/14
Airbill #: N/A

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

Cooler Number/Temperature: 1 / 2 °c ____/____ °c ____/____ °c ____/____ °c (Describe)

Thermometer ID: TD04

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C[1]?	✓			
Is there ice present (document if blue ice is used)	✓			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		✓		
Were all samples received intact[1]?	✓			
Was adequate sample volume provided[1]?	✓			
Are short holding time analytes or samples with HTs due within 48 hours present[1]?		✓		
Is a chain-of-custody (COC) present and filled out completely[1]?	✓			
Does the COC agree with the number and type of sample bottles received[1]?	✓			
Do the sample IDs on the bottle labels match the COC[1]?	✓			
Is the COC properly relinquished by the client with date and time recorded[1]?	✓			
For volatiles in water – is there headspace (> ¼ inch bubble) present? **If yes, contact client and note in narrative.**			✓	
Are samples preserved that require preservation and was it checked [1]? *(note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)*			✓	
Additional Comments (if any):				

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

Reviewed by (Project Manager) 3/4/14 Date/Time Reviewed

Origins Laboratory, Inc.

JBynon

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG

BG-01@3'
2/29/2024 11:43:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes

Origins Laboratory, Inc.

Y403009-01 (Soil)

Metals by Saturated Paste by EPA 6010

Calcium	**2.07**	0.499	meq/L	10	[CALC]	ACC	03/08/2024	03/11/2024
Magnesium	ND	0.823	"	"	"	ACC	"	"
Sodium	ND	0.435	"	"	"	ACC	"	"

pH in Soil by 9045D

pH	**8.10**		pH Units	1	B4C0814	GCG	03/08/2024	03/09/2024

SAR by 20B Saturated Paste

SAR	**0.102**	0.0100	SAR	1	B4C0802	ACC	03/08/2024	03/11/2024

Table 915 metals by EPA 6020B

Arsenic	**6.46**	0.274	mg/kg	10	B4C0125	HJD	03/01/2024	03/08/2024

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

ORIGINS LABORATORY, INC

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG

BG-01@4'
2/29/2024 11:46:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes

Origins Laboratory, Inc.
Y403009-02 (Soil)

Metals by Saturated Paste by EPA 6010

Calcium	**2.32**	0.499	meq/L	10	[CALC]	ACC	03/08/2024	03/11/2024
Magnesium	ND	0.823	"	"	"	ACC	"	"
Sodium	ND	0.435	"	"	"	ACC	"	"

pH in Soil by 9045D

pH	**8.26**		pH Units	1	B4C0814	GCG	03/08/2024	03/09/2024

SAR by 20B Saturated Paste

SAR	**0.0992**	0.0100	SAR	1	B4C0802	ACC	03/08/2024	03/11/2024

Table 915 metals by EPA 6020B

Arsenic	**6.60**	0.244	mg/kg	10	B4C0125	HJD	03/01/2024	03/08/2024

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4C0125 - EPA 3050B										
Blank (B4C0125-BLK1)					Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	ND	0.290	mg/kg							
LCS (B4C0125-BS1)					Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	5.56	0.290	mg/kg	5.00		111	80-120			
Matrix Spike (B4C0125-MS1)		**Source: Y403011-02**			Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	19.5	0.265	mg/kg	4.57	15.0	99.8	75-125			
Matrix Spike Dup (B4C0125-MSD1)		**Source: Y403011-02**			Prepared: 03/01/2024 Analyzed: 03/08/2024					
Arsenic	19.4	0.255	mg/kg	4.39	15.0	101	75-125	0.690	20	

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG

Classical Chemistry Parameters - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4C0802 - Saturated Paste Metals										
Blank (B4C0802-BLK1)					Prepared: 03/08/2024 Analyzed: 03/11/2024					
SAR	ND	0.0100	SAR							
Calcium PPM	ND	10.0	mg/L							
Magnesium PPM	ND	10.0	"							
Sodium PPM	ND	10.0	"							
Duplicate (B4C0802-DUP1)		**Source: Y402771-01**			Prepared: 03/08/2024 Analyzed: 03/11/2024					
SAR	ND	0.0100	SAR		1.63				200	
Calcium PPM	30.4	10.0	mg/L		31.2			2.60	50	
Magnesium PPM	8.96	10.0	"		8.65			3.52	50	
Sodium PPM	40.3	10.0	"		39.9			0.998	50	

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG

Saturated Paste - Quality Control
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B4C0814 - Saturated Paste pH/EC										
Duplicate (B4C0814-DUP1)		**Source: Y402771-01**			Prepared: 03/08/2024 Analyzed: 03/09/2024					
pH	8.15		pH Units		8.22			0.855	25	

Origins Laboratory, Inc.

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

Jordan A. Bynon For Jen Pellegrini, Project Manager

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

Trisha Fanning
Project Number: [none]
Project: NWAU37 BG

Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.

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.

Jordan A. Bynon For Jen Pellegrini, Project Manager

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

May 02, 2023

James Beilman
Mull Drilling Company
1700 N Waterfront Pkwy
Bld. 1200
Wichita, KS 67206

RE: Project: NWAV #37
Pace Project No.: 60426359

Dear James Beilman:

Enclosed are the analytical results for sample(s) received by the laboratory on April 15, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet
- Pace Analytical Services - Kansas City

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Heather M. Wilson

Heather Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: NWAV #37
Pace Project No.: 60426359

Pace Analytical Services Kansas
9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 22-031-0
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055
Nevada Certification #: KS000212023-1
Oklahoma Certification #: 2022-057
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212022-12
Illinois Certification #: 004592
Kansas Field Laboratory Accreditation: # E-92587
Missouri SEKS Micro Certification: 10070

Pace Analytical Services National
12065 Lebanon Road, Mt. Juliet, TN 37122
Alabama Certification #: 40660
Alaska Certification 17-026
Arizona Certification #: AZ0612
Arkansas Certification #: 88-0469
California Certification #: 2932
Canada Certification #: 1461.01
Colorado Certification #: TN00003
Connecticut Certification #: PH-0197
DOD Certification: #1461.01
EPA# TN00003
Florida Certification #: E87487
Georgia DW Certification #: 923
Georgia Certification: NELAP
Idaho Certification #: TN00003
Illinois Certification #: 200008
Indiana Certification #: C-TN-01
Iowa Certification #: 364
Kansas Certification #: E-10277
Kentucky UST Certification #: 16
Kentucky Certification #: 90010
Louisiana Certification #: AI30792
Louisiana DW Certification #: LA180010
Maine Certification #: TN0002
Maryland Certification #: 324
Massachusetts Certification #: M-TN003
Michigan Certification #: 9958
Minnesota Certification #: 047-999-395
Mississippi Certification #: TN00003
Missouri Certification #: 340
Montana Certification #: CERT0086
Nebraska Certification #: NE-OS-15-05
Nevada Certification #: TN-03-2002-34
New Hampshire Certification #: 2975
New Jersey Certification #: TN002
New Mexico DW Certification
New York Certification #: 11742
North Carolina Aquatic Toxicity Certification #: 41
North Carolina Drinking Water Certification #: 21704
North Carolina Environmental Certificate #: 375
North Dakota Certification #: R-140
Ohio VAP Certification #: CL0069
Oklahoma Certification #: 9915
Oregon Certification #: TN200002
Pennsylvania Certification #: 68-02979
Rhode Island Certification #: LAO00356
South Carolina Certification #: 84004
South Dakota Certification
Tennessee DW/Chem/Micro Certification #: 2006
Texas Certification #: T 104704245-17-14
Texas Mold Certification #: LAB0152
USDA Soil Permit #: P330-15-00234
Utah Certification #: TN00003
Vermont Dept. of Health: ID# VT-2006
Virginia Certification #: VT2006
Virginia Certification #: 460132
Washington Certification #: C847
West Virginia Certification #: 233
Wisconsin Certification #: 998093910
Wyoming UST Certification #: via A2LA 2926.01
A2LA-ISO 17025 Certification #: 1461.01
A2LA-ISO 17025 Certification #: 1461.02
AIHA-LAP/LLC EMLAP Certification #:100789

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: NWAV #37
Pace Project No.: 60426359

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60426359001	**DG 1**	Solid	04/13/23 10:00	04/15/23 10:31
60426359002	**DG 1 4'**	Solid	04/13/23 10:05	04/15/23 10:31
60426359003	**DG 2**	Solid	04/13/23 10:15	04/15/23 10:31
60426359004	**DG 3**	Solid	04/13/23 10:30	04/15/23 10:31
60426359005	**DG 4**	Solid	04/13/23 10:40	04/15/23 10:31
60426359006	**DG 5**	Solid	04/13/23 10:50	04/15/23 10:31
60426359007	**DG 6**	Solid	04/13/23 11:00	04/15/23 10:31
60426359008	**DUPLICATE A**	Solid	04/13/23 11:00	04/15/23 10:31

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: NWAV #37
Pace Project No.: 60426359

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60426359001	**DG 1**	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	SPL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN
60426359002	**DG 1 4'**	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	SPL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN
60426359003	**DG 2**	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	SPL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: NWAV #37
Pace Project No.: 60426359

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN
60426359004	**DG 3**	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	SPL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN
60426359005	**DG 4**	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	SPL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN
60426359006	**DG 5**	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	SPL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

SAMPLE ANALYTE COUNT

Project: NWAV #37
Pace Project No.: 60426359

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN
60426359007	**DG 6**	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	SPL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN
60426359008	**DUPLICATE A**	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	SPL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN

PAN = Pace National - Mt. Juliet
PASI-K = Pace Analytical Services - Kansas City

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 1 **Lab ID: 60426359001** Collected: 04/13/23 10:00 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
TPH-RRO (C28-C36)	**14.6J**	mg/kg	21.2	4.7	1	04/19/23 01:59	04/19/23 13:39		
TPH-DRO (C10-C28)	**14.7**	mg/kg	10.6	4.7	1	04/19/23 01:59	04/19/23 13:39		
Surrogates									
n-Tetracosane (S)	47	%	31-152		1	04/19/23 01:59	04/19/23 13:39	646-31-1	
p-Terphenyl (S)	46	%	46-130		1	04/19/23 01:59	04/19/23 13:39	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
TPH-GRO	**1.3J**	mg/kg	10.9	1.3	1	04/20/23 13:54	04/21/23 04:20		
Surrogates									
4-Bromofluorobenzene (S)	91	%	66-130		1	04/20/23 13:54	04/21/23 04:20	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2	Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet								
Boron, Hot Water Soluble	**0.289**	mg/L	0.200	0.0167	1	04/24/23 12:14	04/26/23 10:52	7440-42-8H	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Barium	**155**	mg/kg	0.45	0.25	1	04/22/23 10:38	05/01/23 18:33	7440-39-3	
Cadmium	**0.60**	mg/kg	0.45	0.094	1	04/22/23 10:38	05/01/23 18:33	7440-43-9	
Copper	**9.4**	mg/kg	1.8	0.28	1	04/22/23 10:38	05/01/23 18:33	7440-50-8	
Lead	**15.1**	mg/kg	0.90	0.32	1	04/22/23 10:38	05/01/23 18:33	7439-92-1	
Nickel	**8.9**	mg/kg	0.45	0.21	1	04/22/23 10:38	05/01/23 18:33	7440-02-0	
Selenium	ND	mg/kg	1.3	0.67	1	04/22/23 10:38	05/01/23 18:33	7782-49-2	
Silver	ND	mg/kg	0.63	0.16	1	04/22/23 10:38	05/01/23 18:33	7440-22-4	
Zinc	**40.3**	mg/kg	9.0	1.2	1	04/22/23 10:38	05/01/23 18:33	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	**4.5**	mg/kg	0.90	0.17	10	04/22/23 10:38	04/25/23 09:51	7440-38-2	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
Acenaphthene	ND	mg/kg	0.0035	0.0021	1	04/27/23 15:34	05/02/23 10:33	83-32-9	
Anthracene	ND	mg/kg	0.0035	0.0020	1	04/27/23 15:34	05/02/23 10:33	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:33	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0035	0.0014	1	04/27/23 15:34	05/02/23 10:33	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0035	0.0018	1	04/27/23 15:34	05/02/23 10:33	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0035	0.0018	1	04/27/23 15:34	05/02/23 10:33	207-08-9	
Chrysene	ND	mg/kg	0.0035	0.0018	1	04/27/23 15:34	05/02/23 10:33	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:33	53-70-3	
Fluoranthene	ND	mg/kg	0.0035	0.0029	1	04/27/23 15:34	05/02/23 10:33	206-44-0	
Fluorene	ND	mg/kg	0.0035	0.0026	1	04/27/23 15:34	05/02/23 10:33	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0035	0.0018	1	04/27/23 15:34	05/02/23 10:33	193-39-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 1 **Lab ID: 60426359001** Collected: 04/13/23 10:00 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
1-Methylnaphthalene	ND	mg/kg	0.0035	0.0017	1	04/27/23 15:34	05/02/23 10:33	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0035	0.0024	1	04/27/23 15:34	05/02/23 10:33	91-57-6	
Naphthalene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:33	91-20-3	
Pyrene	ND	mg/kg	0.0035	0.0025	1	04/27/23 15:34	05/02/23 10:33	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	40-120		1	04/27/23 15:34	05/02/23 10:33	321-60-8	
Terphenyl-d14 (S)	64	%	45-130		1	04/27/23 15:34	05/02/23 10:33	1718-51-0	
8260C MSV 5035A Low Level	Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
Benzene	ND	mg/kg	0.0056	0.00052	1	04/19/23 12:18	04/19/23 22:19	71-43-2	
Ethylbenzene	ND	mg/kg	0.0056	0.00098	1	04/19/23 12:18	04/19/23 22:19	100-41-4	
Toluene	ND	mg/kg	0.023	0.0050	1	04/19/23 12:18	04/19/23 22:19	108-88-3	
1,2,4-Trimethylbenzene	**0.0013J**	mg/kg	0.0056	0.00078	1	04/19/23 12:18	04/19/23 22:19	95-63-6	
1,3,5-Trimethylbenzene	**0.00052J**	mg/kg	0.0056	0.00049	1	04/19/23 12:18	04/19/23 22:19	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0041	1	04/19/23 12:18	04/19/23 22:19	1330-20-7	
Surrogates									
Toluene-d8 (S)	106	%	80-120		1	04/19/23 12:18	04/19/23 22:19	2037-26-5	
4-Bromofluorobenzene (S)	101	%	83-119		1	04/19/23 12:18	04/19/23 22:19	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	04/19/23 12:18	04/19/23 22:19	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	**7.1**	%	0.50	0.50	1		04/18/23 14:02		
Total Solids 2540 G-2011	Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet								
Total Solids	**91.9**	%			1	04/22/23 10:05	04/22/23 10:21		
Wet Chemistry 7199	Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet								
Chromium, Hexavalent	ND	mg/kg	1.09	0.277	1	04/23/23 13:41	04/25/23 01:20	18540-29-9	
Wet Chemistry 9045D	Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet								
pH	**8.10**	Std. Units		0.10	1	04/20/23 16:00	04/20/23 18:57		H3
Wet Chemistry 9050AMod	Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet								
Specific Conductance @ 25 C	**319**	umhos/cm	10.0	10.0	1	04/22/23 08:00	04/22/23 10:46		
Calculated Results	Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet								
Sodium Adsorption Ratio	**0.104**				1	04/25/23 20:30	04/25/23 20:30	SAR	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 1 4' **Lab ID: 60426359002** Collected: 04/13/23 10:05 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
TPH-RRO (C28-C36)	ND	mg/kg	21.2	4.7	1	04/19/23 01:59	04/19/23 13:47		
TPH-DRO (C10-C28)	**6.9J**	mg/kg	10.6	4.7	1	04/19/23 01:59	04/19/23 13:47		
Surrogates									
n-Tetracosane (S)	59	%	31-152		1	04/19/23 01:59	04/19/23 13:47	646-31-1	
p-Terphenyl (S)	61	%	46-130		1	04/19/23 01:59	04/19/23 13:47	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
TPH-GRO	ND	mg/kg	11.2	1.4	1	04/20/23 13:54	04/21/23 04:35		
Surrogates									
4-Bromofluorobenzene (S)	83	%	66-130		1	04/20/23 13:54	04/21/23 04:35	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2	Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet								
Boron, Hot Water Soluble	**0.360**	mg/L	0.200	0.0167	1	04/24/23 12:14	04/26/23 10:55	7440-42-8H	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Barium	**574**	mg/kg	0.48	0.26	1	04/22/23 10:38	05/01/23 18:35	7440-39-3	
Cadmium	**0.57**	mg/kg	0.48	0.10	1	04/22/23 10:38	05/01/23 18:35	7440-43-9	
Copper	**9.4**	mg/kg	1.9	0.29	1	04/22/23 10:38	05/01/23 18:35	7440-50-8	
Lead	**8.2**	mg/kg	0.95	0.34	1	04/22/23 10:38	05/01/23 18:35	7439-92-1	
Nickel	**9.9**	mg/kg	0.48	0.22	1	04/22/23 10:38	05/01/23 18:35	7440-02-0	
Selenium	ND	mg/kg	1.4	0.72	1	04/22/23 10:38	05/01/23 18:35	7782-49-2	
Silver	ND	mg/kg	0.67	0.16	1	04/22/23 10:38	05/01/23 18:35	7440-22-4	
Zinc	**33.5**	mg/kg	9.5	1.2	1	04/22/23 10:38	05/01/23 18:35	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	**4.9**	mg/kg	0.95	0.18	10	04/22/23 10:38	04/25/23 09:56	7440-38-2	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
Acenaphthene	ND	mg/kg	0.0035	0.0021	1	04/18/23 16:27	04/27/23 13:17	83-32-9	
Anthracene	ND	mg/kg	0.0035	0.0020	1	04/18/23 16:27	04/27/23 13:17	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0035	0.0019	1	04/18/23 16:27	04/27/23 13:17	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0035	0.0014	1	04/18/23 16:27	04/27/23 13:17	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0035	0.0019	1	04/18/23 16:27	04/27/23 13:17	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0035	0.0019	1	04/18/23 16:27	04/27/23 13:17	207-08-9	
Chrysene	ND	mg/kg	0.0035	0.0019	1	04/18/23 16:27	04/27/23 13:17	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0035	0.0019	1	04/18/23 16:27	04/27/23 13:17	53-70-3	
Fluoranthene	ND	mg/kg	0.0035	0.0029	1	04/18/23 16:27	04/27/23 13:17	206-44-0	
Fluorene	ND	mg/kg	0.0035	0.0027	1	04/18/23 16:27	04/27/23 13:17	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0035	0.0019	1	04/18/23 16:27	04/27/23 13:17	193-39-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 1 4' **Lab ID: 60426359002** Collected: 04/13/23 10:05 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
1-Methylnaphthalene	ND	mg/kg	0.0035	0.0017	1	04/18/23 16:27	04/27/23 13:17	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0035	0.0025	1	04/18/23 16:27	04/27/23 13:17	91-57-6	
Naphthalene	ND	mg/kg	0.0035	0.0019	1	04/18/23 16:27	04/27/23 13:17	91-20-3	
Pyrene	ND	mg/kg	0.0035	0.0025	1	04/18/23 16:27	04/27/23 13:17	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	55	%	40-120		1	04/18/23 16:27	04/27/23 13:17	321-60-8	
Terphenyl-d14 (S)	60	%	45-130		1	04/18/23 16:27	04/27/23 13:17	1718-51-0	
8260C MSV 5035A Low Level	Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
Benzene	ND	mg/kg	0.0056	0.00052	1	04/19/23 12:18	04/19/23 22:40	71-43-2	
Ethylbenzene	ND	mg/kg	0.0056	0.00098	1	04/19/23 12:18	04/19/23 22:40	100-41-4	
Toluene	ND	mg/kg	0.023	0.0050	1	04/19/23 12:18	04/19/23 22:40	108-88-3	
1,2,4-Trimethylbenzene	**0.00080J**	mg/kg	0.0056	0.00078	1	04/19/23 12:18	04/19/23 22:40	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0056	0.00049	1	04/19/23 12:18	04/19/23 22:40	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0042	1	04/19/23 12:18	04/19/23 22:40	1330-20-7	
Surrogates									
Toluene-d8 (S)	106	%	80-120		1	04/19/23 12:18	04/19/23 22:40	2037-26-5	
4-Bromofluorobenzene (S)	102	%	83-119		1	04/19/23 12:18	04/19/23 22:40	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	04/19/23 12:18	04/19/23 22:40	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	**6.3**	%	0.50	0.50	1		04/18/23 14:02		
Total Solids 2540 G-2011	Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet								
Total Solids	**93.7**	%			1	04/22/23 10:05	04/22/23 10:21		
Wet Chemistry 7199	Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet								
Chromium, Hexavalent	ND	mg/kg	1.07	0.272	1	04/23/23 13:41	04/25/23 01:25	18540-29-9	
Wet Chemistry 9045D	Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet								
pH	**7.88**	Std. Units		0.10	1	04/20/23 16:00	04/20/23 18:57		H3
Wet Chemistry 9050AMod	Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet								
Specific Conductance @ 25 C	**1700**	umhos/cm	10.0	10.0	1	04/22/23 08:00	04/22/23 10:46		
Calculated Results	Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet								
Sodium Adsorption Ratio	**0.366**				1	04/25/23 20:06	04/25/23 20:06	SAR	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 2 **Lab ID: 60426359003** Collected: 04/13/23 10:15 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
TPH-RRO (C28-C36)	**5.4J**	mg/kg	22.2	5.0	1	04/19/23 01:59	04/20/23 11:43		
TPH-DRO (C10-C28)	**10.6J**	mg/kg	11.1	5.0	1	04/19/23 01:59	04/20/23 11:43		
Surrogates									
n-Tetracosane (S)	75	%	31-152		1	04/19/23 01:59	04/20/23 11:43	646-31-1	
p-Terphenyl (S)	67	%	46-130		1	04/19/23 01:59	04/20/23 11:43	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
TPH-GRO	ND	mg/kg	12.8	1.6	1	04/20/23 13:54	04/21/23 05:20		
Surrogates									
4-Bromofluorobenzene (S)	89	%	66-130		1	04/20/23 13:54	04/21/23 05:20	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2	Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet								
Boron, Hot Water Soluble	**0.301**	mg/L	0.200	0.0167	1	04/24/23 12:14	04/26/23 10:58	7440-42-8H	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Barium	**158**	mg/kg	0.52	0.29	1	04/22/23 10:38	05/01/23 18:44	7440-39-3	
Cadmium	**0.64**	mg/kg	0.52	0.11	1	04/22/23 10:38	05/01/23 18:44	7440-43-9	
Copper	**11.2**	mg/kg	2.1	0.32	1	04/22/23 10:38	05/01/23 18:44	7440-50-8	
Lead	**9.4**	mg/kg	1.0	0.38	1	04/22/23 10:38	05/01/23 18:44	7439-92-1	
Nickel	**12.5**	mg/kg	0.52	0.24	1	04/22/23 10:38	05/01/23 18:44	7440-02-0	
Selenium	ND	mg/kg	1.6	0.78	1	04/22/23 10:38	05/01/23 18:44	7782-49-2	
Silver	ND	mg/kg	0.73	0.18	1	04/22/23 10:38	05/01/23 18:44	7440-22-4	
Zinc	**39.9**	mg/kg	10.4	1.4	1	04/22/23 10:38	05/01/23 18:44	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	**6.0**	mg/kg	1.0	0.19	10	04/22/23 10:38	04/25/23 09:59	7440-38-2	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
Acenaphthene	ND	mg/kg	0.0037	0.0022	1	04/18/23 16:27	04/27/23 13:35	83-32-9	
Anthracene	ND	mg/kg	0.0037	0.0021	1	04/18/23 16:27	04/27/23 13:35	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0037	0.0020	1	04/18/23 16:27	04/27/23 13:35	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0037	0.0015	1	04/18/23 16:27	04/27/23 13:35	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0037	0.0019	1	04/18/23 16:27	04/27/23 13:35	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0037	0.0019	1	04/18/23 16:27	04/27/23 13:35	207-08-9	
Chrysene	ND	mg/kg	0.0037	0.0019	1	04/18/23 16:27	04/27/23 13:35	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0037	0.0020	1	04/18/23 16:27	04/27/23 13:35	53-70-3	
Fluoranthene	ND	mg/kg	0.0037	0.0031	1	04/18/23 16:27	04/27/23 13:35	206-44-0	
Fluorene	ND	mg/kg	0.0037	0.0028	1	04/18/23 16:27	04/27/23 13:35	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0037	0.0019	1	04/18/23 16:27	04/27/23 13:35	193-39-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 2 **Lab ID: 60426359003** Collected: 04/13/23 10:15 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
1-Methylnaphthalene	ND	mg/kg	0.0037	0.0018	1	04/18/23 16:27	04/27/23 13:35	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0037	0.0026	1	04/18/23 16:27	04/27/23 13:35	91-57-6	
Naphthalene	ND	mg/kg	0.0037	0.0020	1	04/18/23 16:27	04/27/23 13:35	91-20-3	
Pyrene	ND	mg/kg	0.0037	0.0027	1	04/18/23 16:27	04/27/23 13:35	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	52	%	40-120		1	04/18/23 16:27	04/27/23 13:35	321-60-8	
Terphenyl-d14 (S)	55	%	45-130		1	04/18/23 16:27	04/27/23 13:35	1718-51-0	
8260C MSV 5035A Low Level	Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
Benzene	ND	mg/kg	0.0064	0.00059	1	04/19/23 12:18	04/19/23 22:59	71-43-2	
Ethylbenzene	ND	mg/kg	0.0064	0.0011	1	04/19/23 12:18	04/19/23 22:59	100-41-4	
Toluene	ND	mg/kg	0.026	0.0057	1	04/19/23 12:18	04/19/23 22:59	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0064	0.00088	1	04/19/23 12:18	04/19/23 22:59	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0064	0.00056	1	04/19/23 12:18	04/19/23 22:59	108-67-8	
Xylene (Total)	ND	mg/kg	0.019	0.0047	1	04/19/23 12:18	04/19/23 22:59	1330-20-7	
Surrogates									
Toluene-d8 (S)	104	%	80-120		1	04/19/23 12:18	04/19/23 22:59	2037-26-5	
4-Bromofluorobenzene (S)	101	%	83-119		1	04/19/23 12:18	04/19/23 22:59	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	04/19/23 12:18	04/19/23 22:59	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	**12.6**	%	0.50	0.50	1		04/18/23 14:02		
Total Solids 2540 G-2011	Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet								
Total Solids	**91.3**	%			1	04/22/23 10:05	04/22/23 10:21		
Wet Chemistry 7199	Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet								
Chromium, Hexavalent	ND	mg/kg	1.10	0.279	1	04/23/23 13:41	04/25/23 01:30	18540-29-9	
Wet Chemistry 9045D	Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet								
pH	**8.22**	Std. Units		0.10	1	04/20/23 16:00	04/20/23 18:57		H3
Wet Chemistry 9050AMod	Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet								
Specific Conductance @ 25 C	**162**	umhos/cm	10.0	10.0	1	04/22/23 08:00	04/22/23 10:46		
Calculated Results	Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet								
Sodium Adsorption Ratio	**1.25**				1	04/25/23 20:19	04/25/23 20:19	SAR	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 3 **Lab ID: 60426359004** Collected: 04/13/23 10:30 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
TPH-RRO (C28-C36)	**70.4**	mg/kg	21.8	4.9	1	04/19/23 01:59	04/20/23 11:51		
TPH-DRO (C10-C28)	**38.7**	mg/kg	10.9	4.9	1	04/19/23 01:59	04/20/23 11:51		
Surrogates									
n-Tetracosane (S)	72	%	31-152		1	04/19/23 01:59	04/20/23 11:51	646-31-1	
p-Terphenyl (S)	59	%	46-130		1	04/19/23 01:59	04/20/23 11:51	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
TPH-GRO	ND	mg/kg	11.8	1.4	1	04/20/23 13:54	04/21/23 05:35		
Surrogates									
4-Bromofluorobenzene (S)	84	%	66-130		1	04/20/23 13:54	04/21/23 05:35	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2	Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet								
Boron, Hot Water Soluble	**0.244**	mg/L	0.200	0.0167	1	04/24/23 12:14	04/26/23 11:01	7440-42-8H	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Barium	**151**	mg/kg	0.45	0.25	1	04/22/23 10:38	05/01/23 18:46	7440-39-3	
Cadmium	**0.51**	mg/kg	0.45	0.095	1	04/22/23 10:38	05/01/23 18:46	7440-43-9	
Copper	**9.3**	mg/kg	1.8	0.28	1	04/22/23 10:38	05/01/23 18:46	7440-50-8	
Lead	**10.9**	mg/kg	0.90	0.33	1	04/22/23 10:38	05/01/23 18:46	7439-92-1	
Nickel	**9.4**	mg/kg	0.45	0.21	1	04/22/23 10:38	05/01/23 18:46	7440-02-0	
Selenium	ND	mg/kg	1.4	0.68	1	04/22/23 10:38	05/01/23 18:46	7782-49-2	
Silver	ND	mg/kg	0.63	0.16	1	04/22/23 10:38	05/01/23 18:46	7440-22-4	
Zinc	**39.0**	mg/kg	9.0	1.2	1	04/22/23 10:38	05/01/23 18:46	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	**4.5**	mg/kg	0.90	0.17	10	04/22/23 10:38	04/25/23 10:01	7440-38-2	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
Acenaphthene	ND	mg/kg	0.0035	0.0022	1	04/27/23 15:34	05/02/23 10:51	83-32-9	
Anthracene	ND	mg/kg	0.0035	0.0020	1	04/27/23 15:34	05/02/23 10:51	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:51	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0035	0.0014	1	04/27/23 15:34	05/02/23 10:51	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:51	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:51	207-08-9	
Chrysene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:51	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:51	53-70-3	
Fluoranthene	ND	mg/kg	0.0035	0.0029	1	04/27/23 15:34	05/02/23 10:51	206-44-0	
Fluorene	ND	mg/kg	0.0035	0.0027	1	04/27/23 15:34	05/02/23 10:51	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:51	193-39-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 3 **Lab ID: 60426359004** Collected: 04/13/23 10:30 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
1-Methylnaphthalene	ND	mg/kg	0.0035	0.0017	1	04/27/23 15:34	05/02/23 10:51	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0035	0.0025	1	04/27/23 15:34	05/02/23 10:51	91-57-6	
Naphthalene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 10:51	91-20-3	
Pyrene	ND	mg/kg	0.0035	0.0026	1	04/27/23 15:34	05/02/23 10:51	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	77	%	40-120		1	04/27/23 15:34	05/02/23 10:51	321-60-8	
Terphenyl-d14 (S)	87	%	45-130		1	04/27/23 15:34	05/02/23 10:51	1718-51-0	
8260C MSV 5035A Low Level	Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
Benzene	**0.00071J**	mg/kg	0.0060	0.00055	1	04/19/23 12:18	04/19/23 23:20	71-43-2	
Ethylbenzene	ND	mg/kg	0.0060	0.0010	1	04/19/23 12:18	04/19/23 23:20	100-41-4	
Toluene	ND	mg/kg	0.024	0.0053	1	04/19/23 12:18	04/19/23 23:20	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0060	0.00082	1	04/19/23 12:18	04/19/23 23:20	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0060	0.00052	1	04/19/23 12:18	04/19/23 23:20	108-67-8	
Xylene (Total)	ND	mg/kg	0.018	0.0044	1	04/19/23 12:18	04/19/23 23:20	1330-20-7	
Surrogates									
Toluene-d8 (S)	106	%	80-120		1	04/19/23 12:18	04/19/23 23:20	2037-26-5	
4-Bromofluorobenzene (S)	102	%	83-119		1	04/19/23 12:18	04/19/23 23:20	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	04/19/23 12:18	04/19/23 23:20	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	**9.3**	%	0.50	0.50	1		04/18/23 14:02		
Total Solids 2540 G-2011	Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet								
Total Solids	**91.5**	%			1	04/21/23 15:30	04/21/23 15:41		
Wet Chemistry 7199	Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet								
Chromium, Hexavalent	ND	mg/kg	1.09	0.279	1	04/23/23 13:41	04/25/23 01:35	18540-29-9	
Wet Chemistry 9045D	Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet								
pH	**8.07**	Std. Units		0.10	1	04/20/23 16:00	04/20/23 18:57		H3
Wet Chemistry 9050AMod	Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet								
Specific Conductance @ 25 C	**275**	umhos/cm	10.0	10.0	1	04/22/23 08:00	04/22/23 10:46		
Calculated Results	Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet								
Sodium Adsorption Ratio	**0.0960**				1	04/25/23 20:17	04/25/23 20:17	SAR	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 4 **Lab ID: 60426359005** Collected: 04/13/23 10:40 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
TPH-RRO (C28-C36)	**28.5**	mg/kg	21.7	4.9	1	04/19/23 01:59	04/20/23 11:59		
TPH-DRO (C10-C28)	**16.2**	mg/kg	10.8	4.9	1	04/19/23 01:59	04/20/23 11:59		
Surrogates									
n-Tetracosane (S)	134	%	31-152		1	04/19/23 01:59	04/20/23 11:59	646-31-1	
p-Terphenyl (S)	130	%	46-130		1	04/19/23 01:59	04/20/23 11:59	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
TPH-GRO	ND	mg/kg	11.9	1.4	1	04/20/23 13:54	04/21/23 05:50		
Surrogates									
4-Bromofluorobenzene (S)	83	%	66-130		1	04/20/23 13:54	04/21/23 05:50	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2	Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet								
Boron, Hot Water Soluble	**0.233**	mg/L	0.200	0.0167	1	04/24/23 12:14	04/26/23 11:03	7440-42-8H	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Barium	**147**	mg/kg	0.46	0.26	1	04/22/23 10:38	05/01/23 18:48	7440-39-3	
Cadmium	**0.54**	mg/kg	0.46	0.097	1	04/22/23 10:38	05/01/23 18:48	7440-43-9	
Copper	**9.1**	mg/kg	1.9	0.28	1	04/22/23 10:38	05/01/23 18:48	7440-50-8	
Lead	**8.6**	mg/kg	0.93	0.33	1	04/22/23 10:38	05/01/23 18:48	7439-92-1	
Nickel	**9.1**	mg/kg	0.46	0.22	1	04/22/23 10:38	05/01/23 18:48	7440-02-0	
Selenium	ND	mg/kg	1.4	0.70	1	04/22/23 10:38	05/01/23 18:48	7782-49-2	
Silver	ND	mg/kg	0.65	0.16	1	04/22/23 10:38	05/01/23 18:48	7440-22-4	
Zinc	**35.8**	mg/kg	9.3	1.2	1	04/22/23 10:38	05/01/23 18:48	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	**4.7**	mg/kg	0.93	0.17	10	04/22/23 10:38	04/25/23 10:04	7440-38-2	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
Acenaphthene	ND	mg/kg	0.0035	0.0021	1	04/27/23 15:34	05/02/23 11:09	83-32-9	
Anthracene	ND	mg/kg	0.0035	0.0020	1	04/27/23 15:34	05/02/23 11:09	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 11:09	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0035	0.0014	1	04/27/23 15:34	05/02/23 11:09	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0035	0.0018	1	04/27/23 15:34	05/02/23 11:09	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0035	0.0018	1	04/27/23 15:34	05/02/23 11:09	207-08-9	
Chrysene	ND	mg/kg	0.0035	0.0018	1	04/27/23 15:34	05/02/23 11:09	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 11:09	53-70-3	
Fluoranthene	ND	mg/kg	0.0035	0.0029	1	04/27/23 15:34	05/02/23 11:09	206-44-0	
Fluorene	ND	mg/kg	0.0035	0.0026	1	04/27/23 15:34	05/02/23 11:09	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0035	0.0018	1	04/27/23 15:34	05/02/23 11:09	193-39-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 4 **Lab ID: 60426359005** Collected: 04/13/23 10:40 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
1-Methylnaphthalene	ND	mg/kg	0.0035	0.0017	1	04/27/23 15:34	05/02/23 11:09	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0035	0.0025	1	04/27/23 15:34	05/02/23 11:09	91-57-6	
Naphthalene	ND	mg/kg	0.0035	0.0019	1	04/27/23 15:34	05/02/23 11:09	91-20-3	
Pyrene	ND	mg/kg	0.0035	0.0025	1	04/27/23 15:34	05/02/23 11:09	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	70	%	40-120		1	04/27/23 15:34	05/02/23 11:09	321-60-8	
Terphenyl-d14 (S)	74	%	45-130		1	04/27/23 15:34	05/02/23 11:09	1718-51-0	
8260C MSV 5035A Low Level	Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
Benzene	ND	mg/kg	0.0059	0.00054	1	04/19/23 12:18	04/19/23 23:40	71-43-2	
Ethylbenzene	ND	mg/kg	0.0059	0.0010	1	04/19/23 12:18	04/19/23 23:40	100-41-4	
Toluene	ND	mg/kg	0.024	0.0053	1	04/19/23 12:18	04/19/23 23:40	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0059	0.00082	1	04/19/23 12:18	04/19/23 23:40	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0059	0.00051	1	04/19/23 12:18	04/19/23 23:40	108-67-8	
Xylene (Total)	ND	mg/kg	0.018	0.0044	1	04/19/23 12:18	04/19/23 23:40	1330-20-7	
Surrogates									
Toluene-d8 (S)	105	%	80-120		1	04/19/23 12:18	04/19/23 23:40	2037-26-5	
4-Bromofluorobenzene (S)	101	%	83-119		1	04/19/23 12:18	04/19/23 23:40	460-00-4	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1	04/19/23 12:18	04/19/23 23:40	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	**8.7**	%	0.50	0.50	1		04/18/23 14:03		
Total Solids 2540 G-2011	Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet								
Total Solids	**89.1**	%			1	04/21/23 15:30	04/21/23 15:41		
Wet Chemistry 7199	Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet								
Chromium, Hexavalent	ND	mg/kg	1.12	0.286	1	04/23/23 13:41	04/25/23 01:41	18540-29-9	
Wet Chemistry 9045D	Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet								
pH	**8.08**	Std. Units		0.10	1	04/20/23 16:00	04/20/23 18:57		H3
Wet Chemistry 9050AMod	Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet								
Specific Conductance @ 25 C	**223**	umhos/cm	10.0	10.0	1	04/22/23 08:00	04/22/23 10:46		
Calculated Results	Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet								
Sodium Adsorption Ratio	**0.0553**				1	04/25/23 20:00	04/25/23 20:00	SAR	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 5 **Lab ID: 60426359006** Collected: 04/13/23 10:50 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
TPH-RRO (C28-C36)	**19.0J**	mg/kg	21.4	4.8	1	04/19/23 01:59	04/20/23 12:07		
TPH-DRO (C10-C28)	**16.0**	mg/kg	10.7	4.8	1	04/19/23 01:59	04/20/23 12:07		
Surrogates									
n-Tetracosane (S)	57	%	31-152		1	04/19/23 01:59	04/20/23 12:07	646-31-1	
p-Terphenyl (S)	51	%	46-130		1	04/19/23 01:59	04/20/23 12:07	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
TPH-GRO	ND	mg/kg	11.4	1.4	1	04/20/23 13:54	04/21/23 06:05		
Surrogates									
4-Bromofluorobenzene (S)	84	%	66-130		1	04/20/23 13:54	04/21/23 06:05	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2	Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet								
Boron, Hot Water Soluble	**0.180J**	mg/L	0.200	0.0167	1	04/24/23 12:14	04/26/23 11:06	7440-42-8H	J
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Barium	**156**	mg/kg	0.49	0.27	1	04/22/23 10:38	05/01/23 19:01	7440-39-3	
Cadmium	**0.51**	mg/kg	0.49	0.10	1	04/22/23 10:38	05/01/23 19:01	7440-43-9	
Copper	**8.6**	mg/kg	2.0	0.30	1	04/22/23 10:38	05/01/23 19:01	7440-50-8	
Lead	**7.6**	mg/kg	0.98	0.35	1	04/22/23 10:38	05/01/23 19:01	7439-92-1	
Nickel	**8.9**	mg/kg	0.49	0.23	1	04/22/23 10:38	05/01/23 19:01	7440-02-0	
Selenium	ND	mg/kg	1.5	0.74	1	04/22/23 10:38	05/01/23 19:01	7782-49-2	
Silver	ND	mg/kg	0.68	0.17	1	04/22/23 10:38	05/01/23 19:01	7440-22-4	
Zinc	**28.7**	mg/kg	9.8	1.3	1	04/22/23 10:38	05/01/23 19:01	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	**4.5**	mg/kg	0.98	0.18	10	04/22/23 10:38	04/25/23 10:14	7440-38-2	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
Acenaphthene	ND	mg/kg	0.0033	0.0020	1	04/27/23 15:34	05/02/23 11:27	83-32-9	
Anthracene	ND	mg/kg	0.0033	0.0019	1	04/27/23 15:34	05/02/23 11:27	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0033	0.0018	1	04/27/23 15:34	05/02/23 11:27	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0033	0.0014	1	04/27/23 15:34	05/02/23 11:27	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0033	0.0018	1	04/27/23 15:34	05/02/23 11:27	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0033	0.0018	1	04/27/23 15:34	05/02/23 11:27	207-08-9	
Chrysene	ND	mg/kg	0.0033	0.0018	1	04/27/23 15:34	05/02/23 11:27	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0033	0.0018	1	04/27/23 15:34	05/02/23 11:27	53-70-3	
Fluoranthene	ND	mg/kg	0.0033	0.0028	1	04/27/23 15:34	05/02/23 11:27	206-44-0	
Fluorene	ND	mg/kg	0.0033	0.0025	1	04/27/23 15:34	05/02/23 11:27	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0033	0.0018	1	04/27/23 15:34	05/02/23 11:27	193-39-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 5 **Lab ID: 60426359006** Collected: 04/13/23 10:50 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
1-Methylnaphthalene	ND	mg/kg	0.0033	0.0016	1	04/27/23 15:34	05/02/23 11:27	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0033	0.0023	1	04/27/23 15:34	05/02/23 11:27	91-57-6	
Naphthalene	ND	mg/kg	0.0033	0.0018	1	04/27/23 15:34	05/02/23 11:27	91-20-3	
Pyrene	ND	mg/kg	0.0033	0.0024	1	04/27/23 15:34	05/02/23 11:27	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%	40-120		1	04/27/23 15:34	05/02/23 11:27	321-60-8	
Terphenyl-d14 (S)	70	%	45-130		1	04/27/23 15:34	05/02/23 11:27	1718-51-0	
8260C MSV 5035A Low Level	Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
Benzene	ND	mg/kg	0.0057	0.00052	1	04/19/23 12:18	04/20/23 00:01	71-43-2	
Ethylbenzene	ND	mg/kg	0.0057	0.00098	1	04/19/23 12:18	04/20/23 00:01	100-41-4	
Toluene	ND	mg/kg	0.023	0.0050	1	04/19/23 12:18	04/20/23 00:01	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0057	0.00078	1	04/19/23 12:18	04/20/23 00:01	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0057	0.00049	1	04/19/23 12:18	04/20/23 00:01	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0042	1	04/19/23 12:18	04/20/23 00:01	1330-20-7	
Surrogates									
Toluene-d8 (S)	105	%	80-120		1	04/19/23 12:18	04/20/23 00:01	2037-26-5	
4-Bromofluorobenzene (S)	101	%	83-119		1	04/19/23 12:18	04/20/23 00:01	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	04/19/23 12:18	04/20/23 00:01	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	**7.0**	%	0.50	0.50	1		04/19/23 11:30		
Total Solids 2540 G-2011	Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet								
Total Solids	**91.0**	%			1	04/21/23 15:30	04/21/23 15:41		
Wet Chemistry 7199	Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet								
Chromium, Hexavalent	ND	mg/kg	1.10	0.280	1	04/23/23 13:41	04/25/23 01:46	18540-29-9	
Wet Chemistry 9045D	Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet								
pH	**8.33**	Std. Units		0.10	1	04/20/23 16:00	04/20/23 18:57		H3
Wet Chemistry 9050AMod	Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet								
Specific Conductance @ 25 C	**138**	umhos/cm	10.0	10.0	1	04/22/23 08:00	04/22/23 10:46		
Calculated Results	Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet								
Sodium Adsorption Ratio	**0.0706**				1	04/25/23 19:58	04/25/23 19:58	SAR	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 6 **Lab ID: 60426359007** Collected: 04/13/23 11:00 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
TPH-RRO (C28-C36)	**26.2**	mg/kg	21.1	4.7	1	04/19/23 01:59	04/20/23 12:15		
TPH-DRO (C10-C28)	**16.4**	mg/kg	10.6	4.7	1	04/19/23 01:59	04/20/23 12:15		
Surrogates									
n-Tetracosane (S)	64	%	31-152		1	04/19/23 01:59	04/20/23 12:15	646-31-1	
p-Terphenyl (S)	57	%	46-130		1	04/19/23 01:59	04/20/23 12:15	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
TPH-GRO	ND	mg/kg	11.4	1.4	1	04/20/23 13:54	04/21/23 06:20		
Surrogates									
4-Bromofluorobenzene (S)	89	%	66-130		1	04/20/23 13:54	04/21/23 06:20	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2	Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet								
Boron, Hot Water Soluble	**0.233**	mg/L	0.200	0.0167	1	04/24/23 12:14	04/26/23 11:09	7440-42-8H	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Barium	**128**	mg/kg	0.43	0.24	1	04/22/23 10:38	05/01/23 19:08	7440-39-3	
Cadmium	**0.51**	mg/kg	0.43	0.091	1	04/22/23 10:38	05/01/23 19:08	7440-43-9	
Copper	**8.0**	mg/kg	1.7	0.27	1	04/22/23 10:38	05/01/23 19:08	7440-50-8	
Lead	**8.1**	mg/kg	0.87	0.31	1	04/22/23 10:38	05/01/23 19:08	7439-92-1	
Nickel	**8.3**	mg/kg	0.43	0.20	1	04/22/23 10:38	05/01/23 19:08	7440-02-0	
Selenium	ND	mg/kg	1.3	0.65	1	04/22/23 10:38	05/01/23 19:08	7782-49-2	
Silver	ND	mg/kg	0.61	0.15	1	04/22/23 10:38	05/01/23 19:08	7440-22-4	
Zinc	**32.9**	mg/kg	8.7	1.1	1	04/22/23 10:38	05/01/23 19:08	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	**4.1**	mg/kg	0.87	0.16	10	04/22/23 10:38	04/25/23 10:16	7440-38-2	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
Acenaphthene	ND	mg/kg	0.0034	0.0020	1	04/27/23 15:34	05/02/23 11:45	83-32-9	
Anthracene	ND	mg/kg	0.0034	0.0019	1	04/27/23 15:34	05/02/23 11:45	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 11:45	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0034	0.0014	1	04/27/23 15:34	05/02/23 11:45	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 11:45	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 11:45	207-08-9	
Chrysene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 11:45	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 11:45	53-70-3	
Fluoranthene	ND	mg/kg	0.0034	0.0028	1	04/27/23 15:34	05/02/23 11:45	206-44-0	
Fluorene	ND	mg/kg	0.0034	0.0025	1	04/27/23 15:34	05/02/23 11:45	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 11:45	193-39-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DG 6 **Lab ID: 60426359007** Collected: 04/13/23 11:00 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
1-Methylnaphthalene	ND	mg/kg	0.0034	0.0016	1	04/27/23 15:34	05/02/23 11:45	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0034	0.0024	1	04/27/23 15:34	05/02/23 11:45	91-57-6	
Naphthalene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 11:45	91-20-3	
Pyrene	ND	mg/kg	0.0034	0.0024	1	04/27/23 15:34	05/02/23 11:45	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	57	%	40-120		1	04/27/23 15:34	05/02/23 11:45	321-60-8	
Terphenyl-d14 (S)	60	%	45-130		1	04/27/23 15:34	05/02/23 11:45	1718-51-0	
8260C MSV 5035A Low Level	Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
Benzene	ND	mg/kg	0.0057	0.00052	1	04/19/23 12:18	04/20/23 00:21	71-43-2	
Ethylbenzene	ND	mg/kg	0.0057	0.00099	1	04/19/23 12:18	04/20/23 00:21	100-41-4	
Toluene	ND	mg/kg	0.023	0.0051	1	04/19/23 12:18	04/20/23 00:21	108-88-3	
1,2,4-Trimethylbenzene	**0.0014J**	mg/kg	0.0057	0.00079	1	04/19/23 12:18	04/20/23 00:21	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0057	0.00050	1	04/19/23 12:18	04/20/23 00:21	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0042	1	04/19/23 12:18	04/20/23 00:21	1330-20-7	
Surrogates									
Toluene-d8 (S)	106	%	80-120		1	04/19/23 12:18	04/20/23 00:21	2037-26-5	
4-Bromofluorobenzene (S)	102	%	83-119		1	04/19/23 12:18	04/20/23 00:21	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	04/19/23 12:18	04/20/23 00:21	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	**6.9**	%	0.50	0.50	1		04/19/23 11:30		
Total Solids 2540 G-2011	Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet								
Total Solids	**90.6**	%			1	04/21/23 15:30	04/21/23 15:41		
Wet Chemistry 7199	Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet								
Chromium, Hexavalent	ND	mg/kg	1.10	0.282	1	04/23/23 13:41	04/25/23 01:56	18540-29-9	
Wet Chemistry 9045D	Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet								
pH	**8.08**	Std. Units		0.10	1	04/20/23 16:00	04/20/23 18:57		H3
Wet Chemistry 9050AMod	Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet								
Specific Conductance @ 25 C	**268**	umhos/cm	10.0	10.0	1	04/22/23 08:00	04/22/23 10:46		
Calculated Results	Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet								
Sodium Adsorption Ratio	**0.0553**				1	04/25/23 20:11	04/25/23 20:11	SAR	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DUPLICATE A **Lab ID: 60426359008** Collected: 04/13/23 11:00 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
TPH-RRO (C28-C36)	**31.3**	mg/kg	21.3	4.8	1	04/19/23 01:59	04/20/23 12:23		
TPH-DRO (C10-C28)	**17.8**	mg/kg	10.6	4.8	1	04/19/23 01:59	04/20/23 12:23		
Surrogates									
n-Tetracosane (S)	72	%	31-152		1	04/19/23 01:59	04/20/23 12:23	646-31-1	
p-Terphenyl (S)	62	%	46-130		1	04/19/23 01:59	04/20/23 12:23	92-94-4	
Gasoline Range Organics	Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
TPH-GRO	ND	mg/kg	10.3	1.3	1	04/20/23 13:54	04/21/23 06:35		
Surrogates									
4-Bromofluorobenzene (S)	84	%	66-130		1	04/20/23 13:54	04/21/23 06:35	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2	Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet								
Boron, Hot Water Soluble	**0.297**	mg/L	0.200	0.0167	1	04/24/23 12:14	04/26/23 11:17	7440-42-8H	
6010 MET ICP Red. Interference	Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Barium	**143**	mg/kg	0.44	0.24	1	04/22/23 10:38	05/01/23 19:10	7440-39-3	
Cadmium	**0.49**	mg/kg	0.44	0.092	1	04/22/23 10:38	05/01/23 19:10	7440-43-9	
Copper	**9.1**	mg/kg	1.7	0.27	1	04/22/23 10:38	05/01/23 19:10	7440-50-8	
Lead	**14.6**	mg/kg	0.87	0.32	1	04/22/23 10:38	05/01/23 19:10	7439-92-1	
Nickel	**8.7**	mg/kg	0.44	0.21	1	04/22/23 10:38	05/01/23 19:10	7440-02-0	
Selenium	ND	mg/kg	1.3	0.66	1	04/22/23 10:38	05/01/23 19:10	7782-49-2	
Silver	ND	mg/kg	0.61	0.15	1	04/22/23 10:38	05/01/23 19:10	7440-22-4	
Zinc	**42.8**	mg/kg	8.7	1.1	1	04/22/23 10:38	05/01/23 19:10	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City								
Arsenic	**4.3**	mg/kg	0.87	0.16	10	04/22/23 10:38	04/25/23 10:24	7440-38-2	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
Acenaphthene	ND	mg/kg	0.0034	0.0021	1	04/27/23 15:34	05/02/23 12:03	83-32-9	
Anthracene	ND	mg/kg	0.0034	0.0019	1	04/27/23 15:34	05/02/23 12:03	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0034	0.0019	1	04/27/23 15:34	05/02/23 12:03	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0034	0.0014	1	04/27/23 15:34	05/02/23 12:03	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 12:03	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 12:03	207-08-9	
Chrysene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 12:03	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 12:03	53-70-3	
Fluoranthene	ND	mg/kg	0.0034	0.0028	1	04/27/23 15:34	05/02/23 12:03	206-44-0	
Fluorene	ND	mg/kg	0.0034	0.0026	1	04/27/23 15:34	05/02/23 12:03	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 12:03	193-39-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

ANALYTICAL RESULTS

Project: NWAV #37
Pace Project No.: 60426359

Sample: DUPLICATE A **Lab ID: 60426359008** Collected: 04/13/23 11:00 Received: 04/15/23 10:31 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546 Pace Analytical Services - Kansas City								
1-Methylnaphthalene	ND	mg/kg	0.0034	0.0017	1	04/27/23 15:34	05/02/23 12:03	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0034	0.0024	1	04/27/23 15:34	05/02/23 12:03	91-57-6	
Naphthalene	ND	mg/kg	0.0034	0.0018	1	04/27/23 15:34	05/02/23 12:03	91-20-3	
Pyrene	ND	mg/kg	0.0034	0.0025	1	04/27/23 15:34	05/02/23 12:03	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	69	%	40-120		1	04/27/23 15:34	05/02/23 12:03	321-60-8	
Terphenyl-d14 (S)	74	%	45-130		1	04/27/23 15:34	05/02/23 12:03	1718-51-0	
8260C MSV 5035A Low Level	Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B Pace Analytical Services - Kansas City								
Benzene	**0.00063J**	mg/kg	0.0056	0.00052	1	04/19/23 12:18	04/20/23 00:41	71-43-2	
Ethylbenzene	ND	mg/kg	0.0056	0.00098	1	04/19/23 12:18	04/20/23 00:41	100-41-4	
Toluene	ND	mg/kg	0.023	0.0050	1	04/19/23 12:18	04/20/23 00:41	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0056	0.00078	1	04/19/23 12:18	04/20/23 00:41	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0056	0.00049	1	04/19/23 12:18	04/20/23 00:41	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0042	1	04/19/23 12:18	04/20/23 00:41	1330-20-7	
Surrogates									
Toluene-d8 (S)	106	%	80-120		1	04/19/23 12:18	04/20/23 00:41	2037-26-5	
4-Bromofluorobenzene (S)	101	%	83-119		1	04/19/23 12:18	04/20/23 00:41	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	04/19/23 12:18	04/20/23 00:41	2199-69-1	
Percent Moisture	Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City								
Percent Moisture	**6.2**	%	0.50	0.50	1		04/19/23 11:30		
Total Solids 2540 G-2011	Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet								
Total Solids	**92.9**	%			1	04/21/23 15:30	04/21/23 15:41		
Wet Chemistry 7199	Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet								
Chromium, Hexavalent	ND	mg/kg	1.08	0.275	1	04/23/23 13:41	04/25/23 02:32	18540-29-9	
Wet Chemistry 9045D	Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet								
pH	**8.03**	Std. Units		0.10	1	04/20/23 16:00	04/20/23 18:57		H3
Wet Chemistry 9050AMod	Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet								
Specific Conductance @ 25 C	**221**	umhos/cm	10.0	10.0	1	04/22/23 08:00	04/22/23 10:46		
Calculated Results	Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet								
Sodium Adsorption Ratio	**0.0926**				1	04/25/23 20:36	04/25/23 20:36	SAR	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 842659
QC Batch Method: EPA 5035A/5030B
Analysis Method: EPA 8015B
Analysis Description: Gasoline Range Organics
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: 3339734 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH-GRO	mg/kg	ND	10.0	1.2	04/21/23 00:05	
4-Bromofluorobenzene (S)	%	93	66-130		04/21/23 00:05	

LABORATORY CONTROL SAMPLE: 3339735

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	mg/kg	50	47.5	95	70-130	
4-Bromofluorobenzene (S)	%			89	66-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3339736 3339737

Parameter	Units	60426357007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-GRO	mg/kg	ND	47.8	47.8	40.0	41.0	82	84	70-130	2	25	
4-Bromofluorobenzene (S)	%						87	91	66-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 2045653
QC Batch Method: HWS Boron
Analysis Method: 6010B-NE493 Ch 2
Analysis Description: Metals (ICP) 6010B-NE493 Ch 2
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: R3917697-1 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Hot Water Soluble	mg/L	ND	0.200	0.0167	04/26/23 10:44	

LABORATORY CONTROL SAMPLE & LCSD: R3917697-2 R3917697-3

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Boron, Hot Water Soluble	mg/L	1.00	1.03	1.03	103	103	80.0-120	0.260	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 843041
QC Batch Method: EPA 3050
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005

METHOD BLANK: 3341537 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/kg	ND	0.50	0.28	05/01/23 17:52	
Cadmium	mg/kg	ND	0.50	0.10	05/01/23 17:52	
Copper	mg/kg	ND	2.0	0.31	05/01/23 17:52	
Lead	mg/kg	ND	1.0	0.36	05/01/23 17:52	
Nickel	mg/kg	ND	0.50	0.24	05/01/23 17:52	
Selenium	mg/kg	ND	1.5	0.75	05/01/23 17:52	
Silver	mg/kg	ND	0.70	0.17	05/01/23 17:52	
Zinc	mg/kg	ND	10.0	1.3	05/01/23 17:52	

LABORATORY CONTROL SAMPLE: 3341538

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/kg	100	104	104	80-120	
Cadmium	mg/kg	100	102	102	80-120	
Copper	mg/kg	100	101	101	80-120	
Lead	mg/kg	100	103	103	80-120	
Nickel	mg/kg	100	105	105	80-120	
Selenium	mg/kg	100	88.4	88	80-120	
Silver	mg/kg	50	47.4	95	80-120	
Zinc	mg/kg	100	101	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341539 3341540

Parameter	Units	60426353001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/kg	219	109	99.5	342	315	113	96	75-125	8	20	
Cadmium	mg/kg	0.59	109	99.5	95.9	86.0	87	86	75-125	11	20	
Copper	mg/kg	10.2	109	99.5	116	104	97	94	75-125	11	20	
Lead	mg/kg	9.1	109	99.5	105	95.1	88	86	75-125	10	20	
Nickel	mg/kg	10.5	109	99.5	109	97.3	90	87	75-125	11	20	
Selenium	mg/kg	ND	109	99.5	87.5	79.5	80	80	75-125	10	20	
Silver	mg/kg	ND	54.6	49.7	47.3	42.9	87	86	75-125	10	20	
Zinc	mg/kg	37.6	109	99.5	133	120	87	83	75-125	10	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 843044
QC Batch Method: EPA 3050
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359006, 60426359007, 60426359008

METHOD BLANK: 3341547 Matrix: Solid
Associated Lab Samples: 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/kg	ND	0.50	0.28	05/01/23 18:57	
Cadmium	mg/kg	ND	0.50	0.10	05/01/23 18:57	
Copper	mg/kg	ND	2.0	0.31	05/01/23 18:57	
Lead	mg/kg	ND	1.0	0.36	05/01/23 18:57	
Nickel	mg/kg	ND	0.50	0.24	05/01/23 18:57	
Selenium	mg/kg	ND	1.5	0.75	05/01/23 18:57	
Silver	mg/kg	ND	0.70	0.17	05/01/23 18:57	
Zinc	mg/kg	ND	10.0	1.3	05/01/23 18:57	

LABORATORY CONTROL SAMPLE: 3341548

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/kg	100	105	105	80-120	
Cadmium	mg/kg	100	102	102	80-120	
Copper	mg/kg	100	101	101	80-120	
Lead	mg/kg	100	103	103	80-120	
Nickel	mg/kg	100	104	104	80-120	
Selenium	mg/kg	100	89.8	90	80-120	
Silver	mg/kg	50	47.1	94	80-120	
Zinc	mg/kg	100	101	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341549 3341550

Parameter	Units	60426359006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/kg	156	92.7	101	246	261	97	104	75-125	6	20	
Cadmium	mg/kg	0.51	92.7	101	83.6	91.6	90	90	75-125	9	20	
Copper	mg/kg	8.6	92.7	101	100	108	99	98	75-125	7	20	
Lead	mg/kg	7.6	92.7	101	91.0	99.1	90	90	75-125	9	20	
Nickel	mg/kg	8.9	92.7	101	93.8	101	92	91	75-125	7	20	
Selenium	mg/kg	ND	92.7	101	78.6	84.1	84	83	75-125	7	20	
Silver	mg/kg	ND	46.4	50.8	42.2	45.3	91	89	75-125	7	20	
Zinc	mg/kg	28.7	92.7	101	111	119	89	89	75-125	7	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 843042 — Analysis Method: EPA 6020
QC Batch Method: EPA 3050 — Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005

METHOD BLANK: 3341541 — Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	0.18	04/25/23 09:03	

LABORATORY CONTROL SAMPLE: 3341542

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	100	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341543 3341544

Parameter	Units	60426353002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	5.4	98.6	102	100	103	96	96	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 843045
QC Batch Method: EPA 3050
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359006, 60426359007, 60426359008

METHOD BLANK: 3341551 Matrix: Solid
Associated Lab Samples: 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	0.18	04/25/23 10:09	

LABORATORY CONTROL SAMPLE: 3341552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	101	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3341553 3341554

Parameter	Units	60426359007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	4.1	91	89.5	93.4	90.3	98	96	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 842422
QC Batch Method: EPA 5035A/5030B
Analysis Method: EPA 8260C
Analysis Description: 8260C MSV 5035A Low Level
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: 3338691 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	0.00069	04/19/23 21:59	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	0.00043	04/19/23 21:59	
Benzene	mg/kg	ND	0.0050	0.00046	04/19/23 21:59	
Ethylbenzene	mg/kg	ND	0.0050	0.00087	04/19/23 21:59	
Toluene	mg/kg	ND	0.020	0.0044	04/19/23 21:59	
Xylene (Total)	mg/kg	ND	0.015	0.0037	04/19/23 21:59	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		04/19/23 21:59	
4-Bromofluorobenzene (S)	%	103	83-119		04/19/23 21:59	
Toluene-d8 (S)	%	105	80-120		04/19/23 21:59	

LABORATORY CONTROL SAMPLE: 3338692

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	1.2	1.3	105	79-121	
1,3,5-Trimethylbenzene	mg/kg	1.2	1.3	104	81-122	
Benzene	mg/kg	1.2	1.2	98	67-126	
Ethylbenzene	mg/kg	1.2	1.2	98	69-127	
Toluene	mg/kg	1.2	1.2	92	80-118	
Xylene (Total)	mg/kg	3.8	3.7	100	69-130	
1,2-Dichlorobenzene-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			99	83-119	
Toluene-d8 (S)	%			96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3338693 3338694

Parameter	Units	60426359001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2,4-Trimethylbenzene	mg/kg	0.0013J	1.4	1.4	1.5	1.5	102	101	10-124	1	68	
1,3,5-Trimethylbenzene	mg/kg	0.00052J	1.4	1.4	1.5	1.5	101	101	10-125	0	65	
Benzene	mg/kg	ND	1.4	1.4	1.3	1.3	93	93	17-134	0	53	
Ethylbenzene	mg/kg	ND	1.4	1.4	1.4	1.4	95	95	10-137	1	60	
Toluene	mg/kg	ND	1.4	1.4	1.3	1.3	88	88	13-131	1	60	
Xylene (Total)	mg/kg	ND	4.3	4.3	4.1	4.2	95	97	10-137	1	58	
1,2-Dichlorobenzene-d4 (S)	%						102	100	80-120			
4-Bromofluorobenzene (S)	%						100	101	83-119			
Toluene-d8 (S)	%						96	97	80-120			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 842084
QC Batch Method: EPA 3546
Analysis Method: EPA 8015B
Analysis Description: EPA 8015B
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: 3337608 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/kg	ND	9.9	4.4	04/19/23 10:36	
TPH-RRO (C28-C36)	mg/kg	ND	19.8	4.4	04/19/23 10:36	
n-Tetracosane (S)	%	70	31-152		04/19/23 10:36	
p-Terphenyl (S)	%	73	46-130		04/19/23 10:36	

LABORATORY CONTROL SAMPLE: 3337609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/kg	81.9	63.2	77	74-124	
n-Tetracosane (S)	%			79	31-152	
p-Terphenyl (S)	%			80	46-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3337610 3337611

Parameter	Units	60426353001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH-DRO (C10-C28)	mg/kg	15.5	90.8	92.4	58.5	62.7	47	51	30-130	7	35	
n-Tetracosane (S)	%						62	67	31-152			
p-Terphenyl (S)	%						65	67	46-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 842085
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359002, 60426359003

METHOD BLANK: 3337612 Matrix: Solid
Associated Lab Samples: 60426359002, 60426359003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0032	0.0016	04/26/23 11:18	
2-Methylnaphthalene	mg/kg	ND	0.0032	0.0023	04/26/23 11:18	
Acenaphthene	mg/kg	ND	0.0032	0.0020	04/26/23 11:18	
Anthracene	mg/kg	ND	0.0032	0.0018	04/26/23 11:18	
Benzo(a)anthracene	mg/kg	0.0022J	0.0032	0.0018	04/26/23 11:18	
Benzo(a)pyrene	mg/kg	0.0024J	0.0032	0.0013	04/26/23 11:18	
Benzo(b)fluoranthene	mg/kg	0.0024J	0.0032	0.0017	04/26/23 11:18	
Benzo(k)fluoranthene	mg/kg	ND	0.0032	0.0017	04/26/23 11:18	
Chrysene	mg/kg	0.0022J	0.0032	0.0017	04/26/23 11:18	
Dibenz(a,h)anthracene	mg/kg	ND	0.0032	0.0017	04/26/23 11:18	
Fluoranthene	mg/kg	0.0047	0.0032	0.0027	04/26/23 11:18	
Fluorene	mg/kg	ND	0.0032	0.0024	04/26/23 11:18	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0032	0.0017	04/26/23 11:18	
Naphthalene	mg/kg	ND	0.0032	0.0017	04/26/23 11:18	
Pyrene	mg/kg	0.0039	0.0032	0.0023	04/26/23 11:18	
2-Fluorobiphenyl (S)	%	69	40-120		04/26/23 11:18	
Terphenyl-d14 (S)	%	72	45-130		04/26/23 11:18	

LABORATORY CONTROL SAMPLE: 3337613

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.033	0.022	68	55-120	
2-Methylnaphthalene	mg/kg	0.033	0.022	68	55-120	
Acenaphthene	mg/kg	0.033	0.023	68	45-120	
Anthracene	mg/kg	0.033	0.024	72	50-120	
Benzo(a)anthracene	mg/kg	0.033	0.022	65	55-125	
Benzo(a)pyrene	mg/kg	0.033	0.023	68	45-120	
Benzo(b)fluoranthene	mg/kg	0.033	0.018	55	50-125	
Benzo(k)fluoranthene	mg/kg	0.033	0.025	76	55-120	
Chrysene	mg/kg	0.033	0.024	74	55-120	
Dibenz(a,h)anthracene	mg/kg	0.033	0.015	45	40-125	
Fluoranthene	mg/kg	0.033	0.025	74	50-125	
Fluorene	mg/kg	0.033	0.022	66	50-120	
Indeno(1,2,3-cd)pyrene	mg/kg	0.033	0.018	54	44-125	
Naphthalene	mg/kg	0.033	0.022	67	45-120	
Pyrene	mg/kg	0.033	0.026	79	50-125	
2-Fluorobiphenyl (S)	%			65	40-120	
Terphenyl-d14 (S)	%			64	45-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

MATRIX SPIKE SAMPLE: 3337614

Parameter	Units	60426353002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.038	0.023	61	50-145	
2-Methylnaphthalene	mg/kg	ND	0.038	0.024	63	50-120	
Acenaphthene	mg/kg	ND	0.038	0.022	59	10-150	
Anthracene	mg/kg	ND	0.038	0.025	65	10-160	
Benzo(a)anthracene	mg/kg	ND	0.038	0.023	60	10-160	
Benzo(a)pyrene	mg/kg	ND	0.038	0.021	55	10-150	
Benzo(b)fluoranthene	mg/kg	ND	0.038	0.020	52	10-165	
Benzo(k)fluoranthene	mg/kg	ND	0.038	0.023	61	10-165	
Chrysene	mg/kg	ND	0.038	0.023	61	10-150	
Dibenz(a,h)anthracene	mg/kg	ND	0.038	0.022	58	10-175	
Fluoranthene	mg/kg	ND	0.038	0.026	67	10-180	
Fluorene	mg/kg	ND	0.038	0.024	64	20-145	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.038	0.022	57	10-150	
Naphthalene	mg/kg	ND	0.038	0.023	60	10-165	
Pyrene	mg/kg	ND	0.038	0.025	66	10-180	
2-Fluorobiphenyl (S)	%				57	40-120	
Terphenyl-d14 (S)	%				55	45-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 844092
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359001, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: 3345415 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0031	0.0015	05/02/23 09:39	
2-Methylnaphthalene	mg/kg	ND	0.0031	0.0022	05/02/23 09:39	
Acenaphthene	mg/kg	ND	0.0031	0.0019	05/02/23 09:39	
Anthracene	mg/kg	0.0034	0.0031	0.0018	05/02/23 09:39	
Benzo(a)anthracene	mg/kg	0.0082	0.0031	0.0017	05/02/23 09:39	
Benzo(a)pyrene	mg/kg	0.0080	0.0031	0.0013	05/02/23 09:39	
Benzo(b)fluoranthene	mg/kg	0.013	0.0031	0.0017	05/02/23 09:39	
Benzo(k)fluoranthene	mg/kg	0.0047	0.0031	0.0017	05/02/23 09:39	
Chrysene	mg/kg	0.0075	0.0031	0.0017	05/02/23 09:39	
Dibenz(a,h)anthracene	mg/kg	ND	0.0031	0.0017	05/02/23 09:39	
Fluoranthene	mg/kg	0.016	0.0031	0.0026	05/02/23 09:39	
Fluorene	mg/kg	ND	0.0031	0.0024	05/02/23 09:39	
Indeno(1,2,3-cd)pyrene	mg/kg	0.0046	0.0031	0.0017	05/02/23 09:39	
Naphthalene	mg/kg	ND	0.0031	0.0017	05/02/23 09:39	
Pyrene	mg/kg	0.013	0.0031	0.0023	05/02/23 09:39	
2-Fluorobiphenyl (S)	%	83	40-120		05/02/23 09:39	
Terphenyl-d14 (S)	%	78	45-130		05/02/23 09:39	

LABORATORY CONTROL SAMPLE: 3345416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.032	0.027	85	55-120	
2-Methylnaphthalene	mg/kg	0.032	0.027	85	55-120	
Acenaphthene	mg/kg	0.032	0.027	86	45-120	
Anthracene	mg/kg	0.032	0.028	88	50-120	
Benzo(a)anthracene	mg/kg	0.032	0.029	91	55-125	
Benzo(a)pyrene	mg/kg	0.032	0.027	85	45-120	
Benzo(b)fluoranthene	mg/kg	0.032	0.029	90	50-125	
Benzo(k)fluoranthene	mg/kg	0.032	0.030	95	55-120	
Chrysene	mg/kg	0.032	0.029	92	55-120	
Dibenz(a,h)anthracene	mg/kg	0.032	0.027	85	40-125	
Fluoranthene	mg/kg	0.032	0.031	96	50-125	
Fluorene	mg/kg	0.032	0.028	88	50-120	
Indeno(1,2,3-cd)pyrene	mg/kg	0.032	0.028	87	44-125	
Naphthalene	mg/kg	0.032	0.026	83	45-120	
Pyrene	mg/kg	0.032	0.029	91	50-125	
2-Fluorobiphenyl (S)	%			84	40-120	
Terphenyl-d14 (S)	%			86	45-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3345417 3345418

Parameter	Units	60426353005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	mg/kg	ND	0.038	0.038	0.027	0.023	71	60	50-145	16	61	
2-Methylnaphthalene	mg/kg	ND	0.038	0.038	0.027	0.023	72	61	50-120	17	61	
Acenaphthene	mg/kg	ND	0.038	0.038	0.028	0.024	73	63	10-150	16	42	
Anthracene	mg/kg	ND	0.038	0.038	0.028	0.024	74	64	10-160	15	54	
Benzo(a)anthracene	mg/kg	ND	0.038	0.038	0.029	0.025	76	65	10-160	16	62	
Benzo(a)pyrene	mg/kg	ND	0.038	0.038	0.027	0.023	70	60	10-150	16	66	
Benzo(b)fluoranthene	mg/kg	ND	0.038	0.038	0.028	0.024	73	64	10-165	14	61	
Benzo(k)fluoranthene	mg/kg	ND	0.038	0.038	0.033	0.024	86	62	10-165	33	53	
Chrysene	mg/kg	ND	0.038	0.038	0.029	0.025	75	65	10-150	16	57	
Dibenz(a,h)anthracene	mg/kg	ND	0.038	0.038	0.027	0.023	70	61	10-175	15	48	
Fluoranthene	mg/kg	ND	0.038	0.038	0.032	0.027	84	71	10-180	17	54	
Fluorene	mg/kg	ND	0.038	0.038	0.030	0.025	78	67	20-145	17	39	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.038	0.038	0.028	0.023	72	61	10-150	18	59	
Naphthalene	mg/kg	ND	0.038	0.038	0.027	0.022	70	59	10-165	18	54	
Pyrene	mg/kg	ND	0.038	0.038	0.029	0.025	76	65	10-180	16	61	
2-Fluorobiphenyl (S)	%						74	63	40-120			
Terphenyl-d14 (S)	%						73	65	45-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 842215
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005

METHOD BLANK: 3338062 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	0.50	04/18/23 14:02	

SAMPLE DUPLICATE: 3338063

Parameter	Units	60426359001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.1	7.2	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 842436
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60426359006, 60426359007, 60426359008

METHOD BLANK: 3338729 Matrix: Solid
Associated Lab Samples: 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	0.50	04/19/23 11:29	

SAMPLE DUPLICATE: 3338730

Parameter	Units	60426359006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.0	7.0	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 2045681
QC Batch Method: SM 2540 G
Analysis Method: SM 2540G
Analysis Description: Total Solids 2540 G-2011
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 60426359001, 60426359002, 60426359003

METHOD BLANK: R3916459-1 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	%	0.00500			04/22/23 10:21	

LABORATORY CONTROL SAMPLE: R3916459-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	%	50.0	50.0	100	85.0-115	

SAMPLE DUPLICATE: R3916459-3

Parameter	Units	L1606824-05 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	94.5	94.7	0.171	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 2045686
QC Batch Method: SM 2540 G
Analysis Method: SM 2540G
Analysis Description: Total Solids 2540 G-2011
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: R3916166-1 Matrix: Solid
Associated Lab Samples: 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	%	0.00200			04/21/23 15:41	

LABORATORY CONTROL SAMPLE: R3916166-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	%	50.0	50.0	100	85.0-115	

SAMPLE DUPLICATE: R3916166-3

Parameter	Units	60426359006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	91.0	91.1	0.180	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 2045863 — Analysis Method: EPA 7199
QC Batch Method: 3060A — Analysis Description: Wet Chemistry 7199
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: R3916820-1 Matrix: Solid
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	ND	1.00	0.255	04/25/23 00:15	

LABORATORY CONTROL SAMPLE: R3916820-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10.0	9.66	96.6	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3916820-6 R3916820-7

Parameter	Units	60426359007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/kg	ND	22.1	22.1	19.7	18.7	89.0	84.8	75.0-125	4.77	20	

MATRIX SPIKE SAMPLE: R3916820-8

Parameter	Units	60426359007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	ND	708	780	110	75.0-125	

SAMPLE DUPLICATE: R3916820-3

Parameter	Units	L1606824-02 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	0.337	0.385J	13.2	20	J

SAMPLE DUPLICATE: R3916820-4

Parameter	Units	60426359006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	ND	ND	0.00	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 2045836
QC Batch Method: 9045C/9045D
Analysis Method: EPA 9045D
Analysis Description: Wet Chemistry 9045D
Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

LABORATORY CONTROL SAMPLE: R3915607-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH	Std. Units	10.0	10.0	100	99.0-101	

SAMPLE DUPLICATE: R3915607-2

Parameter	Units	60426359001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.10	8.06	0.495	1	

SAMPLE DUPLICATE: R3915607-3

Parameter	Units	L1607138-04 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.28	8.34	0.722	1	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 2046679
QC Batch Method: 9050A
Analysis Method: EPA 9050
Analysis Description: Wet Chemistry 9050AMod
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: R3916178-1 Matrix: Solid
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Specific Conductance @ 25 C	umhos/cm	ND	10.0	10.0	04/22/23 10:46	

LABORATORY CONTROL SAMPLE: R3916178-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1120	1100	97.9	85.0-115	

SAMPLE DUPLICATE: R3916178-3

Parameter	Units	L1606669-02 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	148	144	2.66	20	

SAMPLE DUPLICATE: R3916178-4

Parameter	Units	60426359003 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	162	161	0.0619	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: NWAV #37
Pace Project No.: 60426359

QC Batch: 2046679
QC Batch Method: EPA 9050
Analysis Method: EPA 9050
Analysis Description: Wet Chemistry 9050AMod
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 60426359001, 60426359002, 60426359003, 60426359004, 60426359005, 60426359006, 60426359007, 60426359008

METHOD BLANK: R3916178-1 Matrix: Solid
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Specific Conductance @ 25 C	umhos/cm	ND	10.0	10.0	04/22/23 10:46	

LABORATORY CONTROL SAMPLE: R3916178-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1120	1100	97.9	85.0-115	

SAMPLE DUPLICATE: R3916178-3

Parameter	Units	L1606669-02 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	148	144	2.66	20	

SAMPLE DUPLICATE: R3916178-4

Parameter	Units	60426359003 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	162	161	0.0619	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: NWAV #37
Pace Project No.: 60426359

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

SAMPLE QUALIFIERS

Sample: 60426359001
[1] Wet Chemistry by Method 9045D - 8.1 at 20.7C
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60426359002
[1] Wet Chemistry by Method 9045D - 7.88 at 21C
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60426359003
[1] Wet Chemistry by Method 9045D - 8.22 at 20.8C
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60426359004
[1] Wet Chemistry by Method 9045D - 8.07 at 20.5C
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60426359005
[1] Wet Chemistry by Method 9045D - 8.08 at 19.9C
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60426359006
[1] Wet Chemistry by Method 9045D - 8.33 at 19.9C

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: NWAV #37
Pace Project No.: 60426359

SAMPLE QUALIFIERS

Sample: 60426359006
[1] Wet Chemistry by Method 9050AMod - at 25C
Sample: 60426359007
[1] Wet Chemistry by Method 9045D - 8.08 at 20.2C
[1] Wet Chemistry by Method 9050AMod - at 25C
Sample: 60426359008
[1] Wet Chemistry by Method 9045D - 8.03 at 20.3C
[1] Wet Chemistry by Method 9050AMod - at 25C
Sample: R3915607-1
[1] Wet Chemistry by Method 9045D - 10.01 at 18.9C
Sample: R3915607-2
[1] Wet Chemistry by Method 9045D - 8.06 at 20.8C
Sample: R3915607-3
[1] Wet Chemistry by Method 9045D - 8.34 at 19.5C
Sample: R3916178-1
[1] Wet Chemistry by Method 9050AMod - at 25C
Sample: R3916178-2
[1] Wet Chemistry by Method 9050AMod - at 25C
Sample: R3916178-3
[1] Wet Chemistry by Method 9050AMod - at 25C
Sample: R3916178-4
[1] Wet Chemistry by Method 9050AMod - at 25C
Sample: L1606669-02
[1] Wet Chemistry by Method 9050AMod - at 25C
Sample: L1607138-04
[1] Wet Chemistry by Method 9045D - 8.28 at 19.6C

ANALYTE QUALIFIERS

H3 Sample was received or analysis requested beyond the recognized method holding time.
J Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NWAV #37
Pace Project No.: 60426359

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60426359001	DG 1	EPA 3546	842084	EPA 8015B	842336
60426359002	DG 1 4'	EPA 3546	842084	EPA 8015B	842336
60426359003	DG 2	EPA 3546	842084	EPA 8015B	842336
60426359004	DG 3	EPA 3546	842084	EPA 8015B	842336
60426359005	DG 4	EPA 3546	842084	EPA 8015B	842336
60426359006	DG 5	EPA 3546	842084	EPA 8015B	842336
60426359007	DG 6	EPA 3546	842084	EPA 8015B	842336
60426359008	DUPLICATE A	EPA 3546	842084	EPA 8015B	842336
60426359001	DG 1	EPA 5035A/5030B	842659	EPA 8015B	842790
60426359002	DG 1 4'	EPA 5035A/5030B	842659	EPA 8015B	842790
60426359003	DG 2	EPA 5035A/5030B	842659	EPA 8015B	842790
60426359004	DG 3	EPA 5035A/5030B	842659	EPA 8015B	842790
60426359005	DG 4	EPA 5035A/5030B	842659	EPA 8015B	842790
60426359006	DG 5	EPA 5035A/5030B	842659	EPA 8015B	842790
60426359007	DG 6	EPA 5035A/5030B	842659	EPA 8015B	842790
60426359008	DUPLICATE A	EPA 5035A/5030B	842659	EPA 8015B	842790
60426359001	DG 1	HWS Boron	2045653	6010B-NE493 Ch 2	2045653
60426359002	DG 1 4'	HWS Boron	2045653	6010B-NE493 Ch 2	2045653
60426359003	DG 2	HWS Boron	2045653	6010B-NE493 Ch 2	2045653
60426359004	DG 3	HWS Boron	2045653	6010B-NE493 Ch 2	2045653
60426359005	DG 4	HWS Boron	2045653	6010B-NE493 Ch 2	2045653
60426359006	DG 5	HWS Boron	2045653	6010B-NE493 Ch 2	2045653
60426359007	DG 6	HWS Boron	2045653	6010B-NE493 Ch 2	2045653
60426359008	DUPLICATE A	HWS Boron	2045653	6010B-NE493 Ch 2	2045653
60426359001	DG 1	EPA 3050	843041	EPA 6010	843212
60426359002	DG 1 4'	EPA 3050	843041	EPA 6010	843212
60426359003	DG 2	EPA 3050	843041	EPA 6010	843212
60426359004	DG 3	EPA 3050	843041	EPA 6010	843212
60426359005	DG 4	EPA 3050	843041	EPA 6010	843212
60426359006	DG 5	EPA 3050	843044	EPA 6010	843216
60426359007	DG 6	EPA 3050	843044	EPA 6010	843216
60426359008	DUPLICATE A	EPA 3050	843044	EPA 6010	843216
60426359001	DG 1	EPA 3050	843042	EPA 6020	843215
60426359002	DG 1 4'	EPA 3050	843042	EPA 6020	843215
60426359003	DG 2	EPA 3050	843042	EPA 6020	843215
60426359004	DG 3	EPA 3050	843042	EPA 6020	843215
60426359005	DG 4	EPA 3050	843042	EPA 6020	843215
60426359006	DG 5	EPA 3050	843045	EPA 6020	843217
60426359007	DG 6	EPA 3050	843045	EPA 6020	843217
60426359008	DUPLICATE A	EPA 3050	843045	EPA 6020	843217
60426359001	DG 1	EPA 3546	844092	EPA 8270 by SIM	844607
60426359002	DG 1 4'	EPA 3546	842085	EPA 8270 by SIM	843724
60426359003	DG 2	EPA 3546	842085	EPA 8270 by SIM	843724
60426359004	DG 3	EPA 3546	844092	EPA 8270 by SIM	844607

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NWAV #37
Pace Project No.: 60426359

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60426359005	**DG 4**	EPA 3546	844092	EPA 8270 by SIM	844607
60426359006	**DG 5**	EPA 3546	844092	EPA 8270 by SIM	844607
60426359007	**DG 6**	EPA 3546	844092	EPA 8270 by SIM	844607
60426359008	**DUPLICATE A**	EPA 3546	844092	EPA 8270 by SIM	844607
60426359001	**DG 1**	EPA 5035A/5030B	842422	EPA 8260C	842465
60426359002	**DG 1 4'**	EPA 5035A/5030B	842422	EPA 8260C	842465
60426359003	**DG 2**	EPA 5035A/5030B	842422	EPA 8260C	842465
60426359004	**DG 3**	EPA 5035A/5030B	842422	EPA 8260C	842465
60426359005	**DG 4**	EPA 5035A/5030B	842422	EPA 8260C	842465
60426359006	**DG 5**	EPA 5035A/5030B	842422	EPA 8260C	842465
60426359007	**DG 6**	EPA 5035A/5030B	842422	EPA 8260C	842465
60426359008	**DUPLICATE A**	EPA 5035A/5030B	842422	EPA 8260C	842465
60426359001	**DG 1**	ASTM D2974	842215		
60426359002	**DG 1 4'**	ASTM D2974	842215		
60426359003	**DG 2**	ASTM D2974	842215		
60426359004	**DG 3**	ASTM D2974	842215		
60426359005	**DG 4**	ASTM D2974	842215		
60426359006	**DG 5**	ASTM D2974	842436		
60426359007	**DG 6**	ASTM D2974	842436		
60426359008	**DUPLICATE A**	ASTM D2974	842436		
60426359001	**DG 1**	SM 2540 G	2045681	SM 2540G	2045681
60426359002	**DG 1 4'**	SM 2540 G	2045681	SM 2540G	2045681
60426359003	**DG 2**	SM 2540 G	2045681	SM 2540G	2045681
60426359004	**DG 3**	SM 2540 G	2045686	SM 2540G	2045686
60426359005	**DG 4**	SM 2540 G	2045686	SM 2540G	2045686
60426359006	**DG 5**	SM 2540 G	2045686	SM 2540G	2045686
60426359007	**DG 6**	SM 2540 G	2045686	SM 2540G	2045686
60426359008	**DUPLICATE A**	SM 2540 G	2045686	SM 2540G	2045686
60426359001	**DG 1**	3060A	2045863	EPA 7199	2045863
60426359002	**DG 1 4'**	3060A	2045863	EPA 7199	2045863
60426359003	**DG 2**	3060A	2045863	EPA 7199	2045863
60426359004	**DG 3**	3060A	2045863	EPA 7199	2045863
60426359005	**DG 4**	3060A	2045863	EPA 7199	2045863
60426359006	**DG 5**	3060A	2045863	EPA 7199	2045863
60426359007	**DG 6**	3060A	2045863	EPA 7199	2045863
60426359008	**DUPLICATE A**	3060A	2045863	EPA 7199	2045863
60426359001	**DG 1**	9045C/9045D	2045836	EPA 9045D	2045836
60426359002	**DG 1 4'**	9045C/9045D	2045836	EPA 9045D	2045836
60426359003	**DG 2**	9045C/9045D	2045836	EPA 9045D	2045836
60426359004	**DG 3**	9045C/9045D	2045836	EPA 9045D	2045836
60426359005	**DG 4**	9045C/9045D	2045836	EPA 9045D	2045836
60426359006	**DG 5**	9045C/9045D	2045836	EPA 9045D	2045836
60426359007	**DG 6**	9045C/9045D	2045836	EPA 9045D	2045836
60426359008	**DUPLICATE A**	9045C/9045D	2045836	EPA 9045D	2045836
60426359001	**DG 1**	9050A	2046679	EPA 9050	2046679

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NWAV #37
Pace Project No.: 60426359

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60426359002	**DG 1 4'**	9050A	2046679	EPA 9050	2046679
60426359003	**DG 2**	9050A	2046679	EPA 9050	2046679
60426359004	**DG 3**	9050A	2046679	EPA 9050	2046679
60426359005	**DG 4**	9050A	2046679	EPA 9050	2046679
60426359006	**DG 5**	9050A	2046679	EPA 9050	2046679
60426359007	**DG 6**	9050A	2046679	EPA 9050	2046679
60426359008	**DUPLICATE A**	9050A	2046679	EPA 9050	2046679
60426359001	**DG 1**	Calc	2045648	Calculated	2045648
60426359002	**DG 1 4'**	Calc	2045648	Calculated	2045648
60426359003	**DG 2**	Calc	2045648	Calculated	2045648
60426359004	**DG 3**	Calc	2045648	Calculated	2045648
60426359005	**DG 4**	Calc	2045648	Calculated	2045648
60426359006	**DG 5**	Calc	2045648	Calculated	2045648
60426359007	**DG 6**	Calc	2045648	Calculated	2045648
60426359008	**DUPLICATE A**	Calc	2045648	Calculated	2045648

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace ANALYTICAL SERVICES	DC#_Title: ENV-FRM-LENE-0009_San	WO# : 60426359
	Revision: 2	Effective Date: 01/12/

60426359

Client Name: Mull Drilling

Courier: FedEx ☐ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☒ Other ☐

Tracking #: _____ Pace Shipping Label Used? Yes ☐ No ☒

Custody Seal on Cooler/Box Present: Yes ☐ No ☒ Seals intact: Yes ☐ No ☒

Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐

Thermometer Used: T-299 **Type of Ice:** (Wet) Blue None

Cooler Temperature (°C): **As-read** 0.5 **Corr. Factor** +0.2 **Corrected** 0.7

Date and initials of person examining contents: BL 4/15

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	
Short Hold Time analyses (<72hr):	☐Yes ☒No ☐N/A	
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	
Sufficient volume:	☒Yes ☐No ☐N/A	
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	
Containers intact:	☒Yes ☐No ☐N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	☐Yes ☒No ☐N/A	
Filtered volume received for dissolved tests?	☐Yes ☒No ☐N/A	
Sample labels match COC: Date / time / ID / analyses	☒Yes ☐No ☐N/A	
Samples contain multiple phases? Matrix: SL	☐Yes ☒No ☐N/A	
Containers requiring pH preservation in compliance? (HNO_3, H_2SO_4, HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) **LOT#:**	☐Yes ☐No ☒N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks: Lead acetate strip turns dark? (Record only)	☐Yes ☐No	
Potassium iodide test strip turns blue/purple? (Preserve)	☐Yes ☐No	
Trip Blank present:	☐Yes ☒No ☐N/A	
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	
Samples from USDA Regulated Area: State: SC	☐Yes ☒No ☐N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	☐Yes ☒No ☐N/A	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Qualtrax Document ID: 30468

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf.

Page : 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Mull Drilling Company	Report To:	James Beilman	Attention:	
Address:	1700 N Waterfront Pkwy	Copy To:		Company Name:	
Wichita, KS 67206				Address:	
Email:	jbeilman@mulldrilling.com	Purchase Order #:		Pace Quote:	
Phone:	316-364-6366 Fax:	Project Name:	~~945-1~~ NWAV #37	Pace Project Manager:	nolie.wood@pacelabs.com,
Requested Due Date:		Project #:	NWAV #37	Pace Profile #:	15035, 2

Regulatory Agency

State / Location: CO

MATRIX	CODE
Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Other	OT
Tissue	TS

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	VOAS/SVOA PAH SIM	8015 DRO/GRO	6010/6020 metals	Paste EC, SAR, pH	HW Boron, 7199 CrIV	Residual Chlorine (Y/N)	
1	DL 1	SL	G	4/13/23	0930	1000			4	✓							ice		✓	✓	✓	✓	✓		6042 6359
2	DL 1 4'					1005																			
3	DL 2					1015																			
4	DL 3					1030																			
5	DL 4					1040																			
6	DL 5					1050																			
7	DL 6					1100																			
8	Duplicate A			-	-	-	-																		
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
Send 7199 CrIV, Saturated Paste EC, SAR, pH, and Hot Water Boron to Pace National	James Beilman	4/15/23	1032	BL Nolie	4/16	1031	0.7	Y	Y	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: J. Beilman

SIGNATURE of SAMPLER: [signature] DATE Signed: 4/13/23

J077

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: CO
Cert. Needed: ☐ Yes ☐ No
Owner Received Date: 4/15/2023 Results Requested By: 5/2/2023

Workorder: 60426359 **Workorder Name:** NWAV #37

Report To	Subcontract To
Heather Wilson Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 1(913)563-1407	Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	7199 CrIV	Hot Water Boron	Saturated Paste EC,SAR,pH	LAB USE ONLY
1	DG 1	PS	4/13/2023 10:00	60426359001	Solid	1	X	X	X	-01
2	DG 1 4'	PS	4/13/2023 10:05	60426359002	Solid	1	X	X	X	-02
3	DG 2	PS	4/13/2023 10:15	60426359003	Solid	1	X	X	X	-03
4	DG 3	PS	4/13/2023 10:30	60426359004	Solid	1	X	X	X	-04
5	DG 4	PS	4/13/2023 10:40	60426359005	Solid	1	X	X	X	-05
6	DG 5	PS	4/13/2023 10:50	60426359006	Solid	1	X	X	X	-06
7	DG 6	PS	4/13/2023 11:00	60426359007	Solid	1	X	X	X	-07
8	DUPLICATE A	PS	4/13/2023 11:00	60426359008	Solid	1	X	X	X	-08

LL6068644

Transfers	Released By	Date/Time	Received By	Date/Time
1	[illegible]	4/18/23 1730	[illegible]	04/19/23 0905
2				
3				

Comments

Cooler Temperature on Receipt NSLV 1.2 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres.Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RAD Screen <0.5 mR/hr:	Y N		

14-Nov-2023

James Beilman
Mull Drilling Company
1700 N Waterfront Pkwy, Bld. 1200
Wichita, KS 67206

Re: **NWRV #37** Work Order: **23102588**

Dear James,

ALS Environmental received 4 samples on 28-Oct-2023 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 36.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Electronically approved by: Chad Whelton

Chad Whelton
Project Manager

ALS Group, USA

Date: 14-Nov-23

Client: Mull Drilling Company
Project: NWRV #37
Work Order: **23102588**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
23102588-01	SP 5 4'	Soil		10/26/2023 08:30	10/28/2023 09:15	☐
23102588-02	SP 7	Soil		10/26/2023 08:35	10/28/2023 09:15	☐
23102588-03	SP 8	Soil		10/26/2023 08:40	10/28/2023 09:15	☐
23102588-04	SP 9	Soil		10/26/2023 08:45	10/28/2023 09:15	☐

ALS Group, USA

Date: 14-Nov-23

Client: Mull Drilling Company
Project: NWRV #37
Work Order: 23102588

Case Narrative

The attached "Sample Receipt Checklist" documents the date of receipt, status of custody seals, container integrity, preservation, and temperature compliance.

Samples were analyzed according to the analytical methodology previously transmitted in the "Work Order Acknowledgement". Methodologies are also documented in the "Analytical Result" section for each sample. Quality control results are listed in the "QC Report" section. A copy of the laboratory's scope of accreditation is available upon request.

Sample association for the reported quality control is located at the end of each batch summary. If applicable, results are appropriately qualified in the Analytical Result and QC Report sections. The "Qualifiers" section documents the various qualifiers, units, and acronyms utilized in reporting.

Any flags on MS/MSD samples not addressed in this narrative are unrelated to samples in this report.

With the following exceptions, all sample analyses achieved analytical criteria.

Batch 228540, Method SW8270E, Sample SP 5 4' (23102588-01A): One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.

Batch 228540, Method SW8270E, Sample SP 7 (23102588-02A): One or more surrogate recoveries were below the lower control limits. The sample results may be biased low.

Batch 228795, Method SW8270E, Sample SP 5 4' (23102588-01A): Low surrogate recovery due to sample matrix confirmed by re-extraction.

Batch 228795, Method SW8270E, Sample SP 7 (23102588-02A): Low surrogate recovery due to sample matrix confirmed by re-extraction.

Client: Mull Drilling Company
Project: NWRV #37
WorkOrder: **23102588**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Analyte accreditation is not offered
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
% of sample	Percent of Sample
µg/Kg	Micrograms per Kilogram
µg/Kg-dry	Micrograms per Kilogram Dry Weight
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter
mmhos/cm @25°C	Millimhos-Centimeter at 25 Degrees Celcius

none

ALS Group, USA

Date: *14-Nov-23*

Client: Mull Drilling Company
Project: NWRV #37
Sample ID: SP 5 4'
Collection Date: 10/26/2023 08:30 AM

Work Order: 23102588
Lab ID: 23102588-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW3546 / 11/7/23		Analyst: **SJB**
ERO (C10-C36)	**3.1**	J	**2.7**	**21**	**mg/Kg-dry**	1	11/8/2023 09:24
Surr: 4-Terphenyl-d14	*34.2*			*34-130*	*%REC*	1	11/8/2023 09:24
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW5035A / 10/31/23		Analyst: **SJB**
GRO (C6-C10)	U		5,900	6,400	µg/Kg-dry	1	11/2/2023 02:04
Surr: Toluene-d8	*104*			*75-120*	*%REC*	1	11/2/2023 02:04
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 11/1/23		Analyst: **STP**
Arsenic	**3.2**		**0.036**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:33
Barium	**170**		**2.8**	**3.0**	**mg/Kg-dry**	10	11/2/2023 17:37
Cadmium	**0.052**	J	**0.018**	**0.12**	**mg/Kg-dry**	1	11/2/2023 01:33
Copper	**6.1**		**0.30**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:33
Lead	**7.9**		**0.14**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:33
Nickel	**6.8**		**0.16**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:33
Selenium	U		0.28	0.30	mg/Kg-dry	1	11/2/2023 01:33
Silver	U		0.040	0.30	mg/Kg-dry	1	11/2/2023 01:33
Zinc	**22**		**0.59**	**0.60**	**mg/Kg-dry**	1	11/2/2023 01:33
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 11/3/23		Analyst: **STP**
Calcium	**40**		**2.5**	**5.0**	**mg/L**	10	11/6/2023 19:30
Magnesium	**9.5**		**0.50**	**2.0**	**mg/L**	10	11/6/2023 19:30
Sodium	**44**		**1.8**	**2.0**	**mg/L**	10	11/6/2023 19:30
HOT WATER SOLUBLE BORON BY ICP-MS		Method: **SW6020B**			Prep: EXTRACT / 10/31/23		Analyst: **DSC**
Boron (Hot Water Soluble)	**0.64**		**0.017**	**0.42**	**mg/Kg-dry**	10	10/31/2023 19:35
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 20B**			Prep: USDA Method 20B / 11/3/23		Analyst: **STP**
Sodium Adsorption Ratio	**1.6**		**0.010**	**0.010**	**none**	1	11/6/2023
POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)		Method: **SW8270E**			Prep: SW3546 / 11/8/23		Analyst: **SMT**
1-Methylnaphthalene	U		0.88	4.3	µg/Kg-dry	1	11/8/2023 18:50
2-Methylnaphthalene	U		1.0	4.3	µg/Kg-dry	1	11/8/2023 18:50
Acenaphthene	U		1.7	4.3	µg/Kg-dry	1	11/8/2023 18:50
Anthracene	U		0.79	4.3	µg/Kg-dry	1	11/8/2023 18:50
Benzo(a)anthracene	U		3.1	4.3	µg/Kg-dry	1	11/8/2023 18:50
Benzo(a)pyrene	U		2.9	4.3	µg/Kg-dry	1	11/8/2023 18:50
Benzo(b)fluoranthene	U		2.6	4.3	µg/Kg-dry	1	11/8/2023 18:50
Benzo(k)fluoranthene	U		0.65	4.3	µg/Kg-dry	1	11/8/2023 18:50
Chrysene	U		2.9	4.3	µg/Kg-dry	1	11/8/2023 18:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Mull Drilling Company
Project: NWRV #37
Sample ID: SP 5 4'
Collection Date: 10/26/2023 08:30 AM

Work Order: 23102588
Lab ID: 23102588-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	U		2.5	4.3	µg/Kg-dry	1	11/8/2023 18:50
Fluoranthene	U		2.2	4.3	µg/Kg-dry	1	11/8/2023 18:50
Fluorene	U		1.1	4.3	µg/Kg-dry	1	11/8/2023 18:50
Indeno(1,2,3-cd)pyrene	U		3.0	4.3	µg/Kg-dry	1	11/8/2023 18:50
Naphthalene	U		0.82	4.3	µg/Kg-dry	1	11/8/2023 18:50
Pyrene	U		2.8	4.3	µg/Kg-dry	1	11/8/2023 18:50
Surr: 2-Fluorobiphenyl	*24.3*			*20-140*	*%REC*	1	11/8/2023 18:50
Surr: 4-Terphenyl-d14	*20.6*	S		*22-172*	*%REC*	1	11/8/2023 18:50
Surr: Nitrobenzene-d5	*22.2*	S		*28-140*	*%REC*	1	11/8/2023 18:50
VOLATILE ORGANIC COMPOUNDS - LOW LEVEL		Method:	**SW8260D**				Analyst: **SBR**
1,2,4-Trimethylbenzene	U		2.3	6.5	µg/Kg-dry	1.23	11/9/2023 03:26
1,3,5-Trimethylbenzene	U		2.1	6.5	µg/Kg-dry	1.23	11/9/2023 03:26
Benzene	U		0.68	6.5	µg/Kg-dry	1.23	11/9/2023 03:26
Ethylbenzene	U		1.1	6.5	µg/Kg-dry	1.23	11/9/2023 03:26
m,p-Xylene	U		2.9	3.3	µg/Kg-dry	1.23	11/9/2023 03:26
o-Xylene	U		1.6	3.3	µg/Kg-dry	1.23	11/9/2023 03:26
Toluene	U		2.3	6.5	µg/Kg-dry	1.23	11/9/2023 03:26
Xylenes, Total	U		2.9	6.5	µg/Kg-dry	1.23	11/9/2023 03:26
Surr: 1,2-Dichloroethane-d4	*108*			*83-132*	*%REC*	1.23	11/9/2023 03:26
Surr: 4-Bromofluorobenzene	*93.6*			*83-111*	*%REC*	1.23	11/9/2023 03:26
Surr: Dibromofluoromethane	*103*			*77-125*	*%REC*	1.23	11/9/2023 03:26
Surr: Toluene-d8	*98.4*			*86-108*	*%REC*	1.23	11/9/2023 03:26
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 20B**		Prep: USDA Method 20B / 11/3/23		Analyst: **CLJ**
Electrical Conductivity @ Saturation	**0.50**		**0.011**	**0.10**	**mmhos/cm @25°C**	20	11/4/2023 11:30
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 11/4/23		Analyst: **AXW**
Chromium, Hexavalent	U		0.89	1.1	mg/Kg-dry	1	11/5/2023 15:02
MOISTURE		Method:	**SW3550C**				Analyst: **SGH**
Moisture	**5.8**		**0.10**	**0.10**	**% of sample**	1	10/31/2023 12:58
PH MEASURED IN SOIL PASTE		Method:	**USDA METHOD 20B**		Prep: USDA Method 20B / 11/3/23		Analyst: **CLJ**
pH @ Saturation	**8.52**		**0.11**	**0.11**	**s.u.-dry**	1	11/4/2023 10:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *14-Nov-23*

Client: Mull Drilling Company
Project: NWRV #37
Sample ID: SP 7
Collection Date: 10/26/2023 08:35 AM

Work Order: 23102588
Lab ID: 23102588-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW3546 / 11/7/23		Analyst: **SJB**
ERO (C10-C36)	**8.0**	J	**3.0**	**23**	**mg/Kg-dry**	1	11/8/2023 10:01
Surr: 4-Terphenyl-d14	*42.3*			*34-130*	*%REC*	1	11/8/2023 10:01
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW5035A / 10/31/23		Analyst: **SJB**
GRO (C6-C10)	U		8,600	9,200	µg/Kg-dry	1	11/2/2023 02:27
Surr: Toluene-d8	*109*			*75-120*	*%REC*	1	11/2/2023 02:27
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 11/1/23		Analyst: **STP**
Arsenic	**3.6**		**0.043**	**0.36**	**mg/Kg-dry**	1	11/2/2023 01:39
Barium	**140**		**3.3**	**3.6**	**mg/Kg-dry**	10	11/2/2023 17:47
Cadmium	**0.11**	J	**0.022**	**0.14**	**mg/Kg-dry**	1	11/2/2023 01:39
Copper	**6.6**		**0.36**	**0.36**	**mg/Kg-dry**	1	11/2/2023 01:39
Lead	**9.9**		**0.17**	**0.36**	**mg/Kg-dry**	1	11/2/2023 01:39
Nickel	**7.3**		**0.19**	**0.36**	**mg/Kg-dry**	1	11/2/2023 01:39
Selenium	**0.37**		**0.33**	**0.36**	**mg/Kg-dry**	1	11/2/2023 01:39
Silver	U		0.048	0.36	mg/Kg-dry	1	11/2/2023 01:39
Zinc	**25**		**0.71**	**0.72**	**mg/Kg-dry**	1	11/2/2023 01:39
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 11/3/23		Analyst: **STP**
Calcium	**85**		**2.5**	**5.0**	**mg/L**	10	11/6/2023 19:32
Magnesium	**13**		**0.50**	**2.0**	**mg/L**	10	11/6/2023 19:32
Sodium	**3.8**		**1.8**	**2.0**	**mg/L**	10	11/6/2023 19:32
HOT WATER SOLUBLE BORON BY ICP-MS		Method: **SW6020B**			Prep: EXTRACT / 10/31/23		Analyst: **DSC**
Boron (Hot Water Soluble)	**0.34**	J	**0.019**	**0.46**	**mg/Kg-dry**	10	10/31/2023 19:37
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 20B**			Prep: USDA Method 20B / 11/3/23		Analyst: **STP**
Sodium Adsorption Ratio	**0.10**		**0.010**	**0.010**	**none**	1	11/6/2023
POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)		Method: **SW8270E**			Prep: SW3546 / 11/8/23		Analyst: **SMT**
1-Methylnaphthalene	U		0.94	4.6	µg/Kg-dry	1	11/8/2023 19:06
2-Methylnaphthalene	U		1.1	4.6	µg/Kg-dry	1	11/8/2023 19:06
Acenaphthene	U		1.8	4.6	µg/Kg-dry	1	11/8/2023 19:06
Anthracene	U		0.84	4.6	µg/Kg-dry	1	11/8/2023 19:06
Benzo(a)anthracene	U		3.3	4.6	µg/Kg-dry	1	11/8/2023 19:06
Benzo(a)pyrene	U		3.1	4.6	µg/Kg-dry	1	11/8/2023 19:06
Benzo(b)fluoranthene	U		2.8	4.6	µg/Kg-dry	1	11/8/2023 19:06
Benzo(k)fluoranthene	U		0.69	4.6	µg/Kg-dry	1	11/8/2023 19:06
Chrysene	U		3.0	4.6	µg/Kg-dry	1	11/8/2023 19:06

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Mull Drilling Company
Project: NWRV #37
Sample ID: SP 7
Collection Date: 10/26/2023 08:35 AM

Work Order: 23102588
Lab ID: 23102588-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	U		2.7	4.6	µg/Kg-dry	1	11/8/2023 19:06
Fluoranthene	U		2.3	4.6	µg/Kg-dry	1	11/8/2023 19:06
Fluorene	U		1.1	4.6	µg/Kg-dry	1	11/8/2023 19:06
Indeno(1,2,3-cd)pyrene	U		3.2	4.6	µg/Kg-dry	1	11/8/2023 19:06
Naphthalene	U		0.87	4.6	µg/Kg-dry	1	11/8/2023 19:06
Pyrene	U		2.9	4.6	µg/Kg-dry	1	11/8/2023 19:06
Surr: 2-Fluorobiphenyl	*28.5*			*20-140*	*%REC*	1	11/8/2023 19:06
Surr: 4-Terphenyl-d14	*23.1*			*22-172*	*%REC*	1	11/8/2023 19:06
Surr: Nitrobenzene-d5	*24.8*	S		*28-140*	*%REC*	1	11/8/2023 19:06
VOLATILE ORGANIC COMPOUNDS - LOW LEVEL		Method:	**SW8260D**				Analyst: **SBR**
1,2,4-Trimethylbenzene	U		2.9	8.0	µg/Kg-dry	1.37	11/9/2023 03:44
1,3,5-Trimethylbenzene	U		2.5	8.0	µg/Kg-dry	1.37	11/9/2023 03:44
Benzene	U		0.83	8.0	µg/Kg-dry	1.37	11/9/2023 03:44
Ethylbenzene	U		1.4	8.0	µg/Kg-dry	1.37	11/9/2023 03:44
m,p-Xylene	U		3.5	4.0	µg/Kg-dry	1.37	11/9/2023 03:44
o-Xylene	U		1.9	4.0	µg/Kg-dry	1.37	11/9/2023 03:44
Toluene	U		2.8	8.0	µg/Kg-dry	1.37	11/9/2023 03:44
Xylenes, Total	U		3.5	8.0	µg/Kg-dry	1.37	11/9/2023 03:44
Surr: 1,2-Dichloroethane-d4	*112*			*83-132*	*%REC*	1.37	11/9/2023 03:44
Surr: 4-Bromofluorobenzene	*98.4*			*83-111*	*%REC*	1.37	11/9/2023 03:44
Surr: Dibromofluoromethane	*107*			*77-125*	*%REC*	1.37	11/9/2023 03:44
Surr: Toluene-d8	*97.8*			*86-108*	*%REC*	1.37	11/9/2023 03:44
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 20B**		Prep: USDA Method 20B / 11/3/23		Analyst: **CLJ**
Electrical Conductivity @ Saturation	**0.58**		**0.011**	**0.10**	**mmhos/cm @25°C**	20	11/4/2023 11:30
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 11/4/23		Analyst: **AXW**
Chromium, Hexavalent	U		0.98	1.2	mg/Kg-dry	1	11/5/2023 15:02
MOISTURE		Method:	**SW3550C**				Analyst: **SGH**
Moisture	**14**		**0.10**	**0.10**	**% of sample**	1	10/31/2023 12:58
PH MEASURED IN SOIL PASTE		Method:	**USDA METHOD 20B**		Prep: USDA Method 20B / 11/3/23		Analyst: **CLJ**
pH @ Saturation	**8.29**		**0.12**	**0.12**	**s.u.-dry**	1	11/4/2023 10:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *14-Nov-23*

Client: Mull Drilling Company
Project: NWRV #37
Sample ID: SP 8
Collection Date: 10/26/2023 08:40 AM

Work Order: 23102588
Lab ID: 23102588-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW3546 / 11/7/23		Analyst: **SJB**
ERO (C10-C36)	**26**		**2.7**	**21**	**mg/Kg-dry**	1	11/8/2023 11:16
Surr: 4-Terphenyl-d14	*40.3*			*34-130*	*%REC*	1	11/8/2023 11:16
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW5035A / 10/31/23		Analyst: **SJB**
GRO (C6-C10)	U		8,400	9,000	µg/Kg-dry	1	11/2/2023 02:49
Surr: Toluene-d8	*107*			*75-120*	*%REC*	1	11/2/2023 02:49
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 11/1/23		Analyst: **STP**
Arsenic	**3.1**		**0.036**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:41
Barium	**130**		**2.7**	**3.0**	**mg/Kg-dry**	10	11/2/2023 17:49
Cadmium	**0.096**	J	**0.018**	**0.12**	**mg/Kg-dry**	1	11/2/2023 01:41
Copper	**5.8**		**0.30**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:41
Lead	**9.7**		**0.14**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:41
Nickel	**7.0**		**0.15**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:41
Selenium	**0.35**		**0.27**	**0.30**	**mg/Kg-dry**	1	11/2/2023 01:41
Silver	U		0.039	0.30	mg/Kg-dry	1	11/2/2023 01:41
Zinc	**25**		**0.58**	**0.59**	**mg/Kg-dry**	1	11/2/2023 01:41
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 11/3/23		Analyst: **STP**
Calcium	**50**		**2.5**	**5.0**	**mg/L**	10	11/6/2023 19:34
Magnesium	**11**		**0.50**	**2.0**	**mg/L**	10	11/6/2023 19:34
Sodium	**11**		**1.8**	**2.0**	**mg/L**	10	11/6/2023 19:34
HOT WATER SOLUBLE BORON BY ICP-MS		Method: **SW6020B**			Prep: EXTRACT / 10/31/23		Analyst: **DSC**
Boron (Hot Water Soluble)	**0.44**		**0.017**	**0.41**	**mg/Kg-dry**	10	10/31/2023 19:38
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 20B**			Prep: USDA Method 20B / 11/3/23		Analyst: **STP**
Sodium Adsorption Ratio	**0.36**		**0.010**	**0.010**	**none**	1	11/6/2023
POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)		Method: **SW8270E**			Prep: SW3546 / 11/3/23		Analyst: **SMT**
1-Methylnaphthalene	U		0.88	4.3	µg/Kg-dry	1	11/7/2023 02:45
2-Methylnaphthalene	U		1.0	4.3	µg/Kg-dry	1	11/7/2023 02:45
Acenaphthene	U		1.6	4.3	µg/Kg-dry	1	11/7/2023 02:45
Anthracene	U		0.78	4.3	µg/Kg-dry	1	11/7/2023 02:45
Benzo(a)anthracene	U		3.1	4.3	µg/Kg-dry	1	11/7/2023 02:45
Benzo(a)pyrene	U		2.9	4.3	µg/Kg-dry	1	11/7/2023 02:45
Benzo(b)fluoranthene	U		2.6	4.3	µg/Kg-dry	1	11/7/2023 02:45
Benzo(k)fluoranthene	U		0.64	4.3	µg/Kg-dry	1	11/7/2023 02:45
Chrysene	U		2.8	4.3	µg/Kg-dry	1	11/7/2023 02:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Mull Drilling Company
Project: NWRV #37
Sample ID: SP 8
Collection Date: 10/26/2023 08:40 AM

Work Order: 23102588
Lab ID: 23102588-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	U		2.5	4.3	µg/Kg-dry	1	11/7/2023 02:45
Fluoranthene	U		2.2	4.3	µg/Kg-dry	1	11/7/2023 02:45
Fluorene	U		1.1	4.3	µg/Kg-dry	1	11/7/2023 02:45
Indeno(1,2,3-cd)pyrene	U		3.0	4.3	µg/Kg-dry	1	11/7/2023 02:45
Naphthalene	U		0.81	4.3	µg/Kg-dry	1	11/7/2023 02:45
Pyrene	U		2.7	4.3	µg/Kg-dry	1	11/7/2023 02:45
Surr: 2-Fluorobiphenyl	*31.2*			*20-140*	*%REC*	1	11/7/2023 02:45
Surr: 4-Terphenyl-d14	*27.3*			*22-172*	*%REC*	1	11/7/2023 02:45
Surr: Nitrobenzene-d5	*37.5*			*28-140*	*%REC*	1	11/7/2023 02:45
VOLATILE ORGANIC COMPOUNDS - LOW LEVEL		Method:	**SW8260D**				Analyst: **SBR**
1,2,4-Trimethylbenzene	U		2.7	7.4	µg/Kg-dry	1.4	11/9/2023 04:02
1,3,5-Trimethylbenzene	U		2.4	7.4	µg/Kg-dry	1.4	11/9/2023 04:02
Benzene	U		0.77	7.4	µg/Kg-dry	1.4	11/9/2023 04:02
Ethylbenzene	U		1.3	7.4	µg/Kg-dry	1.4	11/9/2023 04:02
m,p-Xylene	U		3.2	3.7	µg/Kg-dry	1.4	11/9/2023 04:02
o-Xylene	U		1.8	3.7	µg/Kg-dry	1.4	11/9/2023 04:02
Toluene	U		2.6	7.4	µg/Kg-dry	1.4	11/9/2023 04:02
Xylenes, Total	U		3.2	7.4	µg/Kg-dry	1.4	11/9/2023 04:02
Surr: 1,2-Dichloroethane-d4	*109*			*83-132*	*%REC*	1.4	11/9/2023 04:02
Surr: 4-Bromofluorobenzene	*98.9*			*83-111*	*%REC*	1.4	11/9/2023 04:02
Surr: Dibromofluoromethane	*107*			*77-125*	*%REC*	1.4	11/9/2023 04:02
Surr: Toluene-d8	*97.4*			*86-108*	*%REC*	1.4	11/9/2023 04:02
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 20B**		Prep: USDA Method 20B / 11/3/23		Analyst: **CLJ**
Electrical Conductivity @ Saturation	**0.44**		**0.011**	**0.10**	**mmhos/cm @25°C**	20	11/4/2023 11:30
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 11/4/23		Analyst: **AXW**
Chromium, Hexavalent	U		0.83	0.98	mg/Kg-dry	1	11/5/2023 15:02
MOISTURE		Method:	**SW3550C**				Analyst: **SGH**
Moisture	**4.9**		**0.10**	**0.10**	**% of sample**	1	10/31/2023 12:58
PH MEASURED IN SOIL PASTE		Method:	**USDA METHOD 20B**		Prep: USDA Method 20B / 11/3/23		Analyst: **CLJ**
pH @ Saturation	**7.23**		**0.11**	**0.11**	**s.u.-dry**	1	11/4/2023 10:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *14-Nov-23*

Client: Mull Drilling Company
Project: NWRV #37
Sample ID: SP 9
Collection Date: 10/26/2023 08:45 AM

Work Order: 23102588
Lab ID: 23102588-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DIESEL RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW3546 / 11/3/23		Analyst: **SJB**
ERO (C10-C36)	**5.0**	J	**2.7**	**20**	**mg/Kg-dry**	1	11/4/2023 18:54
Surr: 4-Terphenyl-d14	*58.4*			*34-130*	*%REC*	1	11/4/2023 18:54
GASOLINE RANGE ORGANICS BY GC-FID		Method: **SW8015C**			Prep: SW5035A / 10/31/23		Analyst: **QNG**
GRO (C6-C10)	U		8,000	8,600	µg/Kg-dry	1	11/9/2023 17:23
Surr: Toluene-d8	*101*			*75-120*	*%REC*	1	11/9/2023 17:23
METALS BY ICP-MS		Method: **SW6020B**			Prep: SW3050B / 11/1/23		Analyst: **STP**
Arsenic	**2.3**		**0.034**	**0.28**	**mg/Kg-dry**	1	11/2/2023 01:42
Barium	**96**		**0.26**	**0.28**	**mg/Kg-dry**	1	11/2/2023 01:42
Cadmium	**0.11**	J	**0.017**	**0.11**	**mg/Kg-dry**	1	11/2/2023 01:42
Copper	**4.8**		**0.28**	**0.28**	**mg/Kg-dry**	1	11/2/2023 01:42
Lead	**8.3**		**0.14**	**0.28**	**mg/Kg-dry**	1	11/2/2023 01:42
Nickel	**5.0**		**0.15**	**0.28**	**mg/Kg-dry**	1	11/2/2023 01:42
Selenium	**0.29**		**0.26**	**0.28**	**mg/Kg-dry**	1	11/2/2023 01:42
Silver	U		0.037	0.28	mg/Kg-dry	1	11/2/2023 01:42
Zinc	**19**		**0.56**	**0.57**	**mg/Kg-dry**	1	11/2/2023 01:42
SOLUBLE CATIONS FOR SAR		Method: **SW6020B**			Prep: USDA Method 20B / 11/3/23		Analyst: **STP**
Calcium	**67**		**2.5**	**5.0**	**mg/L**	10	11/6/2023 19:35
Magnesium	**9.8**		**0.50**	**2.0**	**mg/L**	10	11/6/2023 19:35
Sodium	**6.5**		**1.8**	**2.0**	**mg/L**	10	11/6/2023 19:35
HOT WATER SOLUBLE BORON BY ICP-MS		Method: **SW6020B**			Prep: EXTRACT / 10/31/23		Analyst: **DSC**
Boron (Hot Water Soluble)	**0.34**	J	**0.017**	**0.41**	**mg/Kg-dry**	10	10/31/2023 19:43
SODIUM ADSORPTION RATIO		Method: **USDA H60 METHOD 20B**			Prep: USDA Method 20B / 11/3/23		Analyst: **STP**
Sodium Adsorption Ratio	**0.20**		**0.010**	**0.010**	**none**	1	11/6/2023
POLYNUCLEAR AROMATIC HYDROCARBONS (SIM)		Method: **SW8270E**			Prep: SW3546 / 11/3/23		Analyst: **SMT**
1-Methylnaphthalene	U		0.87	4.2	µg/Kg-dry	1	11/7/2023 03:01
2-Methylnaphthalene	U		1.0	4.2	µg/Kg-dry	1	11/7/2023 03:01
Acenaphthene	U		1.6	4.2	µg/Kg-dry	1	11/7/2023 03:01
Anthracene	U		0.77	4.2	µg/Kg-dry	1	11/7/2023 03:01
Benzo(a)anthracene	U		3.1	4.2	µg/Kg-dry	1	11/7/2023 03:01
Benzo(a)pyrene	U		2.9	4.2	µg/Kg-dry	1	11/7/2023 03:01
Benzo(b)fluoranthene	U		2.6	4.2	µg/Kg-dry	1	11/7/2023 03:01
Benzo(k)fluoranthene	U		0.64	4.2	µg/Kg-dry	1	11/7/2023 03:01
Chrysene	U		2.8	4.2	µg/Kg-dry	1	11/7/2023 03:01

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: Mull Drilling Company
Project: NWRV #37
Sample ID: SP 9
Collection Date: 10/26/2023 08:45 AM

Work Order: 23102588
Lab ID: 23102588-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Dibenzo(a,h)anthracene	U		2.5	4.2	µg/Kg-dry	1	11/7/2023 03:01
Fluoranthene	U		2.1	4.2	µg/Kg-dry	1	11/7/2023 03:01
Fluorene	U		1.0	4.2	µg/Kg-dry	1	11/7/2023 03:01
Indeno(1,2,3-cd)pyrene	U		2.9	4.2	µg/Kg-dry	1	11/7/2023 03:01
Naphthalene	U		0.80	4.2	µg/Kg-dry	1	11/7/2023 03:01
Pyrene	U		2.7	4.2	µg/Kg-dry	1	11/7/2023 03:01
Surr: 2-Fluorobiphenyl	*84.9*			*20-140*	*%REC*	1	11/7/2023 03:01
Surr: 4-Terphenyl-d14	*74.3*			*22-172*	*%REC*	1	11/7/2023 03:01
Surr: Nitrobenzene-d5	*101*			*28-140*	*%REC*	1	11/7/2023 03:01
VOLATILE ORGANIC COMPOUNDS		Method:	**SW8260D**		Prep: SW5035A / 11/1/23		Analyst: **HJ**
1,2,4-Trimethylbenzene	**110**		**74**	**100**	**µg/Kg**	1	11/8/2023 06:39
1,3,5-Trimethylbenzene	U		72	340	µg/Kg	1	11/8/2023 06:39
Benzene	U		49	100	µg/Kg	1	11/8/2023 06:39
Ethylbenzene	U		72	100	µg/Kg	1	11/8/2023 06:39
m,p-Xylene	**300**		**140**	**200**	**µg/Kg**	1	11/8/2023 06:39
o-Xylene	**54**	J	**39**	**100**	**µg/Kg**	1	11/8/2023 06:39
Toluene	**110**		**84**	**100**	**µg/Kg**	1	11/8/2023 06:39
Xylenes, Total	**350**		**140**	**300**	**µg/Kg**	1	11/8/2023 06:39
Surr: 1,2-Dichloroethane-d4	*113*			*80-120*	*%REC*	1	11/8/2023 06:39
Surr: 4-Bromofluorobenzene	*98.1*			*80-120*	*%REC*	1	11/8/2023 06:39
Surr: Dibromofluoromethane	*99.9*			*80-120*	*%REC*	1	11/8/2023 06:39
Surr: Toluene-d8	*97.6*			*80-120*	*%REC*	1	11/8/2023 06:39
ELECTRICAL CONDUCTIVITY (SAR)		Method:	**USDA H60 METHOD 20B**		Prep: USDA Method 20B / 11/3/23		Analyst: **CLJ**
Electrical Conductivity @ Saturation	**0.51**		**0.011**	**0.10**	**mmhos/cm @25°C**	20	11/4/2023 11:30
CHROMIUM, HEXAVALENT		Method:	**SW7196A**		Prep: SW3060A / 11/4/23		Analyst: **AXW**
Chromium, Hexavalent	U		0.85	1.0	mg/Kg-dry	1	11/5/2023 15:02
MOISTURE		Method:	**SW3550C**				Analyst: **SGH**
Moisture	**3.8**		**0.10**	**0.10**	**% of sample**	1	10/31/2023 12:58
PH MEASURED IN SOIL PASTE		Method:	**USDA METHOD 20B**		Prep: USDA Method 20B / 11/3/23		Analyst: **CLJ**
pH @ Saturation	**7.60**		**0.10**	**0.10**	**s.u.-dry**	1	11/4/2023 10:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: 14-Nov-23

Client: Mull Drilling Company

Work Order: 23102588

Project: NWRV #37

QC BATCH REPORT

Batch ID: **228541** Instrument ID **GC8** Method: **SW8015C**

MBLK Sample ID: **DBLKS1-228541-228541** Units: **mg/Kg** Analysis Date: **11/4/2023 01:56 AM**

Client ID: Run ID: **GC8_231102A** SeqNo: **10170392** Prep Date: **11/3/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C10-C36)	4.95	20								J
Surr: 4-Terphenyl-d14	*0.4833*	0	*0.828*	0	*58.4*	*34-130*	0			

LCS Sample ID: **DLCSS1-228541-228541** Units: **mg/Kg** Analysis Date: **11/4/2023 02:33 AM**

Client ID: Run ID: **GC8_231102A** SeqNo: **10170393** Prep Date: **11/3/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C10-C36)	708.6	20	833	0	85.1	50-150	0			
Surr: 4-Terphenyl-d14	*0.5833*	0	*0.828*	0	*70.5*	*34-130*	0			

MS Sample ID: **23102586-10A MS** Units: **mg/Kg** Analysis Date: **11/4/2023 03:09 AM**

Client ID: Run ID: **GC8_231102A** SeqNo: **10170394** Prep Date: **11/3/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C10-C36)	768.5	20	828	35.01	88.6	50-150	0			
Surr: 4-Terphenyl-d14	*0.4805*	0	*0.8231*	0	*58.4*	*34-130*	0			

MSD Sample ID: **23102586-10A MSD** Units: **mg/Kg** Analysis Date: **11/4/2023 03:46 AM**

Client ID: Run ID: **GC8_231102A** SeqNo: **10170395** Prep Date: **11/3/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C10-C36)	219.6	20	815.1	35.01	22.6	50-150	768.5	111	30	SR
Surr: 4-Terphenyl-d14	*0.1631*	0	*0.8102*	0	*20.1*	*34-130*	0.4805	*98.6*	*30*	*SR*

The following samples were analyzed in this batch:

23102588-01A 23102588-02A 23102588-03A
23102588-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228715** Instrument ID **GC8** Method: **SW8015C**

MBLK Sample ID: **DBLKS1-228715-228715** Units: **mg/Kg** Analysis Date: **11/7/2023 08:18 PM**
Client ID: Run ID: **GC8_231107D** SeqNo: **10179363** Prep Date: **11/7/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C10-C36)	3.8	20								J
Surr: 4-Terphenyl-d14	*0.5167*	0	*0.828*	0	*62.4*	*34-130*	0			

LCS Sample ID: **DLCSS1-228715-228715** Units: **mg/Kg** Analysis Date: **11/7/2023 08:55 PM**
Client ID: Run ID: **GC8_231107D** SeqNo: **10179364** Prep Date: **11/7/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C10-C36)	709.5	20	833	0	85.2	50-150	0			
Surr: 4-Terphenyl-d14	*0.6167*	0	*0.828*	0	*74.5*	*34-130*	0			

MS Sample ID: **23102585-06A MS** Units: **mg/Kg** Analysis Date: **11/7/2023 09:33 PM**
Client ID: Run ID: **GC8_231107D** SeqNo: **10179365** Prep Date: **11/7/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C10-C36)	326.7	19	803.5	4.161	40.1	50-150	0			S
Surr: 4-Terphenyl-d14	*0.1286*	0	*0.7987*	0	*16.1*	*34-130*	0			*S*

MSD Sample ID: **23102585-06A MSD** Units: **mg/Kg** Analysis Date: **11/7/2023 10:10 PM**
Client ID: Run ID: **GC8_231107D** SeqNo: **10179366** Prep Date: **11/7/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
ERO (C10-C36)	148.8	19	796.9	4.161	18.1	50-150	326.7	74.8	30	SR
Surr: 4-Terphenyl-d14	*0.09566*	0	*0.7921*	0	*12.1*	*34-130*	0.1286	*29.4*	*30*	*S*

The following samples were analyzed in this batch: 23102588-01A 23102588-02A 23102588-03A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228305** Instrument ID **GC9** Method: **SW8015C**

MBLK Sample ID: **MBLK-228305-228305** Units: **µg/Kg-dry** Analysis Date: **11/1/2023 03:20 PM**
Client ID: Run ID: **GC9_231101A** SeqNo: **10157154** Prep Date: **10/31/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	U	5,000	0	0	0		0			
Surr: Toluene-d8	*4982*	0	*5000*	0	*99.6*	*75-120*	0			

LCS Sample ID: **LCS-228305-228305** Units: **µg/Kg-dry** Analysis Date: **11/1/2023 02:35 PM**
Client ID: Run ID: **GC9_231101A** SeqNo: **10157153** Prep Date: **10/31/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	254800	5,000	250000	0	102	63-126	0			
Surr: Toluene-d8	*5464*	0	*5000*	0	*109*	*75-120*	0			

MS Sample ID: **23102586-07C MS** Units: **µg/Kg-dry** Analysis Date: **11/1/2023 05:55 PM**
Client ID: Run ID: **GC9_231101A** SeqNo: **10157161** Prep Date: **10/31/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	248400	4,900	242700	0	102	63-126	0			
Surr: Toluene-d8	*5451*	0	*4855*	0	*112*	*75-120*	0			

MSD Sample ID: **23102586-07C MSD** Units: **µg/Kg-dry** Analysis Date: **11/1/2023 06:18 PM**
Client ID: Run ID: **GC9_231101A** SeqNo: **10157162** Prep Date: **10/31/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	317400	4,900	242700	0	131	63-126	248400	24.4	30	S
Surr: Toluene-d8	*5804*	0	*4855*	0	*120*	*75-120*	5451	*6.28*	*30*	

The following samples were analyzed in this batch: 23102588-01C 23102588-02C 23102588-03C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228999** Instrument ID **GC9** Method: **SW8015C**

MBLK Sample ID: **MBLK-228999-228999** Units: **µg/Kg-dry** Analysis Date: **11/9/2023 05:01 PM**
Client ID: Run ID: **GC9_231109A** SeqNo: **10189214** Prep Date: **10/31/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	U	5,000								
Surr: Toluene-d8	*5070*	0	*5000*	0	*101*	*75-120*	0			

LCS Sample ID: **LCS-228999-228999** Units: **µg/Kg-dry** Analysis Date: **11/9/2023 04:16 PM**
Client ID: Run ID: **GC9_231109A** SeqNo: **10189212** Prep Date: **10/31/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	262200	5,000	250000	0	105	63-126	0			
Surr: Toluene-d8	*5400*	0	*5000*	0	*108*	*75-120*	0			

MS Sample ID: **23102588-04C MS** Units: **µg/Kg-dry** Analysis Date: **11/9/2023 07:15 PM**
Client ID: **SP 9** Run ID: **GC9_231109A** SeqNo: **10189220** Prep Date: **10/31/2023** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	1010000	17,000	855400	0	118	63-126	0			
Surr: Toluene-d8	*19300*	0	*17110*	0	*113*	*75-120*	0			

MSD Sample ID: **23102588-04C MSD** Units: **µg/Kg-dry** Analysis Date: **11/9/2023 07:37 PM**
Client ID: **SP 9** Run ID: **GC9_231109A** SeqNo: **10189221** Prep Date: **10/31/2023** DF: **2**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
GRO (C6-C10)	938500	17,000	855400	0	110	63-126	1010000	7.34	30	
Surr: Toluene-d8	*18700*	0	*17110*	0	*109*	*75-120*	19300	*3.16*	*30*	

The following samples were analyzed in this batch: 23102588-04C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228324** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK	Sample ID: **MBLK-228324-228324**				Units: **mg/Kg**			Analysis Date: **10/31/2023 07:03 PM**		
Client ID:	Run ID: **ICPMS3_231031B**				SeqNo: **10150557**		Prep Date: **10/31/2023**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron (Hot Water Soluble)	0.008178	0.040								J

LCS	Sample ID: **LCS-228324-228324**				Units: **mg/Kg**			Analysis Date: **10/31/2023 07:04 PM**		
Client ID:	Run ID: **ICPMS3_231031B**				SeqNo: **10150558**		Prep Date: **10/31/2023**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Boron (Hot Water Soluble)	0.8744	0.040	1	0	87.4	80-120	0			

The following samples were analyzed in this batch:

23102588-01A	23102588-02A	23102588-03A
23102588-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228325** Instrument ID **ICPMS3** Method: **SW6020B**

MBLK Sample ID: **MBLK-228325-228325** Units: **mg/Kg** Analysis Date: **11/2/2023 12:54 AM**
Client ID: Run ID: **ICPMS3_231101B** SeqNo: **10155948** Prep Date: **11/1/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Barium	U	0.25								
Cadmium	U	0.10								
Copper	U	0.25								
Lead	U	0.25								
Nickel	U	0.25								
Selenium	U	0.25								
Silver	U	0.25								
Zinc	U	0.50								

LCS Sample ID: **LCS-228325-228325** Units: **mg/Kg** Analysis Date: **11/2/2023 12:56 AM**
Client ID: Run ID: **ICPMS3_231101B** SeqNo: **10155949** Prep Date: **11/1/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	5.136	0.25	5	0	103	80-120	0			
Barium	5.163	0.25	5	0	103	80-120	0			
Cadmium	4.945	0.10	5	0	98.9	80-120	0			
Copper	5.179	0.25	5	0	104	80-120	0			
Lead	5.209	0.25	5	0	104	80-120	0			
Nickel	5.239	0.25	5	0	105	80-120	0			
Selenium	5.103	0.25	5	0	102	80-120	0			
Silver	5.035	0.25	5	0	101	80-120	0			
Zinc	5.044	0.50	5	0	101	80-120	0			

MS Sample ID: **23102584-04AMS** Units: **mg/Kg** Analysis Date: **11/2/2023 01:05 AM**
Client ID: Run ID: **ICPMS3_231101B** SeqNo: **10155954** Prep Date: **11/1/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.534	0.26	5.16	3.185	84.3	75-125	0			
Cadmium	4.243	0.10	5.16	0.1231	79.8	75-125	0			
Nickel	10.84	0.26	5.16	6.581	82.6	75-125	0			
Selenium	4.696	0.26	5.16	0.4143	83	75-125	0			
Silver	4.185	0.26	5.16	0.02433	80.6	75-125	0			
Zinc	33.08	0.52	5.16	23.13	193	75-125	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228325** Instrument ID **ICPMS3** Method: **SW6020B**

MS Sample ID: **23102584-04AMS** Units: **mg/Kg** Analysis Date: **11/2/2023 05:14 PM**

Client ID: Run ID: **ICPMS3_231102B** SeqNo: **10159927** Prep Date: **11/1/2023** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	92.48	2.6	5.16	91.54	18.3	75-125	0			SO
Copper	12.77	2.6	5.16	8.111	90.2	75-125	0			
Lead	22.42	2.6	5.16	14.92	146	75-125	0			S

MSD Sample ID: **23102584-04AMSD** Units: **mg/Kg** Analysis Date: **11/2/2023 01:07 AM**

Client ID: Run ID: **ICPMS3_231101B** SeqNo: **10155955** Prep Date: **11/1/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	7.624	0.27	5.336	3.185	83.2	75-125	7.534	1.18	20	
Cadmium	4.435	0.11	5.336	0.1231	80.8	75-125	4.243	4.44	20	
Nickel	11.08	0.27	5.336	6.581	84.2	75-125	10.84	2.11	20	
Selenium	4.88	0.27	5.336	0.4143	83.7	75-125	4.696	3.83	20	
Silver	4.336	0.27	5.336	0.02433	80.8	75-125	4.185	3.54	20	
Zinc	27.31	0.53	5.336	23.13	78.3	75-125	33.08	19.1	20	O

MSD Sample ID: **23102584-04AMSD** Units: **mg/Kg** Analysis Date: **11/2/2023 05:15 PM**

Client ID: Run ID: **ICPMS3_231102B** SeqNo: **10159928** Prep Date: **11/1/2023** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	92.22	2.7	5.336	91.54	12.7	75-125	92.48	0.287	20	SO
Copper	13.1	2.7	5.336	8.111	93.5	75-125	12.77	2.58	20	
Lead	19.34	2.7	5.336	14.92	82.9	75-125	22.42	14.8	20	

The following samples were analyzed in this batch:

23102588-01A 23102588-02A 23102588-03A
23102588-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228580** Instrument ID **ICPMS3** Method: **SW6020B**

DUP Sample ID: **23102586-11ADUP** Units: **mg/L** Analysis Date: **11/6/2023 07:15 PM**
Client ID: Run ID: **ICPMS3_231106A** SeqNo: **10172364** Prep Date: **11/3/2023** DF: **10**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	48.69	5.0	0	0	0	0-0	107.7	75.5		
Magnesium	8.539	2.0	0	0	0	0-0	11.41	28.8		
Sodium	69.27	2.0	0	0	0	0-0	81.06	15.7		

The following samples were analyzed in this batch: 23102588-01A 23102588-02A 23102588-03A 23102588-04A

Batch ID: **228580** Instrument ID **SAR** Method: **USDA H60 Metho**

DUP Sample ID: **23102586-11ADUP** Units: **none** Analysis Date: **11/6/2023**
Client ID: Run ID: **SAR_231106B** SeqNo: **10172848** Prep Date: **11/3/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sodium Adsorption Ratio	2.408	0.010	0	0	0		1.985	19.3	50	

The following samples were analyzed in this batch: 23102588-01A 23102588-02A 23102588-03A 23102588-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228540** Instrument ID **SVMS6** Method: **SW8270E**

MBLK Sample ID: **SBLKS1-228540-228540** Units: **µg/Kg** Analysis Date: **11/3/2023 01:58 PM**

Client ID: Run ID: **SVMS6_231103A** SeqNo: **10168530** Prep Date: **11/3/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	U	4.2								
2-Methylnaphthalene	U	4.2								
Acenaphthene	U	4.2								
Anthracene	U	4.2								
Benzo(a)anthracene	U	4.2								
Benzo(a)pyrene	U	4.2								
Benzo(b)fluoranthene	U	4.2								
Benzo(k)fluoranthene	U	4.2								
Chrysene	U	4.2								
Dibenzo(a,h)anthracene	U	4.2								
Fluoranthene	U	4.2								
Fluorene	U	4.2								
Indeno(1,2,3-cd)pyrene	U	4.2								
Naphthalene	U	4.2								
Pyrene	U	4.2								
Surr: 2-Fluorobiphenyl	*564.7*	0	*666.6*	0	*84.7*	*20-140*	0			
Surr: 4-Terphenyl-d14	*555*	0	*666.6*	0	*83.3*	*22-172*	0			
Surr: Nitrobenzene-d5	*673.6*	0	*666.6*	0	*101*	*28-140*	0			

LCS Sample ID: **SLCSS1-228540-228540** Units: **µg/Kg** Analysis Date: **11/3/2023 02:29 PM**

Client ID: Run ID: **SVMS6_231103A** SeqNo: **10168533** Prep Date: **11/3/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	628.4	4.2	666.6	0	94.3	40-140	0			
2-Methylnaphthalene	829.7	4.2	666.6	0	124	40-140	0			
Acenaphthene	667.9	4.2	666.6	0	100	40-140	0			
Anthracene	692.6	4.2	666.6	0	104	40-140	0			
Benzo(a)anthracene	645.8	4.2	666.6	0	96.9	40-140	0			
Benzo(a)pyrene	651	4.2	666.6	0	97.7	40-140	0			
Benzo(b)fluoranthene	585.2	4.2	666.6	0	87.8	40-140	0			
Benzo(k)fluoranthene	610.6	4.2	666.6	0	91.6	40-140	0			
Chrysene	693.3	4.2	666.6	0	104	40-140	0			
Dibenzo(a,h)anthracene	586.4	4.2	666.6	0	88	40-140	0			
Fluoranthene	698.8	4.2	666.6	0	105	40-140	0			
Fluorene	629.4	4.2	666.6	0	94.4	40-140	0			
Indeno(1,2,3-cd)pyrene	593.3	4.2	666.6	0	89	40-140	0			
Naphthalene	697.3	4.2	666.6	0	105	40-140	0			
Pyrene	647.9	4.2	666.6	0	97.2	40-140	0			
Surr: 2-Fluorobiphenyl	*534.1*	0	*666.6*	0	*80.1*	*20-140*	0			
Surr: 4-Terphenyl-d14	*534.8*	0	*666.6*	0	*80.2*	*22-172*	0			
Surr: Nitrobenzene-d5	*600.6*	0	*666.6*	0	*90.1*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228540** Instrument ID **SVMS6** Method: **SW8270E**

The following samples were analyzed in this batch:

23102588-01A	23102588-02A	23102588-03A
23102588-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228795** Instrument ID **SVMS6** Method: **SW8270E**

MBLK	Sample ID: **SBLKS1-228795-228795**			Units: **µg/Kg**			Analysis Date: **11/8/2023 04:31 PM**			
Client ID:	Run ID: **SVMS6_231108A**			SeqNo: **10182803**		Prep Date: **11/8/2023**		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	U	4.2								
2-Methylnaphthalene	U	4.2								
Acenaphthene	U	4.2								
Anthracene	U	4.2								
Benzo(a)anthracene	U	4.2								
Benzo(a)pyrene	U	4.2								
Benzo(b)fluoranthene	U	4.2								
Benzo(k)fluoranthene	U	4.2								
Chrysene	U	4.2								
Dibenzo(a,h)anthracene	U	4.2								
Fluoranthene	U	4.2								
Fluorene	U	4.2								
Indeno(1,2,3-cd)pyrene	U	4.2								
Naphthalene	U	4.2								
Pyrene	U	4.2								
Surr: 2-Fluorobiphenyl	*583.2*	0	*666.6*	0	*87.5*	*20-140*	0			
Surr: 4-Terphenyl-d14	*530.3*	0	*666.6*	0	*79.6*	*22-172*	0			
Surr: Nitrobenzene-d5	*664.4*	0	*666.6*	0	*99.7*	*28-140*	0			

LCS	Sample ID: **SLCSS1-228795-228795**			Units: **µg/Kg**			Analysis Date: **11/8/2023 05:17 PM**			
Client ID:	Run ID: **SVMS6_231108A**			SeqNo: **10182804**		Prep Date: **11/8/2023**		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	712.9	4.2	666.6	0	107	40-140	0			
2-Methylnaphthalene	743.2	4.2	666.6	0	111	40-140	0			
Acenaphthene	721.3	4.2	666.6	0	108	40-140	0			
Anthracene	735.2	4.2	666.6	0	110	40-140	0			
Benzo(a)anthracene	684.9	4.2	666.6	0	103	40-140	0			
Benzo(a)pyrene	698.2	4.2	666.6	0	105	40-140	0			
Benzo(b)fluoranthene	602.3	4.2	666.6	0	90.4	40-140	0			
Benzo(k)fluoranthene	666.7	4.2	666.6	0	100	40-140	0			
Chrysene	745.3	4.2	666.6	0	112	40-140	0			
Dibenzo(a,h)anthracene	624.5	4.2	666.6	0	93.7	40-140	0			
Fluoranthene	734	4.2	666.6	0	110	40-140	0			
Fluorene	671.3	4.2	666.6	0	101	40-140	0			
Indeno(1,2,3-cd)pyrene	620.5	4.2	666.6	0	93.1	40-140	0			
Naphthalene	745.7	4.2	666.6	0	112	40-140	0			
Pyrene	655.4	4.2	666.6	0	98.3	40-140	0			
Surr: 2-Fluorobiphenyl	*590.6*	0	*666.6*	0	*88.6*	*20-140*	0			
Surr: 4-Terphenyl-d14	*523*	0	*666.6*	0	*78.5*	*22-172*	0			
Surr: Nitrobenzene-d5	*594.5*	0	*666.6*	0	*89.2*	*28-140*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228795** Instrument ID **SVMS6** Method: **SW8270E**

MS	Sample ID: **23110435-02A MS**				Units: **µg/Kg**		Analysis Date: **11/8/2023 05:33 PM**			
Client ID:		Run ID: **SVMS6_231108A**			SeqNo: **10182805**		Prep Date: **11/8/2023**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	686	4.1	647.6	0	106	40-140	0			
2-Methylnaphthalene	677.4	4.1	647.6	0	105	40-140	0			
Acenaphthene	714.8	4.1	647.6	0	110	40-140	0			
Anthracene	728.3	4.1	647.6	0	112	40-140	0			
Benzo(a)anthracene	685.5	4.1	647.6	0	106	40-140	0			
Benzo(a)pyrene	691.9	4.1	647.6	0	107	40-140	0			
Benzo(b)fluoranthene	589.5	4.1	647.6	0	91	40-140	0			
Benzo(k)fluoranthene	699.4	4.1	647.6	0	108	40-140	0			
Chrysene	747.2	4.1	647.6	0	115	40-140	0			
Dibenzo(a,h)anthracene	598.9	4.1	647.6	0	92.5	40-140	0			
Fluoranthene	741.8	4.1	647.6	0	115	40-140	0			
Fluorene	675.6	4.1	647.6	0	104	40-140	0			
Indeno(1,2,3-cd)pyrene	589.5	4.1	647.6	0	91	40-140	0			
Naphthalene	740	4.1	647.6	0	114	40-140	0			
Pyrene	665.7	4.1	647.6	0	103	40-140	0			
Surr: 2-Fluorobiphenyl	*569.9*	0	*647.6*	0	*88*	*20-140*	0			
Surr: 4-Terphenyl-d14	*520.4*	0	*647.6*	0	*80.4*	*22-172*	0			
Surr: Nitrobenzene-d5	*594.8*	0	*647.6*	0	*91.9*	*28-140*	0			

MSD	Sample ID: **23110435-02A MSD**				Units: **µg/Kg**		Analysis Date: **11/8/2023 05:48 PM**			
Client ID:		Run ID: **SVMS6_231108A**			SeqNo: **10182806**		Prep Date: **11/8/2023**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1-Methylnaphthalene	676.6	3.9	629.7	0	107	40-140	686	1.38	30	
2-Methylnaphthalene	628.5	3.9	629.7	0	99.8	40-140	677.4	7.49	30	
Acenaphthene	686.9	3.9	629.7	0	109	40-140	714.8	3.98	30	
Anthracene	709.3	3.9	629.7	0	113	40-140	728.3	2.64	30	
Benzo(a)anthracene	660.9	3.9	629.7	0	105	40-140	685.5	3.65	30	
Benzo(a)pyrene	670.7	3.9	629.7	0	107	40-140	691.9	3.11	30	
Benzo(b)fluoranthene	576.2	3.9	629.7	0	91.5	40-140	589.5	2.28	30	
Benzo(k)fluoranthene	649.1	3.9	629.7	0	103	40-140	699.4	7.46	30	
Chrysene	716.6	3.9	629.7	0	114	40-140	747.2	4.17	30	
Dibenzo(a,h)anthracene	592.8	3.9	629.7	0	94.2	40-140	598.9	1.01	30	
Fluoranthene	702.8	3.9	629.7	0	112	40-140	741.8	5.39	30	
Fluorene	645.8	3.9	629.7	0	103	40-140	675.6	4.52	30	
Indeno(1,2,3-cd)pyrene	586.4	3.9	629.7	0	93.1	40-140	589.5	0.529	30	
Naphthalene	715.5	3.9	629.7	0	114	40-140	740	3.37	30	
Pyrene	643.8	3.9	629.7	0	102	40-140	665.7	3.35	30	
Surr: 2-Fluorobiphenyl	*551.4*	0	*629.7*	0	*87.6*	*20-140*	569.9	*3.3*	*30*	
Surr: 4-Terphenyl-d14	*497.2*	0	*629.7*	0	*79*	*22-172*	520.4	*4.56*	*30*	
Surr: Nitrobenzene-d5	*576.8*	0	*629.7*	0	*91.6*	*28-140*	594.8	*3.08*	*30*	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228795** Instrument ID **SVMS6** Method: **SW8270E**

The following samples were analyzed in this batch:	23102588-01A	23102588-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228397** Instrument ID **VMS9** Method: **SW8260D**

MBLK Sample ID: **MBLK-228397-228397** Units: **µg/Kg-dry** Analysis Date: **11/1/2023 01:40 PM**
Client ID: Run ID: **VMS9_231101A** SeqNo: **10156198** Prep Date: **11/1/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	U	30								
1,3,5-Trimethylbenzene	U	100								
Benzene	U	30								
Ethylbenzene	U	30								
m,p-Xylene	U	60								
o-Xylene	U	30								
Toluene	U	30								
Xylenes, Total	U	90								
Surr: 1,2-Dichloroethane-d4	*991.5*	0	*1000*	0	*99.2*	*80-120*	0			
Surr: 4-Bromofluorobenzene	*1005*	0	*1000*	0	*100*	*80-120*	0			
Surr: Dibromofluoromethane	*911.5*	0	*1000*	0	*91.2*	*80-120*	0			
Surr: Toluene-d8	*993.5*	0	*1000*	0	*99.4*	*80-120*	0			

LCS Sample ID: **LCS-228397-228397** Units: **µg/Kg-dry** Analysis Date: **11/1/2023 12:53 PM**
Client ID: Run ID: **VMS9_231101A** SeqNo: **10156196** Prep Date: **11/1/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	946.5	30	1000	0	94.6	64-126	0			
1,3,5-Trimethylbenzene	982.5	100	1000	0	98.2	66-130	0			
Benzene	1002	30	1000	0	100	78-122	0			
Ethylbenzene	1008	30	1000	0	101	75-121	0			
m,p-Xylene	2040	60	2000	0	102	67-129	0			
o-Xylene	980	30	1000	0	98	75-120	0			
Toluene	964.5	30	1000	0	96.4	76-120	0			
Xylenes, Total	3020	90	3000	0	101	67-129	0			
Surr: 1,2-Dichloroethane-d4	*1042*	0	*1000*	0	*104*	*80-120*	0			
Surr: 4-Bromofluorobenzene	*1013*	0	*1000*	0	*101*	*80-120*	0			
Surr: Dibromofluoromethane	*1002*	0	*1000*	0	*100*	*80-120*	0			
Surr: Toluene-d8	*1013*	0	*1000*	0	*101*	*80-120*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228397** Instrument ID **VMS9** Method: **SW8260D**

MS Sample ID: **23110008-01B MS** Units: **µg/Kg-dry** Analysis Date: **11/2/2023 01:53 AM**
Client ID: Run ID: **VMS10_231101A** SeqNo: **10156733** Prep Date: **11/1/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	1108	31	1035	0	107	64-126	0			
1,3,5-Trimethylbenzene	1136	100	1035	0	110	66-130	0			
Benzene	1146	31	1035	0	111	78-122	0			
Ethylbenzene	1121	31	1035	0	108	75-121	0			
m,p-Xylene	2266	62	2070	0	109	67-129	0			
o-Xylene	1172	31	1035	0	113	75-120	0			
Toluene	1126	31	1035	11.9	108	76-120	0			
Xylenes, Total	3438	93	3106	0	111	67-129	0			
Surr: 1,2-Dichloroethane-d4	*1046*	0	*1035*	0	*101*	*80-120*	0			
Surr: 4-Bromofluorobenzene	*1024*	0	*1035*	0	*98.9*	*80-120*	0			
Surr: Dibromofluoromethane	*1018*	0	*1035*	0	*98.3*	*80-120*	0			
Surr: Toluene-d8	*1045*	0	*1035*	0	*101*	*80-120*	0			

MSD Sample ID: **23110008-01B MSD** Units: **µg/Kg-dry** Analysis Date: **11/2/2023 02:10 AM**
Client ID: Run ID: **VMS10_231101A** SeqNo: **10156734** Prep Date: **11/1/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	955.5	31	1035	0	92.3	64-126	1108	14.8	30	
1,3,5-Trimethylbenzene	1024	100	1035	0	98.9	66-130	1136	10.3	30	
Benzene	1082	31	1035	0	105	78-122	1146	5.71	30	
Ethylbenzene	1112	31	1035	0	107	75-121	1121	0.788	30	
m,p-Xylene	2197	62	2070	0	106	67-129	2266	3.06	30	
o-Xylene	1024	31	1035	0	98.9	75-120	1172	13.5	30	
Toluene	947.7	31	1035	11.9	90.4	76-120	1126	17.2	30	
Xylenes, Total	3222	93	3106	0	104	67-129	3438	6.5	30	
Surr: 1,2-Dichloroethane-d4	*1034*	0	*1035*	0	*99.9*	*80-120*	1046	*1.15*	*30*	
Surr: 4-Bromofluorobenzene	*1041*	0	*1035*	0	*101*	*80-120*	1024	*1.65*	*30*	
Surr: Dibromofluoromethane	*1031*	0	*1035*	0	*99.6*	*80-120*	1018	*1.31*	*30*	
Surr: Toluene-d8	*927.5*	0	*1035*	0	*89.6*	*80-120*	1045	*11.9*	*30*	

The following samples were analyzed in this batch: 23102588-04C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **R388669a** Instrument ID **VMS8** Method: **SW8260D**

MBLK Sample ID: **8V-BLKS2-231108-R388669a** Units: **µg/Kg** Analysis Date: **11/9/2023 12:07 AM**
Client ID: Run ID: **VMS8_231108B** SeqNo: **10183040** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	U	5.0								
1,3,5-Trimethylbenzene	U	5.0								
Benzene	U	5.0								
Ethylbenzene	U	5.0								
m,p-Xylene	U	2.5								
o-Xylene	U	2.5								
Toluene	U	5.0								
Xylenes, Total	U	5.0								
Surr: 1,2-Dichloroethane-d4	*18.77*	0	*20*	0	*93.8*	*83-132*	0			
Surr: 4-Bromofluorobenzene	*17.84*	0	*20*	0	*89.2*	*83-111*	0			
Surr: Dibromofluoromethane	*20.57*	0	*20*	0	*103*	*77-125*	0			
Surr: Toluene-d8	*19.14*	0	*20*	0	*95.7*	*86-108*	0			

LCS Sample ID: **8V-LCSS2-231108-R388669a** Units: **µg/Kg** Analysis Date: **11/8/2023 11:12 PM**
Client ID: Run ID: **VMS8_231108B** SeqNo: **10183038** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	16.66	5.0	20	0	83.3	71-133	0			
1,3,5-Trimethylbenzene	17.44	5.0	20	0	87.2	71-139	0			
Benzene	18.77	5.0	20	0	93.8	77-133	0			
Ethylbenzene	17.41	5.0	20	0	87	75-133	0			
m,p-Xylene	34.33	2.5	40	0	85.8	75-134	0			
o-Xylene	18.48	2.5	20	0	92.4	76-130	0			
Toluene	17.54	5.0	20	0	87.7	76-130	0			
Xylenes, Total	52.81	5.0	60	0	88	75-132	0			
Surr: 1,2-Dichloroethane-d4	*18.74*	0	*20*	0	*93.7*	*83-132*	0			
Surr: 4-Bromofluorobenzene	*18.81*	0	*20*	0	*94*	*83-111*	0			
Surr: Dibromofluoromethane	*19.88*	0	*20*	0	*99.4*	*77-125*	0			
Surr: Toluene-d8	*19.26*	0	*20*	0	*96.3*	*86-108*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **R388669a** Instrument ID **VMS8** Method: **SW8260D**

MS Sample ID: **23102529-03A MS** Units: **µg/Kg** Analysis Date: **11/9/2023 06:44 AM**

Client ID: Run ID: **VMS8_231108B** SeqNo: **10183062** Prep Date: DF: **0.796**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	12.62	4.0	15.92	0	79.3	71-133	0			
1,3,5-Trimethylbenzene	13.75	4.0	15.92	0	86.3	71-139	0			
Benzene	16.3	4.0	15.92	1.294	94.3	77-133	0			
Ethylbenzene	13.96	4.0	15.92	0	87.7	75-133	0			
m,p-Xylene	26.6	2.0	31.84	0	83.5	75-134	0			
o-Xylene	14.42	2.0	15.92	0	90.6	76-130	0			
Toluene	14.5	4.0	15.92	0	91.1	76-130	0			
Xylenes, Total	41.02	4.0	47.76	0	85.9	75-132	0			
Surr: 1,2-Dichloroethane-d4	*15.64*	0	*15.92*	0	*98.2*	*83-132*	0			
Surr: 4-Bromofluorobenzene	*15.12*	0	*15.92*	0	*95*	*83-111*	0			
Surr: Dibromofluoromethane	*15.67*	0	*15.92*	0	*98.4*	*77-125*	0			
Surr: Toluene-d8	*15.47*	0	*15.92*	0	*97.2*	*86-108*	0			

MSD Sample ID: **23102529-03A MSD** Units: **µg/Kg** Analysis Date: **11/9/2023 07:03 AM**

Client ID: Run ID: **VMS8_231108B** SeqNo: **10183063** Prep Date: DF: **0.784**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,2,4-Trimethylbenzene	12.74	3.9	15.68	0	81.2	71-133	12.62	0.91	30	
1,3,5-Trimethylbenzene	13.99	3.9	15.68	0	89.2	71-139	13.75	1.73	30	
Benzene	16.65	3.9	15.68	1.294	97.9	77-133	16.3	2.12	30	
Ethylbenzene	14.25	3.9	15.68	0	90.9	75-133	13.96	2.06	30	
m,p-Xylene	27.29	2.0	31.36	0	87	75-134	26.6	2.56	30	
o-Xylene	15.16	2.0	15.68	0	96.7	76-130	14.42	5.05	30	
Toluene	14.72	3.9	15.68	0	93.9	76-130	14.5	1.56	30	
Xylenes, Total	42.45	3.9	47.04	0	90.2	75-132	41.02	3.44	30	
Surr: 1,2-Dichloroethane-d4	*15.77*	0	*15.68*	0	*101*	*83-132*	15.64	*0.845*	*30*	
Surr: 4-Bromofluorobenzene	*14.92*	0	*15.68*	0	*95.1*	*83-111*	15.12	*1.36*	*30*	
Surr: Dibromofluoromethane	*16.31*	0	*15.68*	0	*104*	*77-125*	15.67	*4.02*	*30*	
Surr: Toluene-d8	*15.04*	0	*15.68*	0	*96*	*86-108*	15.47	*2.76*	*30*	

The following samples were analyzed in this batch: 23102588-01C 23102588-02C 23102588-03C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228580** Instrument ID **WETCHEM** Method: **USDA Method 20**

DUP	Sample ID: **23102586-11ADUP**				Units: **s.u.**			Analysis Date: **11/4/2023 10:31 AM**		
Client ID:	Run ID: **WETCHEM_231104A**				SeqNo: **10165445**		Prep Date: **11/3/2023**		DF: **1**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
pH @ Saturation	6.99	0.10	0	0	0	0-0	7.17	2.54	20	

DUP	Sample ID: **23102586-11ADUP**				Units: **mmhos/cm @25°**			Analysis Date: **11/4/2023 11:30 AM**		
Client ID:	Run ID: **WETCHEM_231104B**				SeqNo: **10165618**		Prep Date: **11/3/2023**		DF: **20**	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Electrical Conductivity @ Saturation	0.6792	0.10	0	0	0		0.9046	28.5	50	

The following samples were analyzed in this batch:

23102588-01A	23102588-02A	23102588-03A
23102588-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **228614** Instrument ID **SPEC-04** Method: **SW7196A**

MBLK Sample ID: **MBLK-228614-228614** Units: **mg/Kg** Analysis Date: **11/5/2023 03:02 PM**
Client ID: Run ID: **SPEC-04_231105A** SeqNo: **10166206** Prep Date: **11/4/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	U	1.0								

LCS Sample ID: **LCS-228614-228614** Units: **mg/Kg** Analysis Date: **11/5/2023 03:02 PM**
Client ID: Run ID: **SPEC-04_231105A** SeqNo: **10166207** Prep Date: **11/4/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	4.713	0.99	4.95	0	95.2	80-120	0			

MS Sample ID: **23102587-06A MS** Units: **mg/Kg** Analysis Date: **11/5/2023 03:02 PM**
Client ID: Run ID: **SPEC-04_231105A** SeqNo: **10166214** Prep Date: **11/4/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	2.039	0.98	4.902	-0.2157	46	75-125	0			S

MS Sample ID: **23102587-06A MSI** Units: **mg/Kg** Analysis Date: **11/5/2023 03:02 PM**
Client ID: Run ID: **SPEC-04_231105A** SeqNo: **10166216** Prep Date: **11/4/2023** DF: **100**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1541	97	1875	-0.2157	82.2	75-125	0			

MSD Sample ID: **23102587-06A MSD** Units: **mg/Kg** Analysis Date: **11/5/2023 03:02 PM**
Client ID: Run ID: **SPEC-04_231105A** SeqNo: **10166215** Prep Date: **11/4/2023** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chromium, Hexavalent	1.931	0.99	4.95	-0.2157	43.4	75-125	2.039	5.47	20	S

The following samples were analyzed in this batch:

23102588-01A 23102588-02A 23102588-03A
23102588-04A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Mull Drilling Company
Work Order: 23102588
Project: NWRV #37

QC BATCH REPORT

Batch ID: **R387001** Instrument ID **MOIST** Method: **SW3550C**

MBLK Sample ID: **WBLKS-R387001** Units: **% of sample** Analysis Date: **10/31/2023 12:58 PM**
Client ID: Run ID: **MOIST_231031A** SeqNo: **10152525** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	U	0.10								

LCS Sample ID: **LCS-R387001** Units: **% of sample** Analysis Date: **10/31/2023 12:58 PM**
Client ID: Run ID: **MOIST_231031A** SeqNo: **10152524** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.10	100	0	100	98-102	0			

DUP Sample ID: **23102584-01A DUP** Units: **% of sample** Analysis Date: **10/31/2023 12:58 PM**
Client ID: Run ID: **MOIST_231031A** SeqNo: **10152503** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	9.21	0.10	0	0	0	0-0	9.29	0.865	10	

DUP Sample ID: **23102585-03B DUP** Units: **% of sample** Analysis Date: **10/31/2023 12:58 PM**
Client ID: Run ID: **MOIST_231031A** SeqNo: **10152510** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	10.5	0.10	0	0	0	0-0	11.05	5.1	10	

The following samples were analyzed in this batch:

23102588-01B 23102588-02B 23102588-03B
23102588-04B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Chain of Custody Form

ALS Group USA, Corp

Work Order: _____

Company Name	Mull Drilling Company	Purchase Order	
		Company Name	Mull Drilling Company
Send Report To	James Beilman	Invoice Attn	Accounts Payable
Project Name		Project #	NWAV #37
Address	1700 N Waterfront Pkwy, Bld. 1200	Address	1700 N Waterfront Pkwy, Bld. 1200
City State Zip	Wichita, KS 67206	City State Zip	Wichita, KS 67206
Phone	3162646366	Phone	3162646366
e-Mail Address		e-Mail Address	

Parameter/Method Request for Analysis

A	Table 915-1
B	
C	
D	
E	
F	
G	
H	
I	
J	

#	Sample Description	Date	Time	Matrix	Preservative	# Bottles	A	B	C	D	E	F	Notes
1	SP 5 4'	10/26/23	0830	Soil	Various	5	✓						
2	SP 7	↓	0835	"	"	"	✓						
3	SP 8		0840	"	"	"	✓						
4	SP 9		0845	"	"	"	✓						
5													
6													
7													
8													
9													
10													

Notes: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2SZO3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Required Turnaround Time: _____
X Std 10 Wk days ___ 5 Wk days ___ 2 Wk days ___ 24 hr

Results Due:

Relinquised by	Date	Time	Received by	Date	Time
James Beilman	10/26/23	1730	Fedex		
Fedex	10/28/23	915	[illegible]	10/28/23	915

NOTES: 3.7°C DF2

QC Reporting Level: (check box below)

- Level II: Standard QC
- Level III: Std QC + Raw data
- Level IV: SW846 CLP-Like

Other:

ALS Group USA, Corp | 3352 128th Ave | | Holland Michigan 49424 | TEL. (616) 399-6070

ALS Group, USA
Holland, Michigan

Sample Receipt Checklist

Client Name: **MULLDRILLING** Date/Time Received: **28-Oct-23 09:15**

Work Order: **23102588** Received by: **WSK**

Checklist completed by Weston Kotecki (eSignature) 28-Oct-23 (Date) Reviewed by: Chad Whelton (eSignature) 31-Oct-23 (Date)

Matrices: Soil
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	3.7/3.7C	DF2	
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	10/28/2023 2:37:58 PM		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑
pH adjusted?	Yes ☐	No ☐	N/A ☑
pH adjusted by:	-		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Attachment B

Flowline Environmental Screening Photos

Ziploc
FL 4 4 10:37

Ziploc
FLS 4' 10.3C

Ziploc
FL 6 1 10.45

PL 9' loss

Ziploc
FL 10 4 11:8

Ziploc
FL 11 4' 11/05

FL2 4 11'10