

December 20, 2022

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

RE: Project: MAUER 915-1
Pace Project No.: 60416937

Dear James Beilman:

Enclosed are the analytical results for sample(s) received by the laboratory on December 02, 2022. 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 Wilson
heather.wilson@pacelabs.com
1(913)563-1407
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: MAUER 915-1

Pace Project No.: 60416937

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 Mold Certification #: LAB0152

Texas Certification #: T 104704245-17-14

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

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SAMPLE SUMMARY

Project: MAUER 915-1

Pace Project No.: 60416937

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60416937001	SP1	Solid	12/01/22 09:00	12/02/22 10:57
60416937002	SP1 4'	Solid	12/01/22 09:15	12/02/22 10:57
60416937003	SP2	Solid	12/01/22 09:20	12/02/22 10:57
60416937004	SP2 4'	Solid	12/01/22 09:35	12/02/22 10:57
60416937005	SP3	Solid	12/01/22 09:45	12/02/22 10:57
60416937006	SP4	Solid	12/01/22 09:30	12/02/22 10:57
60416937007	SP5	Solid	12/01/22 08:50	12/02/22 10:57
60416937008	SP6	Solid	12/01/22 09:10	12/02/22 10:57

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: MAUER 915-1

Pace Project No.: 60416937

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60416937001	SP1	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	ABL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	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
		EPA 8015B	YGR	4	PASI-K
60416937002	SP1 4'	EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	ABL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	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
		EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
60416937003	SP2	6010B-NE493 Ch 2	ABL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	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 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	ABL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	1	PASI-K

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SAMPLE ANALYTE COUNT

Project: MAUER 915-1

Pace Project No.: 60416937

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60416937004	SP2 4'	EPA 9050	NTG	1	PAN
		Calculated	ZSA	1	PAN
		EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	ABL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	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	ABL	1	PAN
60416937005	SP3	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	ABL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	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	ABL	1	PAN
		EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	ABL	1	PAN
60416937006	SP4	EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	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

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SAMPLE ANALYTE COUNT

Project: MAUER 915-1

Pace Project No.: 60416937

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60416937007	SP5	EPA 7199	VSS	1	PAN
		EPA 9045D	KAD	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	ABL	1	PAN
		EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	ABL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	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	ABL	1	PAN
60416937008	SP6	EPA 8015B	YGR	4	PASI-K
		EPA 8015B	JLO	2	PASI-K
		6010B-NE493 Ch 2	ABL	1	PAN
		EPA 6010	MA1	8	PASI-K
		EPA 6020	MRV	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	ABL	1	PAN

PAN = Pace National - Mt. Juliet

PASI-K = Pace Analytical Services - Kansas City

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MAUER 915-1

Pace Project No.: 60416937

Sample: SP1 **Lab ID: 60416937001** Collected: 12/01/22 09:00 Received: 12/02/22 10:57 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)	27.2	mg/kg	20.5	4.6	1	12/05/22 15:33	12/10/22 19:12		
TPH-DRO (C10-C28)	21.4	mg/kg	10.2	4.6	1	12/05/22 15:33	12/10/22 19:12		B
Surrogates									
n-Tetracosane (S)	90	%	31-152		1	12/05/22 15:33	12/10/22 19:12	646-31-1	
p-Terphenyl (S)	76	%	46-130		1	12/05/22 15:33	12/10/22 19:12	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	10.0	1.2	1	12/08/22 10:11	12/08/22 19:23		
Surrogates									
4-Bromofluorobenzene (S)	98	%	66-130		1	12/08/22 10:11	12/08/22 19:23	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	469	ug/L	200	16.7	1	12/09/22 17:57	12/16/22 13:20	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	177	mg/kg	0.42	0.083	1	12/07/22 14:03	12/14/22 19:41	7440-39-3	M1,R1
Cadmium	0.29J	mg/kg	0.42	0.060	1	12/07/22 14:03	12/14/22 19:41	7440-43-9	
Copper	6.3	mg/kg	1.7	0.34	1	12/07/22 14:03	12/14/22 19:41	7440-50-8	
Lead	6.6	mg/kg	0.83	0.24	1	12/07/22 14:03	12/14/22 19:41	7439-92-1	
Nickel	7.1	mg/kg	0.42	0.21	1	12/07/22 14:03	12/14/22 19:41	7440-02-0	
Selenium	0.34J	mg/kg	1.2	0.25	1	12/07/22 14:03	12/14/22 19:41	7782-49-2	M1
Silver	ND	mg/kg	0.58	0.090	1	12/07/22 14:03	12/14/22 19:41	7440-22-4	
Zinc	23.6	mg/kg	8.3	0.18	1	12/07/22 14:03	12/14/22 19:41	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	3.9	mg/kg	0.83	0.19	10	12/07/22 14:03	12/15/22 16:36	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	0.0018	1	12/05/22 15:35	12/09/22 11:21	83-32-9	
Anthracene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 11:21	120-12-7	
Benzo(a)anthracene	0.0031J	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 11:21	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0034	0.0014	1	12/05/22 15:35	12/09/22 11:21	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 11:21	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 11:21	207-08-9	
Chrysene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 11:21	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 11:21	53-70-3	
Fluoranthene	ND	mg/kg	0.0034	0.0024	1	12/05/22 15:35	12/09/22 11:21	206-44-0	
Fluorene	ND	mg/kg	0.0034	0.0022	1	12/05/22 15:35	12/09/22 11:21	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 11:21	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP1 **Lab ID: 60416937001** Collected: 12/01/22 09:00 Received: 12/02/22 10:57 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	12/05/22 15:35	12/09/22 11:21	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0034	0.0021	1	12/05/22 15:35	12/09/22 11:21	91-57-6	
Naphthalene	ND	mg/kg	0.0034	0.0017	1	12/05/22 15:35	12/09/22 11:21	91-20-3	
Pyrene	ND	mg/kg	0.0034	0.0022	1	12/05/22 15:35	12/09/22 11:21	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	63	%	40-120		1	12/05/22 15:35	12/09/22 11:21	321-60-8	
Terphenyl-d14 (S)	75	%	45-130		1	12/05/22 15:35	12/09/22 11:21	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.00070J	mg/kg	0.0053	0.00049	1	12/05/22 11:13	12/05/22 13:39	71-43-2	
Ethylbenzene	ND	mg/kg	0.0053	0.00092	1	12/05/22 11:13	12/05/22 13:39	100-41-4	
Toluene	ND	mg/kg	0.021	0.0047	1	12/05/22 11:13	12/05/22 13:39	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0053	0.00073	1	12/05/22 11:13	12/05/22 13:39	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0053	0.00046	1	12/05/22 11:13	12/05/22 13:39	108-67-8	
Xylene (Total)	ND	mg/kg	0.016	0.0039	1	12/05/22 11:13	12/05/22 13:39	1330-20-7	
Surrogates									
Toluene-d8 (S)	110	%	80-120		1	12/05/22 11:13	12/05/22 13:39	2037-26-5	
4-Bromofluorobenzene (S)	104	%	83-119		1	12/05/22 11:13	12/05/22 13:39	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	12/05/22 11:13	12/05/22 13:39	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	3.1	%	0.50	0.50	1		12/05/22 13:59		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	94.1	%			1	12/07/22 15:25	12/07/22 15:40		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	0.636J	mg/kg	1.06	0.271	1	12/07/22 01:10	12/08/22 04:16	18540-29-9	J
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	8.47	Std. Units		0.10	1	12/07/22 08:30	12/07/22 10:24		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	11200	umhos/cm	10.0	10.0	1	12/10/22 11:00	12/13/22 08:10		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	11.6				1	12/15/22 12:09	12/15/22 12:09	SAR	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MAUER 915-1

Pace Project No.: 60416937

Sample: SP1 4' **Lab ID: 60416937002** Collected: 12/01/22 09:15 Received: 12/02/22 10:57 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	23.6	5.3	1	12/05/22 15:33	12/07/22 00:47		
TPH-DRO (C10-C28)	ND	mg/kg	11.8	5.3	1	12/05/22 15:33	12/07/22 00:47		CH
Surrogates									
n-Tetracosane (S)	86	%	31-152		1	12/05/22 15:33	12/07/22 00:47	646-31-1	
p-Terphenyl (S)	76	%	46-130		1	12/05/22 15:33	12/07/22 00:47	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	13.1	1.6	1	12/08/22 10:11	12/08/22 19:38		
Surrogates									
4-Bromofluorobenzene (S)	94	%	66-130		1	12/08/22 10:11	12/08/22 19:38	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	669	ug/L	200	16.7	1	12/09/22 17:57	12/16/22 13:23	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	176	mg/kg	0.52	0.10	1	12/07/22 14:03	12/14/22 19:47	7440-39-3	
Cadmium	0.68	mg/kg	0.52	0.076	1	12/07/22 14:03	12/14/22 19:47	7440-43-9	
Copper	17.5	mg/kg	2.1	0.43	1	12/07/22 14:03	12/14/22 19:47	7440-50-8	
Lead	12.7	mg/kg	1.0	0.30	1	12/07/22 14:03	12/14/22 19:47	7439-92-1	
Nickel	15.0	mg/kg	0.52	0.26	1	12/07/22 14:03	12/14/22 19:47	7440-02-0	
Selenium	0.44J	mg/kg	1.6	0.32	1	12/07/22 14:03	12/14/22 19:47	7782-49-2	
Silver	ND	mg/kg	0.73	0.11	1	12/07/22 14:03	12/14/22 19:47	7440-22-4	
Zinc	55.4	mg/kg	10.4	0.22	1	12/07/22 14:03	12/14/22 19:47	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	8.2	mg/kg	1.0	0.24	10	12/07/22 14:03	12/15/22 16:38	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	0.0039	0.0021	1	12/05/22 15:35	12/09/22 11:39	83-32-9	
Anthracene	ND	mg/kg	0.0039	0.0020	1	12/05/22 15:35	12/09/22 11:39	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0039	0.0022	1	12/05/22 15:35	12/09/22 11:39	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0039	0.0016	1	12/05/22 15:35	12/09/22 11:39	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0039	0.0022	1	12/05/22 15:35	12/09/22 11:39	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0039	0.0022	1	12/05/22 15:35	12/09/22 11:39	207-08-9	
Chrysene	ND	mg/kg	0.0039	0.0021	1	12/05/22 15:35	12/09/22 11:39	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0039	0.0021	1	12/05/22 15:35	12/09/22 11:39	53-70-3	
Fluoranthene	ND	mg/kg	0.0039	0.0027	1	12/05/22 15:35	12/09/22 11:39	206-44-0	
Fluorene	ND	mg/kg	0.0039	0.0025	1	12/05/22 15:35	12/09/22 11:39	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0039	0.0020	1	12/05/22 15:35	12/09/22 11:39	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP1 4' **Lab ID: 60416937002** Collected: 12/01/22 09:15 Received: 12/02/22 10:57 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	0.0039	0.0019	1	12/05/22 15:35	12/09/22 11:39	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0039	0.0024	1	12/05/22 15:35	12/09/22 11:39	91-57-6	
Naphthalene	ND	mg/kg	0.0039	0.0020	1	12/05/22 15:35	12/09/22 11:39	91-20-3	
Pyrene	ND	mg/kg	0.0039	0.0026	1	12/05/22 15:35	12/09/22 11:39	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	67	%	40-120		1	12/05/22 15:35	12/09/22 11:39	321-60-8	
Terphenyl-d14 (S)	80	%	45-130		1	12/05/22 15:35	12/09/22 11:39	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0014J	mg/kg	0.0069	0.00063	1	12/05/22 11:13	12/05/22 13:59	71-43-2	
Ethylbenzene	ND	mg/kg	0.0069	0.0012	1	12/05/22 11:13	12/05/22 13:59	100-41-4	
Toluene	ND	mg/kg	0.027	0.0061	1	12/05/22 11:13	12/05/22 13:59	108-88-3	
1,2,4-Trimethylbenzene	0.0011J	mg/kg	0.0069	0.00095	1	12/05/22 11:13	12/05/22 13:59	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0069	0.00060	1	12/05/22 11:13	12/05/22 13:59	108-67-8	
Xylene (Total)	ND	mg/kg	0.021	0.0051	1	12/05/22 11:13	12/05/22 13:59	1330-20-7	
Surrogates									
Toluene-d8 (S)	109	%	80-120		1	12/05/22 11:13	12/05/22 13:59	2037-26-5	
4-Bromofluorobenzene (S)	104	%	83-119		1	12/05/22 11:13	12/05/22 13:59	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	12/05/22 11:13	12/05/22 13:59	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	15.9	%	0.50	0.50	1		12/05/22 13:59		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	84.4	%			1	12/07/22 15:25	12/07/22 15:40		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.18	0.302	1	12/07/22 01:10	12/08/22 04:22	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	8.27	Std. Units		0.10	1	12/07/22 08:30	12/07/22 10:24		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	4110	umhos/cm	10.0	10.0	1	12/07/22 09:00	12/07/22 11:40		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	17.4				1	12/15/22 12:11	12/15/22 12:11	SAR	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP2 **Lab ID: 60416937003** Collected: 12/01/22 09:20 Received: 12/02/22 10:57 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	23.5	5.3	1	12/05/22 15:33	12/07/22 19:30		
TPH-DRO (C10-C28)	41.5	mg/kg	11.7	5.3	1	12/05/22 15:33	12/07/22 19:30		B
Surrogates									
n-Tetracosane (S)	83	%	31-152		1	12/05/22 15:33	12/07/22 19:30	646-31-1	
p-Terphenyl (S)	75	%	46-130		1	12/05/22 15:33	12/07/22 19:30	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	13.3	1.6	1	12/08/22 10:11	12/08/22 19:54		
Surrogates									
4-Bromofluorobenzene (S)	94	%	66-130		1	12/08/22 10:11	12/08/22 19:54	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	184J	ug/L	200	16.7	1	12/09/22 17:57	12/16/22 13:29	7440-42-8H	J
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	210	mg/kg	0.52	0.10	1	12/07/22 14:03	12/14/22 19:49	7440-39-3	
Cadmium	0.65	mg/kg	0.52	0.075	1	12/07/22 14:03	12/14/22 19:49	7440-43-9	
Copper	14.1	mg/kg	2.1	0.43	1	12/07/22 14:03	12/14/22 19:49	7440-50-8	
Lead	16.7	mg/kg	1.0	0.30	1	12/07/22 14:03	12/14/22 19:49	7439-92-1	
Nickel	12.5	mg/kg	0.52	0.26	1	12/07/22 14:03	12/14/22 19:49	7440-02-0	
Selenium	ND	mg/kg	1.5	0.32	1	12/07/22 14:03	12/14/22 19:49	7782-49-2	
Silver	ND	mg/kg	0.72	0.11	1	12/07/22 14:03	12/14/22 19:49	7440-22-4	
Zinc	50.4	mg/kg	10.3	0.22	1	12/07/22 14:03	12/14/22 19:49	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	8.6	mg/kg	1.0	0.24	10	12/07/22 14:03	12/15/22 16:41	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	0.0039	0.0021	1	12/05/22 15:35	12/09/22 12:16	83-32-9	
Anthracene	0.0044	mg/kg	0.0039	0.0020	1	12/05/22 15:35	12/09/22 12:16	120-12-7	
Benzo(a)anthracene	0.0023J	mg/kg	0.0039	0.0021	1	12/05/22 15:35	12/09/22 12:16	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0039	0.0016	1	12/05/22 15:35	12/09/22 12:16	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0039	0.0021	1	12/05/22 15:35	12/09/22 12:16	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0039	0.0022	1	12/05/22 15:35	12/09/22 12:16	207-08-9	
Chrysene	ND	mg/kg	0.0039	0.0021	1	12/05/22 15:35	12/09/22 12:16	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0039	0.0021	1	12/05/22 15:35	12/09/22 12:16	53-70-3	
Fluoranthene	0.012	mg/kg	0.0039	0.0027	1	12/05/22 15:35	12/09/22 12:16	206-44-0	
Fluorene	ND	mg/kg	0.0039	0.0025	1	12/05/22 15:35	12/09/22 12:16	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0039	0.0020	1	12/05/22 15:35	12/09/22 12:16	193-39-5	

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ANALYTICAL RESULTS

Project: MAUER 915-1

Pace Project No.: 60416937

Sample: SP2 **Lab ID: 60416937003** Collected: 12/01/22 09:20 Received: 12/02/22 10:57 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	0.0039	0.0019	1	12/05/22 15:35	12/09/22 12:16	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0039	0.0024	1	12/05/22 15:35	12/09/22 12:16	91-57-6	
Naphthalene	ND	mg/kg	0.0039	0.0020	1	12/05/22 15:35	12/09/22 12:16	91-20-3	
Pyrene	0.0076	mg/kg	0.0039	0.0025	1	12/05/22 15:35	12/09/22 12:16	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	70	%	40-120		1	12/05/22 15:35	12/09/22 12:16	321-60-8	
Terphenyl-d14 (S)	82	%	45-130		1	12/05/22 15:35	12/09/22 12:16	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0012J	mg/kg	0.0069	0.00063	1	12/05/22 11:13	12/05/22 14:19	71-43-2	
Ethylbenzene	ND	mg/kg	0.0069	0.0012	1	12/05/22 11:13	12/05/22 14:19	100-41-4	
Toluene	ND	mg/kg	0.028	0.0061	1	12/05/22 11:13	12/05/22 14:19	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0069	0.00095	1	12/05/22 11:13	12/05/22 14:19	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0069	0.00060	1	12/05/22 11:13	12/05/22 14:19	108-67-8	
Xylene (Total)	ND	mg/kg	0.021	0.0051	1	12/05/22 11:13	12/05/22 14:19	1330-20-7	
Surrogates									
Toluene-d8 (S)	111	%	80-120		1	12/05/22 11:13	12/05/22 14:19	2037-26-5	
4-Bromofluorobenzene (S)	104	%	83-119		1	12/05/22 11:13	12/05/22 14:19	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	12/05/22 11:13	12/05/22 14:19	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	16.5	%	0.50	0.50	1		12/05/22 13:59		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	85.4	%			1	12/07/22 15:25	12/07/22 15:40		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	0.354J	mg/kg	1.17	0.298	1	12/07/22 01:10	12/08/22 04:37	18540-29-9	J
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	8.97	Std. Units		0.10	1	12/07/22 08:30	12/07/22 10:24		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	829	umhos/cm	10.0	10.0	1	12/07/22 09:00	12/07/22 11:40		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	1.27				1	12/15/22 12:19	12/15/22 12:19	SAR	

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP2 4' **Lab ID: 60416937004** Collected: 12/01/22 09:35 Received: 12/02/22 10:57 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	24.6	5.5	1	12/05/22 15:33	12/07/22 01:03		
TPH-DRO (C10-C28)	ND	mg/kg	12.3	5.5	1	12/05/22 15:33	12/07/22 01:03		CH
Surrogates									
n-Tetracosane (S)	86	%	31-152		1	12/05/22 15:33	12/07/22 01:03	646-31-1	
p-Terphenyl (S)	77	%	46-130		1	12/05/22 15:33	12/07/22 01:03	92-94-4	
Gasoline Range Organics									
Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
TPH-GRO	1.9J	mg/kg	14.0	1.7	1	12/08/22 10:11	12/08/22 20:41		
Surrogates									
4-Bromofluorobenzene (S)	94	%	66-130		1	12/08/22 10:11	12/08/22 20:41	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	1160	ug/L	400	33.4	2	12/09/22 17:57	12/16/22 13:26	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	178	mg/kg	0.42	0.084	1	12/07/22 14:03	12/14/22 19:51	7440-39-3	
Cadmium	0.60	mg/kg	0.42	0.061	1	12/07/22 14:03	12/14/22 19:51	7440-43-9	
Copper	13.3	mg/kg	1.7	0.35	1	12/07/22 14:03	12/14/22 19:51	7440-50-8	
Lead	11.4	mg/kg	0.85	0.25	1	12/07/22 14:03	12/14/22 19:51	7439-92-1	
Nickel	12.6	mg/kg	0.42	0.21	1	12/07/22 14:03	12/14/22 19:51	7440-02-0	
Selenium	0.58J	mg/kg	1.3	0.26	1	12/07/22 14:03	12/14/22 19:51	7782-49-2	
Silver	ND	mg/kg	0.59	0.092	1	12/07/22 14:03	12/14/22 19:51	7440-22-4	
Zinc	45.9	mg/kg	8.5	0.18	1	12/07/22 14:03	12/14/22 19:51	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	7.3	mg/kg	0.85	0.19	10	12/07/22 14:03	12/15/22 16:43	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	0.0041	0.0022	1	12/05/22 15:35	12/09/22 12:34	83-32-9	
Anthracene	ND	mg/kg	0.0041	0.0021	1	12/05/22 15:35	12/09/22 12:34	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0041	0.0022	1	12/05/22 15:35	12/09/22 12:34	56-55-3	
Benzo(a)pyrene	0.0022J	mg/kg	0.0041	0.0017	1	12/05/22 15:35	12/09/22 12:34	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0041	0.0022	1	12/05/22 15:35	12/09/22 12:34	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0041	0.0023	1	12/05/22 15:35	12/09/22 12:34	207-08-9	
Chrysene	ND	mg/kg	0.0041	0.0022	1	12/05/22 15:35	12/09/22 12:34	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0041	0.0022	1	12/05/22 15:35	12/09/22 12:34	53-70-3	
Fluoranthene	0.0032J	mg/kg	0.0041	0.0028	1	12/05/22 15:35	12/09/22 12:34	206-44-0	
Fluorene	ND	mg/kg	0.0041	0.0026	1	12/05/22 15:35	12/09/22 12:34	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0041	0.0021	1	12/05/22 15:35	12/09/22 12:34	193-39-5	

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP2 4' **Lab ID: 60416937004** Collected: 12/01/22 09:35 Received: 12/02/22 10:57 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	0.0041	0.0020	1	12/05/22 15:35	12/09/22 12:34	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0041	0.0025	1	12/05/22 15:35	12/09/22 12:34	91-57-6	
Naphthalene	ND	mg/kg	0.0041	0.0021	1	12/05/22 15:35	12/09/22 12:34	91-20-3	
Pyrene	0.0027J	mg/kg	0.0041	0.0027	1	12/05/22 15:35	12/09/22 12:34	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%	40-120		1	12/05/22 15:35	12/09/22 12:34	321-60-8	
Terphenyl-d14 (S)	66	%	45-130		1	12/05/22 15:35	12/09/22 12:34	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0011J	mg/kg	0.0073	0.00067	1	12/05/22 11:13	12/05/22 14:39	71-43-2	
Ethylbenzene	ND	mg/kg	0.0073	0.0013	1	12/05/22 11:13	12/05/22 14:39	100-41-4	
Toluene	ND	mg/kg	0.029	0.0065	1	12/05/22 11:13	12/05/22 14:39	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0073	0.0010	1	12/05/22 11:13	12/05/22 14:39	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0073	0.00064	1	12/05/22 11:13	12/05/22 14:39	108-67-8	
Xylene (Total)	ND	mg/kg	0.022	0.0054	1	12/05/22 11:13	12/05/22 14:39	1330-20-7	
Surrogates									
Toluene-d8 (S)	110	%	80-120		1	12/05/22 11:13	12/05/22 14:39	2037-26-5	
4-Bromofluorobenzene (S)	104	%	83-119		1	12/05/22 11:13	12/05/22 14:39	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	12/05/22 11:13	12/05/22 14:39	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	19.2	%	0.50	0.50	1		12/05/22 13:59		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	81.0	%			1	12/07/22 15:25	12/07/22 15:40		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.23	0.315	1	12/07/22 01:10	12/08/22 05:03	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	8.82	Std. Units		0.10	1	12/08/22 13:00	12/08/22 15:10		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	1710	umhos/cm	10.0	10.0	1	12/07/22 09:00	12/07/22 11:40		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	19.0				1	12/15/22 23:59	12/15/22 23:59	SAR	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP3 **Lab ID: 60416937005** Collected: 12/01/22 09:45 Received: 12/02/22 10:57 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)	28.2	mg/kg	22.2	5.0	1	12/05/22 15:33	12/07/22 19:38		
TPH-DRO (C10-C28)	36.4	mg/kg	11.1	5.0	1	12/05/22 15:33	12/07/22 19:38		B
Surrogates									
n-Tetracosane (S)	104	%	31-152		1	12/05/22 15:33	12/07/22 19:38	646-31-1	
p-Terphenyl (S)	89	%	46-130		1	12/05/22 15:33	12/07/22 19:38	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	12.1	1.5	1	12/08/22 10:11	12/08/22 21:28		
Surrogates									
4-Bromofluorobenzene (S)	93	%	66-130		1	12/08/22 10:11	12/08/22 21:28	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	1410	ug/L	200	16.7	1	12/09/22 17:57	12/16/22 13:32	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	554	mg/kg	0.50	0.099	1	12/07/22 14:03	12/14/22 20:00	7440-39-3	
Cadmium	0.58	mg/kg	0.50	0.072	1	12/07/22 14:03	12/14/22 20:00	7440-43-9	
Copper	13.8	mg/kg	2.0	0.41	1	12/07/22 14:03	12/14/22 20:00	7440-50-8	
Lead	12.7	mg/kg	1.0	0.29	1	12/07/22 14:03	12/14/22 20:00	7439-92-1	
Nickel	12.4	mg/kg	0.50	0.25	1	12/07/22 14:03	12/14/22 20:00	7440-02-0	
Selenium	0.34J	mg/kg	1.5	0.31	1	12/07/22 14:03	12/14/22 20:00	7782-49-2	
Silver	ND	mg/kg	0.70	0.11	1	12/07/22 14:03	12/14/22 20:00	7440-22-4	
Zinc	45.2	mg/kg	10	0.21	1	12/07/22 14:03	12/14/22 20:00	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	7.6	mg/kg	1.0	0.23	10	12/07/22 14:03	12/15/22 16:45	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	0.0036	0.0020	1	12/05/22 15:35	12/09/22 12:52	83-32-9	
Anthracene	ND	mg/kg	0.0036	0.0019	1	12/05/22 15:35	12/09/22 12:52	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0036	0.0020	1	12/05/22 15:35	12/09/22 12:52	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0036	0.0015	1	12/05/22 15:35	12/09/22 12:52	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0036	0.0020	1	12/05/22 15:35	12/09/22 12:52	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0036	0.0020	1	12/05/22 15:35	12/09/22 12:52	207-08-9	
Chrysene	0.0024J	mg/kg	0.0036	0.0019	1	12/05/22 15:35	12/09/22 12:52	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0036	0.0019	1	12/05/22 15:35	12/09/22 12:52	53-70-3	
Fluoranthene	0.0025J	mg/kg	0.0036	0.0025	1	12/05/22 15:35	12/09/22 12:52	206-44-0	
Fluorene	ND	mg/kg	0.0036	0.0023	1	12/05/22 15:35	12/09/22 12:52	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0036	0.0019	1	12/05/22 15:35	12/09/22 12:52	193-39-5	

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ANALYTICAL RESULTS

Project: MAUER 915-1

Pace Project No.: 60416937

Sample: SP3 **Lab ID: 60416937005** Collected: 12/01/22 09:45 Received: 12/02/22 10:57 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	0.0036	0.0017	1	12/05/22 15:35	12/09/22 12:52	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0036	0.0022	1	12/05/22 15:35	12/09/22 12:52	91-57-6	
Naphthalene	ND	mg/kg	0.0036	0.0019	1	12/05/22 15:35	12/09/22 12:52	91-20-3	
Pyrene	0.0024J	mg/kg	0.0036	0.0024	1	12/05/22 15:35	12/09/22 12:52	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	76	%	40-120		1	12/05/22 15:35	12/09/22 12:52	321-60-8	
Terphenyl-d14 (S)	89	%	45-130		1	12/05/22 15:35	12/09/22 12:52	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.00091J	mg/kg	0.0064	0.00058	1	12/05/22 11:13	12/05/22 14:58	71-43-2	
Ethylbenzene	ND	mg/kg	0.0064	0.0011	1	12/05/22 11:13	12/05/22 14:58	100-41-4	
Toluene	ND	mg/kg	0.025	0.0057	1	12/05/22 11:13	12/05/22 14:58	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0064	0.00088	1	12/05/22 11:13	12/05/22 14:58	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0064	0.00055	1	12/05/22 11:13	12/05/22 14:58	108-67-8	
Xylene (Total)	ND	mg/kg	0.019	0.0047	1	12/05/22 11:13	12/05/22 14:58	1330-20-7	
Surrogates									
Toluene-d8 (S)	110	%	80-120		1	12/05/22 11:13	12/05/22 14:58	2037-26-5	
4-Bromofluorobenzene (S)	105	%	83-119		1	12/05/22 11:13	12/05/22 14:58	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	12/05/22 11:13	12/05/22 14:58	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	12.2	%	0.50	0.50	1		12/05/22 13:59		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	89.9	%			1	12/07/22 15:25	12/07/22 15:40		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.11	0.284	1	12/07/22 01:10	12/08/22 05:08	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	7.59	Std. Units		0.10	1	12/08/22 13:00	12/08/22 15:10		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	15100	umhos/cm	10.0	10.0	1	12/07/22 09:00	12/07/22 11:40		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	18.4				1	12/16/22 00:02	12/16/22 00:02	SAR	

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP4 **Lab ID: 60416937006** Collected: 12/01/22 09:30 Received: 12/02/22 10:57 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)	69.8	mg/kg	20.3	4.5	1	12/05/22 15:33	12/07/22 19:47		
TPH-DRO (C10-C28)	487	mg/kg	10.1	4.5	1	12/05/22 15:33	12/07/22 19:47		
Surrogates									
n-Tetracosane (S)	83	%	31-152		1	12/05/22 15:33	12/07/22 19:47	646-31-1	
p-Terphenyl (S)	73	%	46-130		1	12/05/22 15:33	12/07/22 19:47	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	10.7	1.3	1	12/08/22 10:11	12/08/22 21:44		
Surrogates									
4-Bromofluorobenzene (S)	91	%	66-130		1	12/08/22 10:11	12/08/22 21:44	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	340	ug/L	200	16.7	1	12/09/22 17:57	12/16/22 13:35	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	164	mg/kg	0.52	0.10	1	12/07/22 14:03	12/14/22 20:02	7440-39-3	
Cadmium	0.52J	mg/kg	0.52	0.076	1	12/07/22 14:03	12/14/22 20:02	7440-43-9	
Copper	11.7	mg/kg	2.1	0.43	1	12/07/22 14:03	12/14/22 20:02	7440-50-8	
Lead	12.8	mg/kg	1.0	0.30	1	12/07/22 14:03	12/14/22 20:02	7439-92-1	
Nickel	11.1	mg/kg	0.52	0.26	1	12/07/22 14:03	12/14/22 20:02	7440-02-0	
Selenium	0.49J	mg/kg	1.6	0.32	1	12/07/22 14:03	12/14/22 20:02	7782-49-2	
Silver	ND	mg/kg	0.73	0.11	1	12/07/22 14:03	12/14/22 20:02	7440-22-4	
Zinc	42.2	mg/kg	10.4	0.22	1	12/07/22 14:03	12/14/22 20:02	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	6.9	mg/kg	1.0	0.24	10	12/07/22 14:03	12/15/22 16:50	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	0.0018	1	12/05/22 15:35	12/09/22 13:10	83-32-9	
Anthracene	0.0031J	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:10	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:10	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0034	0.0014	1	12/05/22 15:35	12/09/22 13:10	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:10	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:10	207-08-9	
Chrysene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:10	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:10	53-70-3	
Fluoranthene	ND	mg/kg	0.0034	0.0023	1	12/05/22 15:35	12/09/22 13:10	206-44-0	
Fluorene	ND	mg/kg	0.0034	0.0022	1	12/05/22 15:35	12/09/22 13:10	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:10	193-39-5	

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ANALYTICAL RESULTS

Project: MAUER 915-1

Pace Project No.: 60416937

Sample: SP4 **Lab ID: 60416937006** Collected: 12/01/22 09:30 Received: 12/02/22 10:57 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	12/05/22 15:35	12/09/22 13:10	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0034	0.0021	1	12/05/22 15:35	12/09/22 13:10	91-57-6	
Naphthalene	ND	mg/kg	0.0034	0.0017	1	12/05/22 15:35	12/09/22 13:10	91-20-3	
Pyrene	ND	mg/kg	0.0034	0.0022	1	12/05/22 15:35	12/09/22 13:10	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75	%	40-120		1	12/05/22 15:35	12/09/22 13:10	321-60-8	
Terphenyl-d14 (S)	79	%	45-130		1	12/05/22 15:35	12/09/22 13:10	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0012J	mg/kg	0.0057	0.00052	1	12/05/22 11:13	12/05/22 15:18	71-43-2	
Ethylbenzene	ND	mg/kg	0.0057	0.00098	1	12/05/22 11:13	12/05/22 15:18	100-41-4	
Toluene	ND	mg/kg	0.023	0.0050	1	12/05/22 11:13	12/05/22 15:18	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0057	0.00078	1	12/05/22 11:13	12/05/22 15:18	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0057	0.00049	1	12/05/22 11:13	12/05/22 15:18	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0042	1	12/05/22 11:13	12/05/22 15:18	1330-20-7	
Surrogates									
Toluene-d8 (S)	110	%	80-120		1	12/05/22 11:13	12/05/22 15:18	2037-26-5	
4-Bromofluorobenzene (S)	104	%	83-119		1	12/05/22 11:13	12/05/22 15:18	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	12/05/22 11:13	12/05/22 15:18	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	6.1	%	0.50	0.50	1		12/05/22 14:00		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	94.1	%			1	12/07/22 15:25	12/07/22 15:40		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	0.276J	mg/kg	1.06	0.271	1	12/07/22 01:10	12/08/22 05:14	18540-29-9	J
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	7.81	Std. Units		0.10	1	12/08/22 13:00	12/08/22 15:10		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	1680	umhos/cm	10.0	10.0	1	12/07/22 09:00	12/07/22 11:40		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	7.45				1	12/16/22 00:05	12/16/22 00:05	SAR	

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP5 **Lab ID: 60416937007** Collected: 12/01/22 08:50 Received: 12/02/22 10:57 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	20.7	4.6	1	12/05/22 15:33	12/19/22 15:12		
TPH-DRO (C10-C28)	8.2J	mg/kg	10.3	4.6	1	12/05/22 15:33	12/19/22 15:12		B
Surrogates									
n-Tetracosane (S)	73	%	31-152		1	12/05/22 15:33	12/19/22 15:12	646-31-1	
p-Terphenyl (S)	78	%	46-130		1	12/05/22 15:33	12/19/22 15:12	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	10.5	1.3	1	12/08/22 10:11	12/08/22 22:00		
Surrogates									
4-Bromofluorobenzene (S)	96	%	66-130		1	12/08/22 10:11	12/08/22 22:00	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	570	ug/L	200	16.7	1	12/09/22 17:57	12/16/22 13:43	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	170	mg/kg	0.38	0.075	1	12/07/22 14:03	12/14/22 20:04	7440-39-3	
Cadmium	0.55	mg/kg	0.38	0.055	1	12/07/22 14:03	12/14/22 20:04	7440-43-9	
Copper	13.3	mg/kg	1.5	0.31	1	12/07/22 14:03	12/14/22 20:04	7440-50-8	
Lead	11.2	mg/kg	0.76	0.22	1	12/07/22 14:03	12/14/22 20:04	7439-92-1	
Nickel	12.3	mg/kg	0.38	0.19	1	12/07/22 14:03	12/14/22 20:04	7440-02-0	
Selenium	0.50J	mg/kg	1.1	0.23	1	12/07/22 14:03	12/14/22 20:04	7782-49-2	
Silver	ND	mg/kg	0.53	0.082	1	12/07/22 14:03	12/14/22 20:04	7440-22-4	
Zinc	47.5	mg/kg	7.6	0.16	1	12/07/22 14:03	12/14/22 20:04	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	7.7	mg/kg	0.76	0.17	10	12/07/22 14:03	12/15/22 16:53	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	0.0018	1	12/05/22 15:35	12/09/22 13:28	83-32-9	
Anthracene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:28	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:28	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0034	0.0014	1	12/05/22 15:35	12/09/22 13:28	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:28	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:28	207-08-9	
Chrysene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:28	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:28	53-70-3	
Fluoranthene	ND	mg/kg	0.0034	0.0024	1	12/05/22 15:35	12/09/22 13:28	206-44-0	
Fluorene	ND	mg/kg	0.0034	0.0022	1	12/05/22 15:35	12/09/22 13:28	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:28	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MAUER 915-1

Pace Project No.: 60416937

Sample: SP5 **Lab ID: 60416937007** Collected: 12/01/22 08:50 Received: 12/02/22 10:57 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	12/05/22 15:35	12/09/22 13:28	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0034	0.0021	1	12/05/22 15:35	12/09/22 13:28	91-57-6	
Naphthalene	ND	mg/kg	0.0034	0.0017	1	12/05/22 15:35	12/09/22 13:28	91-20-3	
Pyrene	ND	mg/kg	0.0034	0.0022	1	12/05/22 15:35	12/09/22 13:28	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	40-120		1	12/05/22 15:35	12/09/22 13:28	321-60-8	
Terphenyl-d14 (S)	77	%	45-130		1	12/05/22 15:35	12/09/22 13:28	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.00078J	mg/kg	0.0055	0.00050	1	12/05/22 11:13	12/05/22 15:38	71-43-2	
Ethylbenzene	ND	mg/kg	0.0055	0.00095	1	12/05/22 11:13	12/05/22 15:38	100-41-4	
Toluene	ND	mg/kg	0.022	0.0049	1	12/05/22 11:13	12/05/22 15:38	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0055	0.00076	1	12/05/22 11:13	12/05/22 15:38	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0055	0.00048	1	12/05/22 11:13	12/05/22 15:38	108-67-8	
Xylene (Total)	ND	mg/kg	0.016	0.0040	1	12/05/22 11:13	12/05/22 15:38	1330-20-7	
Surrogates									
Toluene-d8 (S)	110	%	80-120		1	12/05/22 11:13	12/05/22 15:38	2037-26-5	
4-Bromofluorobenzene (S)	104	%	83-119		1	12/05/22 11:13	12/05/22 15:38	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	12/05/22 11:13	12/05/22 15:38	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	5.5	%	0.50	0.50	1		12/05/22 14:00		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	31.3	%			1	12/07/22 15:10	12/07/22 15:24		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	3.20	0.815	1	12/07/22 01:10	12/08/22 05:19	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	7.97	Std. Units		0.10	1	12/08/22 13:00	12/08/22 15:10		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	1420	umhos/cm	10.0	10.0	1	12/10/22 11:00	12/13/22 08:10		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	1.94				1	12/16/22 00:08	12/16/22 00:08	SAR	

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP6 **Lab ID: 60416937008** Collected: 12/01/22 09:10 Received: 12/02/22 10:57 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)	5.2J	mg/kg	20.3	4.5	1	12/05/22 15:33	12/19/22 15:20		
TPH-DRO (C10-C28)	ND	mg/kg	10.1	4.5	1	12/05/22 15:33	12/19/22 15:20		
Surrogates									
n-Tetracosane (S)	70	%	31-152		1	12/05/22 15:33	12/19/22 15:20	646-31-1	
p-Terphenyl (S)	75	%	46-130		1	12/05/22 15:33	12/19/22 15:20	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	10.6	1.3	1	12/08/22 10:11	12/08/22 22:16		
Surrogates									
4-Bromofluorobenzene (S)	94	%	66-130		1	12/08/22 10:11	12/08/22 22:16	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	319	ug/L	200	16.7	1	12/09/22 17:57	12/16/22 13:46	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	174	mg/kg	0.41	0.081	1	12/07/22 14:03	12/14/22 20:06	7440-39-3	
Cadmium	0.51	mg/kg	0.41	0.059	1	12/07/22 14:03	12/14/22 20:06	7440-43-9	
Copper	12.3	mg/kg	1.6	0.34	1	12/07/22 14:03	12/14/22 20:06	7440-50-8	
Lead	9.8	mg/kg	0.82	0.24	1	12/07/22 14:03	12/14/22 20:06	7439-92-1	
Nickel	11.7	mg/kg	0.41	0.20	1	12/07/22 14:03	12/14/22 20:06	7440-02-0	
Selenium	0.52J	mg/kg	1.2	0.25	1	12/07/22 14:03	12/14/22 20:06	7782-49-2	
Silver	ND	mg/kg	0.57	0.088	1	12/07/22 14:03	12/14/22 20:06	7440-22-4	
Zinc	37.4	mg/kg	8.2	0.17	1	12/07/22 14:03	12/14/22 20:06	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	6.7	mg/kg	0.82	0.19	10	12/07/22 14:03	12/15/22 16:55	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	0.0019	1	12/05/22 15:35	12/09/22 13:46	83-32-9	
Anthracene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:46	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:46	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0034	0.0014	1	12/05/22 15:35	12/09/22 13:46	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:46	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0034	0.0019	1	12/05/22 15:35	12/09/22 13:46	207-08-9	
Chrysene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:46	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:46	53-70-3	
Fluoranthene	ND	mg/kg	0.0034	0.0024	1	12/05/22 15:35	12/09/22 13:46	206-44-0	
Fluorene	ND	mg/kg	0.0034	0.0022	1	12/05/22 15:35	12/09/22 13:46	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:46	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: MAUER 915-1
Pace Project No.: 60416937

Sample: SP6 **Lab ID: 60416937008** Collected: 12/01/22 09:10 Received: 12/02/22 10:57 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	12/05/22 15:35	12/09/22 13:46	90-12-0	
2-Methylnaphthalene	ND	mg/kg	0.0034	0.0021	1	12/05/22 15:35	12/09/22 13:46	91-57-6	
Naphthalene	ND	mg/kg	0.0034	0.0018	1	12/05/22 15:35	12/09/22 13:46	91-20-3	
Pyrene	ND	mg/kg	0.0034	0.0022	1	12/05/22 15:35	12/09/22 13:46	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71	%	40-120		1	12/05/22 15:35	12/09/22 13:46	321-60-8	
Terphenyl-d14 (S)	87	%	45-130		1	12/05/22 15:35	12/09/22 13:46	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0010J	mg/kg	0.0055	0.00050	1	12/05/22 11:13	12/05/22 15:57	71-43-2	
Ethylbenzene	ND	mg/kg	0.0055	0.00095	1	12/05/22 11:13	12/05/22 15:57	100-41-4	
Toluene	ND	mg/kg	0.022	0.0049	1	12/05/22 11:13	12/05/22 15:57	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0055	0.00076	1	12/05/22 11:13	12/05/22 15:57	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0055	0.00048	1	12/05/22 11:13	12/05/22 15:57	108-67-8	
Xylene (Total)	ND	mg/kg	0.016	0.0040	1	12/05/22 11:13	12/05/22 15:57	1330-20-7	
Surrogates									
Toluene-d8 (S)	110	%	80-120		1	12/05/22 11:13	12/05/22 15:57	2037-26-5	
4-Bromofluorobenzene (S)	103	%	83-119		1	12/05/22 11:13	12/05/22 15:57	460-00-4	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120		1	12/05/22 11:13	12/05/22 15:57	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	5.6	%	0.50	0.50	1		12/05/22 14:00		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	94.5	%			1	12/07/22 15:10	12/07/22 15:24		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.06	0.270	1	12/07/22 01:10	12/08/22 05:24	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	8.88	Std. Units		0.10	1	12/08/22 13:00	12/08/22 15:10		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	479	umhos/cm	10.0	10.0	1	12/10/22 11:00	12/13/22 08:10		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	3.75				1	12/16/22 00:10	12/16/22 00:10	SAR	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch:	821854	Analysis Method:	EPA 8015B
QC Batch Method:	EPA 5035A/5030B	Analysis Description:	Gasoline Range Organics
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

METHOD BLANK:	3267110	Matrix:	Solid
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH-GRO	mg/kg	1.4J	10.0	1.2	12/08/22 18:51	
4-Bromofluorobenzene (S)	%	98	66-130		12/08/22 18:51	

LABORATORY CONTROL SAMPLE: 3267111						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	mg/kg	50	48.4	97	70-130	
4-Bromofluorobenzene (S)	%			99	66-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3267112 3267113												
Parameter	Units	60416937003 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	66.3	66.3	64.3	64.5	95	96	70-130	0	25	
4-Bromofluorobenzene (S)	%						95	96	66-130			

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch:	1972178	Analysis Method:	6010B-NE493 Ch 2
QC Batch Method:	HWS Boron	Analysis Description:	Metals (ICP) 6010B-NE493 Ch 2
		Laboratory:	Pace National - Mt. Juliet
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

METHOD BLANK:	R3872801-1	Matrix:	Solid
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Hot Water Soluble	ug/L	ND	200	16.7	12/16/22 13:09	

LABORATORY CONTROL SAMPLE & LCSD:			R3872801-2		R3872801-3						
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Boron, Hot Water Soluble	ug/L	1000	1020	1020	102	102	80.0-120	0.244	20		

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch:	821838	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

METHOD BLANK:	3267045	Matrix:	Solid
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/kg	ND	0.50	0.099	12/14/22 19:34	
Cadmium	mg/kg	ND	0.50	0.072	12/14/22 19:34	
Copper	mg/kg	ND	2.0	0.41	12/14/22 19:34	
Lead	mg/kg	ND	1.0	0.29	12/14/22 19:34	
Nickel	mg/kg	ND	0.50	0.25	12/14/22 19:34	
Selenium	mg/kg	ND	1.5	0.31	12/14/22 19:34	
Silver	mg/kg	ND	0.70	0.11	12/14/22 19:34	
Zinc	mg/kg	0.31J	10.0	0.21	12/14/22 19:34	

LABORATORY CONTROL SAMPLE: 3267046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/kg	100	94.1	94	80-120	
Cadmium	mg/kg	100	91.5	92	80-120	
Copper	mg/kg	100	90.2	90	80-120	
Lead	mg/kg	100	90.2	90	80-120	
Nickel	mg/kg	100	91.8	92	80-120	
Selenium	mg/kg	100	85.7	86	80-120	
Silver	mg/kg	50	44.5	89	80-120	
Zinc	mg/kg	100	86.9	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3267047 3267048

Parameter	Units	60416937001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/kg	177	80.6	81.9	243	302	83	154	75-125	22	20	M1, R1
Cadmium	mg/kg	0.29J	80.6	81.9	66.4	68.4	82	83	75-125	3	20	
Copper	mg/kg	6.3	80.6	81.9	75.9	77.2	86	87	75-125	2	20	
Lead	mg/kg	6.6	80.6	81.9	71.2	73.1	80	81	75-125	3	20	
Nickel	mg/kg	7.1	80.6	81.9	72.0	74.9	80	83	75-125	4	20	
Selenium	mg/kg	0.34J	80.6	81.9	59.7	62.3	74	76	75-125	4	20	M1
Silver	mg/kg	ND	40.3	41	31.4	32.3	78	79	75-125	3	20	
Zinc	mg/kg	23.6	80.6	81.9	85.5	90.7	77	82	75-125	6	20	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch:	821837	Analysis Method:	EPA 6020
QC Batch Method:	EPA 3050	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

METHOD BLANK:	3267039	Matrix:	Solid
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	0.23	12/15/22 16:23	

LABORATORY CONTROL SAMPLE: 3267040						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	90.7	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:												

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch:	821391	Analysis Method:	EPA 8260C
QC Batch Method:	EPA 5035A/5030B	Analysis Description:	8260C MSV 5035A Low Level
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

METHOD BLANK: 3265464

Matrix: Solid

Associated Lab Samples: 60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	0.00069	12/05/22 12:59	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	0.00043	12/05/22 12:59	
Benzene	mg/kg	ND	0.0050	0.00046	12/05/22 12:59	
Ethylbenzene	mg/kg	ND	0.0050	0.00087	12/05/22 12:59	
Toluene	mg/kg	ND	0.020	0.0044	12/05/22 12:59	
Xylene (Total)	mg/kg	ND	0.015	0.0037	12/05/22 12:59	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120		12/05/22 12:59	
4-Bromofluorobenzene (S)	%	105	83-119		12/05/22 12:59	
Toluene-d8 (S)	%	111	80-120		12/05/22 12:59	

LABORATORY CONTROL SAMPLE: 3265465

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	1.2	1.2	98	79-121	
1,3,5-Trimethylbenzene	mg/kg	1.2	1.2	97	81-122	
Benzene	mg/kg	1.2	1.1	91	67-126	
Ethylbenzene	mg/kg	1.2	1.2	93	69-127	
Toluene	mg/kg	1.2	1.1	88	80-118	
Xylene (Total)	mg/kg	3.8	3.6	95	69-130	
1,2-Dichlorobenzene-d4 (S)	%			99	80-120	
4-Bromofluorobenzene (S)	%			100	83-119	
Toluene-d8 (S)	%			95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3265466 3265467

Parameter	Units	60416937008 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	ND	1.4	1.4	1.3	1.4	94	101	10-124	8	68	
1,3,5-Trimethylbenzene	mg/kg	ND	1.4	1.4	1.3	1.4	92	100	10-125	8	65	
Benzene	mg/kg	0.0010J	1.4	1.4	1.2	1.3	88	93	17-134	6	53	
Ethylbenzene	mg/kg	ND	1.4	1.4	1.2	1.3	91	96	10-137	6	60	
Toluene	mg/kg	ND	1.4	1.4	1.2	1.2	85	90	13-131	6	60	
Xylene (Total)	mg/kg	ND	4.1	4.1	3.8	4.0	92	97	10-137	5	58	
1,2-Dichlorobenzene-d4 (S)	%						99	100	80-120			
4-Bromofluorobenzene (S)	%						101	100	83-119			
Toluene-d8 (S)	%						95	95	80-120			

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch:	821387	Analysis Method:	EPA 8015B
QC Batch Method:	EPA 3546	Analysis Description:	EPA 8015B
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

METHOD BLANK:	3265442	Matrix:	Solid
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/kg	9.8	9.5	4.3	12/10/22 18:47	
TPH-RRO (C28-C36)	mg/kg	ND	19.0	4.3	12/10/22 18:47	
n-Tetracosane (S)	%	87	31-152		12/10/22 18:47	
p-Terphenyl (S)	%	78	46-130		12/10/22 18:47	

LABORATORY CONTROL SAMPLE: 3265443

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/kg	79.6	80.2	101	74-124	
n-Tetracosane (S)	%			90	31-152	
p-Terphenyl (S)	%			80	46-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3265444 3265445

Parameter	Units	60416937001 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	21.4	82.1	83.9	108	108	105	103	30-130	0	35	
n-Tetracosane (S)	%						105	103	31-152			
p-Terphenyl (S)	%						90	87	46-130			

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch:	821386	Analysis Method:	EPA 8270 by SIM
QC Batch Method:	EPA 3546	Analysis Description:	8270/3546 MSSV PAH by SIM
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

METHOD BLANK: 3265438

Matrix: Solid

Associated Lab Samples: 60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0031	0.0015	12/09/22 09:51	
2-Methylnaphthalene	mg/kg	ND	0.0031	0.0019	12/09/22 09:51	
Acenaphthene	mg/kg	ND	0.0031	0.0017	12/09/22 09:51	
Anthracene	mg/kg	ND	0.0031	0.0016	12/09/22 09:51	
Benzo(a)anthracene	mg/kg	ND	0.0031	0.0017	12/09/22 09:51	
Benzo(a)pyrene	mg/kg	ND	0.0031	0.0013	12/09/22 09:51	
Benzo(b)fluoranthene	mg/kg	ND	0.0031	0.0017	12/09/22 09:51	
Benzo(k)fluoranthene	mg/kg	ND	0.0031	0.0018	12/09/22 09:51	
Chrysene	mg/kg	ND	0.0031	0.0017	12/09/22 09:51	
Dibenz(a,h)anthracene	mg/kg	ND	0.0031	0.0017	12/09/22 09:51	
Fluoranthene	mg/kg	ND	0.0031	0.0022	12/09/22 09:51	
Fluorene	mg/kg	ND	0.0031	0.0020	12/09/22 09:51	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0031	0.0016	12/09/22 09:51	
Naphthalene	mg/kg	ND	0.0031	0.0016	12/09/22 09:51	
Pyrene	mg/kg	ND	0.0031	0.0021	12/09/22 09:51	
2-Fluorobiphenyl (S)	%	75	40-120		12/09/22 09:51	
Terphenyl-d14 (S)	%	85	45-130		12/09/22 09:51	

LABORATORY CONTROL SAMPLE: 3265439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.032	0.019	58	55-120	
2-Methylnaphthalene	mg/kg	0.032	0.019	59	55-120	
Acenaphthene	mg/kg	0.032	0.020	62	45-120	
Anthracene	mg/kg	0.032	0.021	66	50-120	
Benzo(a)anthracene	mg/kg	0.032	0.020	62	55-125	
Benzo(a)pyrene	mg/kg	0.032	0.019	58	45-120	
Benzo(b)fluoranthene	mg/kg	0.032	0.020	64	50-125	
Benzo(k)fluoranthene	mg/kg	0.032	0.023	70	55-120	
Chrysene	mg/kg	0.032	0.020	63	55-120	
Dibenz(a,h)anthracene	mg/kg	0.032	0.020	61	40-125	
Fluoranthene	mg/kg	0.032	0.022	70	50-125	
Fluorene	mg/kg	0.032	0.019	60	50-120	
Indeno(1,2,3-cd)pyrene	mg/kg	0.032	0.022	67	44-125	
Naphthalene	mg/kg	0.032	0.018	57	45-120	
Pyrene	mg/kg	0.032	0.022	69	50-125	
2-Fluorobiphenyl (S)	%			61	40-120	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

LABORATORY CONTROL SAMPLE: 3265439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Terphenyl-d14 (S)	%			67	45-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3265440 3265441

Parameter	Units	60416935001 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	0.037	0.037	0.025	0.019	68	51	50-145	30	61	
2-Methylnaphthalene	mg/kg	ND	0.037	0.037	0.026	0.019	71	52	50-120	31	61	
Acenaphthene	mg/kg	ND	0.037	0.037	0.028	0.020	75	55	10-150	31	42	
Anthracene	mg/kg	ND	0.037	0.037	0.030	0.022	81	60	10-160	29	54	
Benzo(a)anthracene	mg/kg	ND	0.037	0.037	0.029	0.021	78	58	10-160	29	62	
Benzo(a)pyrene	mg/kg	ND	0.037	0.037	0.027	0.020	73	54	10-150	29	66	
Benzo(b)fluoranthene	mg/kg	ND	0.037	0.037	0.030	0.022	81	60	10-165	30	61	
Benzo(k)fluoranthene	mg/kg	ND	0.037	0.037	0.029	0.022	77	60	10-165	25	53	
Chrysene	mg/kg	ND	0.037	0.037	0.029	0.022	78	58	10-150	29	57	
Dibenz(a,h)anthracene	mg/kg	ND	0.037	0.037	0.025	0.019	68	52	10-175	28	48	
Fluoranthene	mg/kg	ND	0.037	0.037	0.032	0.024	86	64	10-180	30	54	
Fluorene	mg/kg	ND	0.037	0.037	0.028	0.020	74	53	20-145	32	39	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.037	0.037	0.027	0.020	73	54	10-150	29	59	
Naphthalene	mg/kg	ND	0.037	0.037	0.026	0.019	70	50	10-165	33	54	
Pyrene	mg/kg	ND	0.037	0.037	0.032	0.024	87	64	10-180	30	61	
2-Fluorobiphenyl (S)	%						79	55	40-120			
Terphenyl-d14 (S)	%						89	63	45-130			

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 821376

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008

METHOD BLANK: 3265408

Matrix: Solid

Associated Lab Samples: 60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	0.50	12/05/22 13:59	

SAMPLE DUPLICATE: 3265409

Parameter	Units	60416918001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.3	21.3	0	20	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 1970364

Analysis Method: SM 2540G

QC Batch Method: SM 2540 G

Analysis Description: Total Solids 2540 G-2011

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006

METHOD BLANK: R3869539-1

Matrix: Solid

Associated Lab Samples: 60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	%	0.00100			12/07/22 15:40	

LABORATORY CONTROL SAMPLE: R3869539-2

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

SAMPLE DUPLICATE: R3869539-3

Parameter	Units	60416937003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	85.4	85.5	0.0496	10	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 1970365

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: 60416937007, 60416937008

METHOD BLANK: R3869536-1

Matrix: Solid

Associated Lab Samples: 60416937007, 60416937008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	%	0.00200			12/07/22 15:24	

LABORATORY CONTROL SAMPLE: R3869536-2

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

SAMPLE DUPLICATE: R3869536-3

Parameter	Units	L1564201-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	81.7	81.6	0.123	10	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch:	1970335	Analysis Method:	EPA 7199
QC Batch Method:	3060A	Analysis Description:	Wet Chemistry 7199
		Laboratory:	Pace National - Mt. Juliet
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

METHOD BLANK:	R3869445-1	Matrix:	Solid
Associated Lab Samples:	60416937001, 60416937002, 60416937003, 60416937004, 60416937005, 60416937006, 60416937007, 60416937008		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	ND	1.00	0.255	12/08/22 03:33	

LABORATORY CONTROL SAMPLE: R3869445-2						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10.0	10.4	104	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:					R3869445-5								R3869445-6			
Parameter	Units	60416937003	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	RPD	RPD	Qual			
		Result	Spike Conc.	Spike Conc.												
Chromium, Hexavalent	mg/kg	0.354	23.4	23.4	18.4	20.3	77.1	85.2	75.0-125	9.77	20					

MATRIX SPIKE SAMPLE:	R3869445-7						
		60416937003	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
Chromium, Hexavalent	mg/kg	0.354	744	732	98.3	75.0-125	

SAMPLE DUPLICATE: R3869445-3						
Parameter	Units	L1564125-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	0.441	0.562J	24.2	20	D8,J

SAMPLE DUPLICATE: R3869445-8

Parameter	Units	L1564201-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	ND	ND	0.00	20	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 1970169

Analysis Method: EPA 9045D

QC Batch Method: 9045C/9045D

Analysis Description: Wet Chemistry 9045D

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416937001, 60416937002, 60416937003

LABORATORY CONTROL SAMPLE: R3869038-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH	Std. Units	10.0	9.91	99.1	99.0-101	

SAMPLE DUPLICATE: R3869038-2

Parameter	Units	L1564073-02 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	10.3	10.3	0.292	1	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 1971123

Analysis Method: EPA 9045D

QC Batch Method: 9045C/9045D

Analysis Description: Wet Chemistry 9045D

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416937004, 60416937005, 60416937006, 60416937007, 60416937008

LABORATORY CONTROL SAMPLE: R3869716-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH	Std. Units	10.0	9.90	99.0	99.0-101	

SAMPLE DUPLICATE: R3869716-2

Parameter	Units	60416937005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.59	7.57	0.264	1	

SAMPLE DUPLICATE: R3869716-3

Parameter	Units	L1564541-02 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.94	8.00	0.753	1	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 1969809

Analysis Method: EPA 9050

QC Batch Method: EPA 9050

Analysis Description: Wet Chemistry 9050AMod

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416937002, 60416937003, 60416937004, 60416937005, 60416937006

METHOD BLANK: R3869102-1

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	12/07/22 11:40	

LABORATORY CONTROL SAMPLE: R3869102-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1120	1090	97.5	85.0-115	

SAMPLE DUPLICATE: R3869102-3

Parameter	Units	L1562533-05 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1330	1340	0.673	20	

SAMPLE DUPLICATE: R3869102-4

Parameter	Units	L1563669-03 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	155	155	0.452	20	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 1969809

Analysis Method: EPA 9050

QC Batch Method: 9050A

Analysis Description: Wet Chemistry 9050AMod

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416937002, 60416937003, 60416937004, 60416937005, 60416937006

METHOD BLANK: R3869102-1

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	12/07/22 11:40	

LABORATORY CONTROL SAMPLE: R3869102-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1120	1090	97.5	85.0-115	

SAMPLE DUPLICATE: R3869102-3

Parameter	Units	L1562533-05 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1330	1340	0.673	20	

SAMPLE DUPLICATE: R3869102-4

Parameter	Units	L1563669-03 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	155	155	0.452	20	

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 1971883

Analysis Method: EPA 9050

QC Batch Method: EPA 9050

Analysis Description: Wet Chemistry 9050AMod

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416937001, 60416937007, 60416937008

METHOD BLANK: R3870967-1

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	12/13/22 08:10	

LABORATORY CONTROL SAMPLE: R3870967-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1120	1090	97.2	85.0-115	

SAMPLE DUPLICATE: R3870967-3

Parameter	Units	60416937001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	11200	11200	0.179	20	

SAMPLE DUPLICATE: R3870967-4

Parameter	Units	L1565582-04 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	434	430	0.926	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

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QUALITY CONTROL DATA

Project: MAUER 915-1

Pace Project No.: 60416937

QC Batch: 1971883

Analysis Method: EPA 9050

QC Batch Method: 9050A

Analysis Description: Wet Chemistry 9050AMod

Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 60416937001, 60416937007, 60416937008

METHOD BLANK: R3870967-1

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	12/13/22 08:10	

LABORATORY CONTROL SAMPLE: R3870967-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1120	1090	97.2	85.0-115	

SAMPLE DUPLICATE: R3870967-3

Parameter	Units	60416937001 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	11200	11200	0.179	20	

SAMPLE DUPLICATE: R3870967-4

Parameter	Units	L1565582-04 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	434	430	0.926	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

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QUALIFIERS

Project: MAUER 915-1

Pace Project No.: 60416937

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: 60416937001

[1] Wet Chemistry by Method 9045D - 8.47 at 20.3C

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60416937002

[1] Wet Chemistry by Method 9045D - 8.27 at 20.3C

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60416937003

[1] Wet Chemistry by Method 9045D - 8.97 at 20.1C

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60416937004

[1] Wet Chemistry by Method 9045D - 8.82 at 21.7C

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60416937005

[1] Wet Chemistry by Method 9045D - 7.59 at 21.7C

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60416937006

[1] Wet Chemistry by Method 9045D - 7.81 at 21.5C

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: MAUER 915-1

Pace Project No.: 60416937

SAMPLE QUALIFIERS

Sample: 60416937006

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60416937007

[1] Wet Chemistry by Method 9045D - 7.97 at 21.3C

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60416937008

[1] Wet Chemistry by Method 9045D - 8.88 at 21.3C

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3869038-1

[1] Wet Chemistry by Method 9045D - 9.91 at 20.8C

Sample: R3869038-2

[1] Wet Chemistry by Method 9045D - 10.25 at 20.7C

Sample: R3869102-1

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3869102-2

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3869102-3

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3869102-4

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3869716-1

[1] Wet Chemistry by Method 9045D - 9.9 at 20.7C

Sample: R3869716-2

[1] Wet Chemistry by Method 9045D - 7.57 at 21.6C

Sample: R3869716-3

[1] Wet Chemistry by Method 9045D - 8 at 21.3C

Sample: R3870967-1

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3870967-2

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3870967-3

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3870967-4

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: L1562533-05

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: L1563669-03

[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: L1564073-02

[1] Wet Chemistry by Method 9045D - 10.28 at 21.1C

Sample: L1564541-02

[1] Wet Chemistry by Method 9045D - 7.94 at 21.6C

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: MAUER 915-1

Pace Project No.: 60416937

SAMPLE QUALIFIERS

Sample: L1565582-04

[1] Wet Chemistry by Method 9050AMod - at 25C

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D8	The sample and duplicate results for this parameter are less than 5 times the reporting limit, the RPD may not be statistically valid.
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.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MAUER 915-1

Pace Project No.: 60416937

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60416937001	SP1	EPA 3546	821387	EPA 8015B	821540
60416937002	SP1 4'	EPA 3546	821387	EPA 8015B	821540
60416937003	SP2	EPA 3546	821387	EPA 8015B	821540
60416937004	SP2 4'	EPA 3546	821387	EPA 8015B	821540
60416937005	SP3	EPA 3546	821387	EPA 8015B	821540
60416937006	SP4	EPA 3546	821387	EPA 8015B	821540
60416937007	SP5	EPA 3546	821387	EPA 8015B	821540
60416937008	SP6	EPA 3546	821387	EPA 8015B	821540
60416937001	SP1	EPA 5035A/5030B	821854	EPA 8015B	822174
60416937002	SP1 4'	EPA 5035A/5030B	821854	EPA 8015B	822174
60416937003	SP2	EPA 5035A/5030B	821854	EPA 8015B	822174
60416937004	SP2 4'	EPA 5035A/5030B	821854	EPA 8015B	822174
60416937005	SP3	EPA 5035A/5030B	821854	EPA 8015B	822174
60416937006	SP4	EPA 5035A/5030B	821854	EPA 8015B	822174
60416937007	SP5	EPA 5035A/5030B	821854	EPA 8015B	822174
60416937008	SP6	EPA 5035A/5030B	821854	EPA 8015B	822174
60416937001	SP1	HWS Boron	1972178	6010B-NE493 Ch 2	1972178
60416937002	SP1 4'	HWS Boron	1972178	6010B-NE493 Ch 2	1972178
60416937003	SP2	HWS Boron	1972178	6010B-NE493 Ch 2	1972178
60416937004	SP2 4'	HWS Boron	1972178	6010B-NE493 Ch 2	1972178
60416937005	SP3	HWS Boron	1972178	6010B-NE493 Ch 2	1972178
60416937006	SP4	HWS Boron	1972178	6010B-NE493 Ch 2	1972178
60416937007	SP5	HWS Boron	1972178	6010B-NE493 Ch 2	1972178
60416937008	SP6	HWS Boron	1972178	6010B-NE493 Ch 2	1972178
60416937001	SP1	EPA 3050	821838	EPA 6010	822072
60416937002	SP1 4'	EPA 3050	821838	EPA 6010	822072
60416937003	SP2	EPA 3050	821838	EPA 6010	822072
60416937004	SP2 4'	EPA 3050	821838	EPA 6010	822072
60416937005	SP3	EPA 3050	821838	EPA 6010	822072
60416937006	SP4	EPA 3050	821838	EPA 6010	822072
60416937007	SP5	EPA 3050	821838	EPA 6010	822072
60416937008	SP6	EPA 3050	821838	EPA 6010	822072
60416937001	SP1	EPA 3050	821837	EPA 6020	822073
60416937002	SP1 4'	EPA 3050	821837	EPA 6020	822073
60416937003	SP2	EPA 3050	821837	EPA 6020	822073
60416937004	SP2 4'	EPA 3050	821837	EPA 6020	822073
60416937005	SP3	EPA 3050	821837	EPA 6020	822073
60416937006	SP4	EPA 3050	821837	EPA 6020	822073
60416937007	SP5	EPA 3050	821837	EPA 6020	822073
60416937008	SP6	EPA 3050	821837	EPA 6020	822073
60416937001	SP1	EPA 3546	821386	EPA 8270 by SIM	821827
60416937002	SP1 4'	EPA 3546	821386	EPA 8270 by SIM	821827
60416937003	SP2	EPA 3546	821386	EPA 8270 by SIM	821827
60416937004	SP2 4'	EPA 3546	821386	EPA 8270 by SIM	821827
60416937005	SP3	EPA 3546	821386	EPA 8270 by SIM	821827
60416937006	SP4	EPA 3546	821386	EPA 8270 by SIM	821827

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MAUER 915-1

Pace Project No.: 60416937

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60416937007	SP5	EPA 3546	821386	EPA 8270 by SIM	821827
60416937008	SP6	EPA 3546	821386	EPA 8270 by SIM	821827
60416937001	SP1	EPA 5035A/5030B	821391	EPA 8260C	821427
60416937002	SP1 4'	EPA 5035A/5030B	821391	EPA 8260C	821427
60416937003	SP2	EPA 5035A/5030B	821391	EPA 8260C	821427
60416937004	SP2 4'	EPA 5035A/5030B	821391	EPA 8260C	821427
60416937005	SP3	EPA 5035A/5030B	821391	EPA 8260C	821427
60416937006	SP4	EPA 5035A/5030B	821391	EPA 8260C	821427
60416937007	SP5	EPA 5035A/5030B	821391	EPA 8260C	821427
60416937008	SP6	EPA 5035A/5030B	821391	EPA 8260C	821427
60416937001	SP1	ASTM D2974	821376		
60416937002	SP1 4'	ASTM D2974	821376		
60416937003	SP2	ASTM D2974	821376		
60416937004	SP2 4'	ASTM D2974	821376		
60416937005	SP3	ASTM D2974	821376		
60416937006	SP4	ASTM D2974	821376		
60416937007	SP5	ASTM D2974	821376		
60416937008	SP6	ASTM D2974	821376		
60416937001	SP1	SM 2540 G	1970364	SM 2540G	1970364
60416937002	SP1 4'	SM 2540 G	1970364	SM 2540G	1970364
60416937003	SP2	SM 2540 G	1970364	SM 2540G	1970364
60416937004	SP2 4'	SM 2540 G	1970364	SM 2540G	1970364
60416937005	SP3	SM 2540 G	1970364	SM 2540G	1970364
60416937006	SP4	SM 2540 G	1970364	SM 2540G	1970364
60416937007	SP5	SM 2540 G	1970365	SM 2540G	1970365
60416937008	SP6	SM 2540 G	1970365	SM 2540G	1970365
60416937001	SP1	3060A	1970335	EPA 7199	1970335
60416937002	SP1 4'	3060A	1970335	EPA 7199	1970335
60416937003	SP2	3060A	1970335	EPA 7199	1970335
60416937004	SP2 4'	3060A	1970335	EPA 7199	1970335
60416937005	SP3	3060A	1970335	EPA 7199	1970335
60416937006	SP4	3060A	1970335	EPA 7199	1970335
60416937007	SP5	3060A	1970335	EPA 7199	1970335
60416937008	SP6	3060A	1970335	EPA 7199	1970335
60416937001	SP1	9045C/9045D	1970169	EPA 9045D	1970169
60416937002	SP1 4'	9045C/9045D	1970169	EPA 9045D	1970169
60416937003	SP2	9045C/9045D	1970169	EPA 9045D	1970169
60416937004	SP2 4'	9045C/9045D	1971123	EPA 9045D	1971123
60416937005	SP3	9045C/9045D	1971123	EPA 9045D	1971123
60416937006	SP4	9045C/9045D	1971123	EPA 9045D	1971123
60416937007	SP5	9045C/9045D	1971123	EPA 9045D	1971123
60416937008	SP6	9045C/9045D	1971123	EPA 9045D	1971123
60416937001	SP1	9050A	1971883	EPA 9050	1971883
60416937002	SP1 4'	9050A	1969809	EPA 9050	1969809

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: MAUER 915-1

Pace Project No.: 60416937

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60416937003	SP2	9050A	1969809	EPA 9050	1969809
60416937004	SP2 4'	9050A	1969809	EPA 9050	1969809
60416937005	SP3	9050A	1969809	EPA 9050	1969809
60416937006	SP4	9050A	1969809	EPA 9050	1969809
60416937007	SP5	9050A	1971883	EPA 9050	1971883
60416937008	SP6	9050A	1971883	EPA 9050	1971883
60416937001	SP1	Calc	1971971	Calculated	1971971
60416937002	SP1 4'	Calc	1971971	Calculated	1971971
60416937003	SP2	Calc	1971971	Calculated	1971971
60416937004	SP2 4'	Calc	1971973	Calculated	1971973
60416937005	SP3	Calc	1971973	Calculated	1971973
60416937006	SP4	Calc	1971973	Calculated	1971973
60416937007	SP5	Calc	1971973	Calculated	1971973
60416937008	SP6	Calc	1971973	Calculated	1971973

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-LENE-0009_Sa

Revision: 2

Effective Date: 01/12

W0#: 60416937



60416937

Client Name: Mull DrillingCourier: 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 0.31 Corr. Factor 0.5 Corrected 0.31Date and initials of person examining contents: 12/12Temperature should be above freezing to 6°C 0.5

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Samples contain multiple phases? Matrix: <u>SL</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO ₃ , H ₂ SO ₄ , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples from USDA Regulated Area: State: <u>CO</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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: _____

Pace

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

Section A
Required Client Information:

Company:	Mull Drilling Company	Report To:	James Beilman	Attention:	
Address:	1700 N Waterfront Pkwy Bld. 1200, Wichita, KS 67206	Copy To:		Company Name:	
Email:	beilman@mulldrilling.com	Purchase Order #:		Address:	
Phone:	(316)364-9203	Project Name:	RES <i>maxer 415-1</i>	Pace Quote:	
Fax:		Project #:		Pace Project Manager:	heather.wilson@pacelabs.com,
Requested Due Date:		Project #:	15622, 1	Pace Profile #:	15622, 1
					State / Location
					CO
					Regulatory Agency

[illegible]

Client: Mull Drilling

Profile #

15622 Line 1

Site: Mauer 415-1

Notes

COC Line Item	Matrix	VG9H	DG9H	DG9Q	VG9U	DG9U	DG9M	DG9B	BG1U	AG1H	AG1U	AG2U	AG3S	AG4U	AG5U	JGFU	WGKU	WGDU	BP1U	BP2U	BP3U	BP1N	BP3N	BP3F	BP3S	BP3C	BP3Z	WPDU	ZPLC	Other
1	2															2	2													
2	1															2	2													
3																														
4																														
5																														
6																														
7	2															2	2													
8	2															2	2													
9																														
10																														
11																														
12																														

Container Codes

Glass										Plastic										Misc.									
DG9B	40mL bisulfate clear vial	WGKU	8oz clear soil jar	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic	BP1C	1L NaOH plastic
DG9H	40mL HCl amber vial	WGKU	4oz clear soil jar	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic	BP1N	1L HNO3 plastic
DG9M	40mL MeOH clear vial	WG2U	2oz clear soil jar	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic	BP1S	1L H2SO4 plastic
DG9Q	40mL TSP amber vial	JGFU	4oz unpreserved amber wide	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic	BP1U	1L unpreserved plastic
DG9S	40mL H2SO4 amber vial	AG0U	100mL unores amber glass	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate	BP1Z	1L NaOH, Zn Acetate
DG9T	40mL Na Thio amber vial	AG1H	1L HCl amber glass	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic	BP2C	500mL NaOH plastic
DG9U	40mL amber unpreserved	AG1S	1L H2SO4 amber glass	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic	BP2N	500mL HNO3 plastic
VG9H	40mL HCl clear vial	AG1T	1L Na Thiosulfate clear/amber glass	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic	BP2S	500mL H2SO4 plastic
VG9T	40mL Na Thio. clear vial	AG1U	1liter unpres amber glass	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic	BP2U	500mL unpreserved plastic
VG9U	40mL unpreserved clear vial	AG2N	500mL HNO3 amber glass	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate	BP2Z	500mL NaOH, Zn Acetate
BG1S	1liter H2SO4 clear glass	AG2S	500mL H2SO4 amber glass	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic	BP3C	250mL NaOH plastic
BG1U	1liter unpres glass	AG3S	250mL H2SO4 amber glass	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered	BP3F	250mL HNO3 plastic - field filtered
BG3H	250mL HCL Clear glass	AG2U	500mL unpres amber glass	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic	BP3N	250mL HNO3 plastic
BG3U	250mL Unpres Clear glass	AG3U	250mL unpres amber glass	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic	BP3U	250mL H2SO4 plastic
WGDU	16oz clear soil jar	AG4U	125mL unpres amber glass	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic	BP3S	250mL H2SO4 plastic
		AG5U	100mL unpres amber glass	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate	BP3Z	250mL NaOH, Zn Acetate
				BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic	BP4U	125mL unpreserved plastic
				BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic	BP4N	125mL HNO3 plastic
				BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic	BP4S	125mL H2SO4 plastic
				WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic	WPDU	16oz unpreserved plastic

Work Order Number:

60416937
60416915

Internal Transfer Chain of Custody



☐ Samples Pre-Logged into eCOC.

State Of Origin: CO

Cert. Needed:	<input type="checkbox"/>	Yes
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☒ No

Workorder: 60416937

Workorder Name: MAUER 915-1

Owner Received Date: 12/2/2022 Results Requested By: 12/19/2022

[illegible]

***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 considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist

COC Seal Present/Intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	If Applicable	
COC Signed/Accurate:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	VOA Zero Headspace:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Bottles arrive intact:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Pres. Correct/Check:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Correct bottles used:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N	MSA 3.7+0=3.7	
Sufficient volume sent:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
RAD Screen <0.5 mR/hr:	<input checked="" type="checkbox"/> Y <input type="checkbox"/> N		

MSA2
3.7+0=3.7

6091 0793 81



Ship To:
Pace National
12065 Lebanon Rd
Mt. Juliet, TN 37122
Phone (615) 758-5858

INTER_LABORATORY WORK ORDER # 60416937

(To be completed by sending lab)

Sending Project No:	60416937
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	12/05/22
REQUESTED COMPLETION DATE:	12/19/2022

Sending Region	IR60-Kansas	Sending Project Mgr.	Heather Wilson
Receiving Region	IR850-Pace National	External Client	Mull Drilling Company
State of Sample Origin	CO	QC Deliverable	STD REPORT

All questions should be addressed to sending project manager.

Requested Reportable Units _____ Report Wet or Dry Weight? ☐ IRWO Lab Need to run? _____ Cert. Needed No

WORK REQUESTED					
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples	Unit Price
Hot Water Boron	WGKU	8	Unpreserved	8	\$32.00
7199 Cr/V	WGKU		Unpreserved	8	\$91.00
Saturated Paste EC, SAR, pH	WGKU		Unpreserved	8	\$85.00
TOTAL					\$1,664.00

Special Requirements: Report D, QC Limits, MDLs (D), FR Only no EDD (0)

Receiving Region Department	Acctg. Code	Totals from above	Revenue Allocation	
			Receiving Region (80%)	Client Services Dept. Sending Region (20%)
Metals	20	\$984.00	\$787.20	\$196.80
Wet Chemistry	21	\$680.00	\$544.00	\$136.00
* Custom Revenue Allocation	TOTAL	\$1,664.00	\$1,331.20	\$332.80

FOR ANALYTICAL WORK COMPLETED THIS SECTION ALSO

Return Samples to Sending Region: ☐ Yes ☒ No

DISPOSITION OF FORM

Original sent to the receiving lab - Copy kept at the sending lab.

When work completed: Original sent to the ABM at the receiving laboratory. Copies are made to corporate as needed.