

October 10, 2022

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

RE: Project: 915-1
Pace Project No.: 60410331

Dear James Beilman:

Enclosed are the analytical results for sample(s) received by the laboratory on September 14, 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: 915-1
Pace Project No.: 60410331

Pace Analytical Services Kansas

9608 Loiret Boulevard, Lenexa, KS 66219
Missouri Inorganic Drinking Water Certification #: 10090
Arkansas Drinking Water
Arkansas Certification #: 22-031-0
Arkansas Drinking Water
Illinois Certification #: 2000302021-3
Iowa Certification #: 118
Kansas/NELAP Certification #: E-10116
Louisiana Certification #: 03055

Nevada Certification #: KS000212020-2
Oklahoma Certification #: 9205/9935
Florida: Cert E871149 SEKS WET
Texas Certification #: T104704407-21-15
Utah Certification #: KS000212019-9
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 #: LA000356
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
Virginia Certification #: VT2006
Vermont Dept. of Health: ID# VT-2006
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: 915-1
Pace Project No.: 60410331

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60410331001	SL-1	Solid	09/09/22 10:20	09/14/22 11:10
60410331002	SL-2	Solid	09/09/22 10:30	09/14/22 11:10
60410331003	SL-3	Solid	09/09/22 10:40	09/14/22 11:10
60410331004	SL-4	Solid	09/09/22 10:50	09/14/22 11:10
60410331005	SL-5	Solid	09/09/22 11:00	09/14/22 11:10
60410331006	UPGRADIENT	Solid	09/09/22 11:20	09/14/22 11:10
60410331007	SL-6	Solid	09/09/22 11:10	09/14/22 11:10

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SAMPLE ANALYTE COUNT

Project: 915-1
Pace Project No.: 60410331

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60410331001	SL-1	EPA 8015B	WFG	4	PASI-K
		EPA 8015B	BA	2	PASI-K
		6010B-NE493 Ch 2	CCE	1	PAN
		EPA 6010	MRV	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	ARD	1	PAN
		EPA 9045D	SGB	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	CCE	1	PAN
		EPA 8015B	WFG	4	PASI-K
		EPA 8015B	BA	2	PASI-K
60410331002	SL-2	6010B-NE493 Ch 2	CCE	1	PAN
		EPA 6010	MRV	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	ARD	1	PAN
		EPA 9045D	SGB	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	CCE	1	PAN
		EPA 8015B	WFG	4	PASI-K
		EPA 8015B	BA	2	PASI-K
		6010B-NE493 Ch 2	CCE	1	PAN
		EPA 6010	MRV	8	PASI-K
		EPA 6020	JGP	1	PASI-K
60410331003	SL-3	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	ARD	1	PAN
		EPA 9045D	SGB	1	PAN

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SAMPLE ANALYTE COUNT

Project: 915-1

Pace Project No.: 60410331

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60410331004	SL-4	EPA 9050	NTG	1	PAN
		Calculated	CCE	1	PAN
		EPA 8015B	WFG	4	PASI-K
		EPA 8015B	BA	2	PASI-K
		6010B-NE493 Ch 2	CCE	1	PAN
		EPA 6010	MRV	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	ARD	1	PAN
		EPA 9045D	SGB	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	CCE	1	PAN
60410331005	SL-5	EPA 8015B	WFG	4	PASI-K
		EPA 8015B	BA	2	PASI-K
		6010B-NE493 Ch 2	CCE	1	PAN
		EPA 6010	MRV	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	ARD	1	PAN
		EPA 9045D	SGB	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	CCE	1	PAN
		6010B-NE493 Ch 2	CCE	1	PAN
		EPA 6010	MRV	8	PASI-K
		EPA 6020	JGP	1	PASI-K
60410331006	UPGRADIENT	ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	ARD	1	PAN
		EPA 9045D	SGB	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	KMG	1	PAN

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SAMPLE ANALYTE COUNT

Project: 915-1
Pace Project No.: 60410331

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60410331007	SL-6	EPA 8015B	WFG	4	PASI-K
		EPA 8015B	BA	2	PASI-K
		6010B-NE493 Ch 2	CCE	1	PAN
		EPA 6010	MRV	8	PASI-K
		EPA 6020	JGP	1	PASI-K
		EPA 8270 by SIM	SJJ	17	PASI-K
		EPA 8260C	RAD	9	PASI-K
		ASTM D2974	DWC	1	PASI-K
		SM 2540G	CMK	1	PAN
		EPA 7199	ARD	1	PAN
		EPA 9045D	SGB	1	PAN
		EPA 9050	NTG	1	PAN
		Calculated	CCE	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: 915-1
Pace Project No.: 60410331

Sample: SL-1 **Lab ID: 60410331001** Collected: 09/09/22 10:20 Received: 09/14/22 11:10 Matrix: Solid

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics									
Analytical Method: EPA 8015B Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
TPH-RRO (C28-C36)	ND	mg/kg	21.1	4.7	1	09/15/22 21:00	09/16/22 08:37		
TPH-DRO (C10-C28)	ND	mg/kg	10.6	4.7	1	09/15/22 21:00	09/16/22 08:37		
Surrogates									
n-Tetracosane (S)	60	%	31-152		1	09/15/22 21:00	09/16/22 08:37	646-31-1	
p-Terphenyl (S)	62	%	46-130		1	09/15/22 21:00	09/16/22 08:37	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	9.9	1.2	1	09/22/22 16:01	09/23/22 00:16		
Surrogates									
4-Bromofluorobenzene (S)	99	%	66-130		1	09/22/22 16:01	09/23/22 00:16	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	462	ug/L	200	16.7	1	09/20/22 10:47	09/30/22 02:28	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	214	mg/kg	0.41	0.082	1	09/16/22 08:12	09/20/22 14:00	7440-39-3	M1
Cadmium	0.49	mg/kg	0.41	0.060	1	09/16/22 08:12	09/20/22 14:00	7440-43-9	
Copper	15.9	mg/kg	1.6	0.34	1	09/16/22 08:12	09/20/22 14:00	7440-50-8	
Lead	12.2	mg/kg	0.82	0.24	1	09/16/22 08:12	09/20/22 14:00	7439-92-1	
Nickel	14.2	mg/kg	0.41	0.21	1	09/16/22 08:12	09/20/22 14:00	7440-02-0	
Selenium	0.56J	mg/kg	1.2	0.25	1	09/16/22 08:12	09/20/22 14:00	7782-49-2	M1
Silver	ND	mg/kg	0.58	0.089	1	09/16/22 08:12	09/20/22 14:00	7440-22-4	
Zinc	50.7	mg/kg	8.2	0.17	1	09/16/22 08:12	09/20/22 14:00	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	8.1	mg/kg	0.91	0.21	10	09/16/22 08:25	09/22/22 16:22	7440-38-2	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
Acenaphthene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 16:56	83-32-9	
Anthracene	ND	mg/kg	0.0035	0.0018	1	09/15/22 20:56	09/19/22 16:56	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 16:56	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0035	0.0014	1	09/15/22 20:56	09/19/22 16:56	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 16:56	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0035	0.0020	1	09/15/22 20:56	09/19/22 16:56	207-08-9	
Chrysene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 16:56	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 16:56	53-70-3	
Fluoranthene	ND	mg/kg	0.0035	0.0024	1	09/15/22 20:56	09/19/22 16:56	206-44-0	
Fluorene	ND	mg/kg	0.0035	0.0023	1	09/15/22 20:56	09/19/22 16:56	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0035	0.0018	1	09/15/22 20:56	09/19/22 16:56	193-39-5	

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-1 **Lab ID: 60410331001** Collected: 09/09/22 10:20 Received: 09/14/22 11:10 Matrix: Solid

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
1-Methylnaphthalene	ND	mg/kg	0.0035	0.0017	1	09/15/22 20:56	09/19/22 16:56	90-12-0	L2
2-Methylnaphthalene	ND	mg/kg	0.0035	0.0021	1	09/15/22 20:56	09/19/22 16:56	91-57-6	
Naphthalene	ND	mg/kg	0.0035	0.0018	1	09/15/22 20:56	09/19/22 16:56	91-20-3	
Pyrene	ND	mg/kg	0.0035	0.0023	1	09/15/22 20:56	09/19/22 16:56	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	66	%	40-120		1	09/15/22 20:56	09/19/22 16:56	321-60-8	
Terphenyl-d14 (S)	76	%	45-130		1	09/15/22 20:56	09/19/22 16:56	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0035J	mg/kg	0.0055	0.00050	1	09/15/22 14:48	09/16/22 10:28	71-43-2	
Ethylbenzene	ND	mg/kg	0.0055	0.00096	1	09/15/22 14:48	09/16/22 10:28	100-41-4	
Toluene	ND	mg/kg	0.022	0.0049	1	09/15/22 14:48	09/16/22 10:28	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0055	0.00076	1	09/15/22 14:48	09/16/22 10:28	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0055	0.00048	1	09/15/22 14:48	09/16/22 10:28	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0041	1	09/15/22 14:48	09/16/22 10:28	1330-20-7	
Surrogates									
Toluene-d8 (S)	111	%	80-120		1	09/15/22 14:48	09/16/22 10:28	2037-26-5	
4-Bromofluorobenzene (S)	103	%	83-119		1	09/15/22 14:48	09/16/22 10:28	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	09/15/22 14:48	09/16/22 10:28	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	5.3	%	0.50	0.50	1		09/15/22 09:26		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	94.0	%			1	09/19/22 15:12	09/19/22 15:18		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.06	0.271	1	10/03/22 18:00	10/05/22 02:03	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	7.86	Std. Units		0.10	1	09/26/22 11:00	09/26/22 13:00		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	5710	umhos/cm	10.0	10.0	1	09/24/22 10:39	09/24/22 12:20		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	12.1				1	09/29/22 22:15	09/29/22 22:15	SAR	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-2 **Lab ID: 60410331002** Collected: 09/09/22 10:30 Received: 09/14/22 11:10 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	19.8	4.4	1	09/15/22 21:00	09/16/22 08:53		
TPH-DRO (C10-C28)	ND	mg/kg	9.9	4.4	1	09/15/22 21:00	09/16/22 08:53		
Surrogates									
n-Tetracosane (S)	62	%	31-152		1	09/15/22 21:00	09/16/22 08:53	646-31-1	
p-Terphenyl (S)	67	%	46-130		1	09/15/22 21:00	09/16/22 08:53	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	8.9	1.1	1	09/22/22 16:01	09/23/22 00:32		
Surrogates									
4-Bromofluorobenzene (S)	99	%	66-130		1	09/22/22 16:01	09/23/22 00:32	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	435	ug/L	200	16.7	1	09/20/22 10:47	09/30/22 02:31	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	156	mg/kg	0.43	0.086	1	09/16/22 08:12	09/20/22 14:06	7440-39-3	
Cadmium	0.47	mg/kg	0.43	0.063	1	09/16/22 08:12	09/20/22 14:06	7440-43-9	
Copper	15.3	mg/kg	1.7	0.36	1	09/16/22 08:12	09/20/22 14:06	7440-50-8	
Lead	16.0	mg/kg	0.87	0.25	1	09/16/22 08:12	09/20/22 14:06	7439-92-1	
Nickel	16.1	mg/kg	0.43	0.22	1	09/16/22 08:12	09/20/22 14:06	7440-02-0	
Selenium	0.58J	mg/kg	1.3	0.27	1	09/16/22 08:12	09/20/22 14:06	7782-49-2	
Silver	ND	mg/kg	0.61	0.094	1	09/16/22 08:12	09/20/22 14:06	7440-22-4	
Zinc	56.7	mg/kg	8.7	0.18	1	09/16/22 08:12	09/20/22 14:06	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	8.7	mg/kg	1.0	0.23	10	09/16/22 08:25	09/22/22 16:34	7440-38-2	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
Acenaphthene	ND	mg/kg	0.0033	0.0018	1	09/15/22 20:56	09/19/22 17:50	83-32-9	
Anthracene	ND	mg/kg	0.0033	0.0017	1	09/15/22 20:56	09/19/22 17:50	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0033	0.0018	1	09/15/22 20:56	09/19/22 17:50	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0033	0.0014	1	09/15/22 20:56	09/19/22 17:50	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0033	0.0018	1	09/15/22 20:56	09/19/22 17:50	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0033	0.0019	1	09/15/22 20:56	09/19/22 17:50	207-08-9	
Chrysene	ND	mg/kg	0.0033	0.0018	1	09/15/22 20:56	09/19/22 17:50	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0033	0.0018	1	09/15/22 20:56	09/19/22 17:50	53-70-3	
Fluoranthene	ND	mg/kg	0.0033	0.0023	1	09/15/22 20:56	09/19/22 17:50	206-44-0	
Fluorene	ND	mg/kg	0.0033	0.0022	1	09/15/22 20:56	09/19/22 17:50	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0033	0.0017	1	09/15/22 20:56	09/19/22 17:50	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-2 **Lab ID: 60410331002** Collected: 09/09/22 10:30 Received: 09/14/22 11:10 Matrix: Solid

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
1-Methylnaphthalene	ND	mg/kg	0.0033	0.0016	1	09/15/22 20:56	09/19/22 17:50	90-12-0	L2
2-Methylnaphthalene	ND	mg/kg	0.0033	0.0021	1	09/15/22 20:56	09/19/22 17:50	91-57-6	
Naphthalene	ND	mg/kg	0.0033	0.0017	1	09/15/22 20:56	09/19/22 17:50	91-20-3	
Pyrene	ND	mg/kg	0.0033	0.0022	1	09/15/22 20:56	09/19/22 17:50	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	75	%	40-120		1	09/15/22 20:56	09/19/22 17:50	321-60-8	
Terphenyl-d14 (S)	81	%	45-130		1	09/15/22 20:56	09/19/22 17:50	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0023J	mg/kg	0.0050	0.00046	1	09/15/22 14:48	09/16/22 10:47	71-43-2	
Ethylbenzene	ND	mg/kg	0.0050	0.00087	1	09/15/22 14:48	09/16/22 10:47	100-41-4	
Toluene	ND	mg/kg	0.020	0.0045	1	09/15/22 14:48	09/16/22 10:47	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0050	0.00069	1	09/15/22 14:48	09/16/22 10:47	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0050	0.00044	1	09/15/22 14:48	09/16/22 10:47	108-67-8	
Xylene (Total)	ND	mg/kg	0.015	0.0037	1	09/15/22 14:48	09/16/22 10:47	1330-20-7	
Surrogates									
Toluene-d8 (S)	108	%	80-120		1	09/15/22 14:48	09/16/22 10:47	2037-26-5	
4-Bromofluorobenzene (S)	102	%	83-119		1	09/15/22 14:48	09/16/22 10:47	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	09/15/22 14:48	09/16/22 10:47	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	0.77	%	0.50	0.50	1		09/15/22 09:26		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	97.5	%			1	09/19/22 15:12	09/19/22 15:18		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.03	0.261	1	10/03/22 18:00	10/05/22 02:08	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	8.58	Std. Units		0.10	1	09/27/22 15:00	09/27/22 16:00		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	1500	umhos/cm	10.0	10.0	1	09/24/22 10:39	09/24/22 12:20		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	26.1				1	09/29/22 22:18	09/29/22 22:18	SAR	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-3 **Lab ID: 60410331003** Collected: 09/09/22 10:40 Received: 09/14/22 11:10 Matrix: Solid

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics									
Analytical Method: EPA 8015B Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
TPH-RRO (C28-C36)	ND	mg/kg	21.4	4.8	1	09/15/22 21:00	09/16/22 09:02		
TPH-DRO (C10-C28)	ND	mg/kg	10.7	4.8	1	09/15/22 21:00	09/16/22 09:02		
Surrogates									
n-Tetracosane (S)	58	%	31-152		1	09/15/22 21:00	09/16/22 09:02	646-31-1	
p-Terphenyl (S)	63	%	46-130		1	09/15/22 21:00	09/16/22 09:02	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	10.8	1.3	1	09/22/22 16:01	09/23/22 00:47		
Surrogates									
4-Bromofluorobenzene (S)	99	%	66-130		1	09/22/22 16:01	09/23/22 00:47	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	1980	ug/L	200	16.7	1	09/20/22 10:47	09/30/22 02:34	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	193	mg/kg	0.51	0.10	1	09/16/22 08:12	09/20/22 14:08	7440-39-3	
Cadmium	0.42J	mg/kg	0.51	0.073	1	09/16/22 08:12	09/20/22 14:08	7440-43-9	
Copper	11.3	mg/kg	2.0	0.42	1	09/16/22 08:12	09/20/22 14:08	7440-50-8	
Lead	10.5	mg/kg	1.0	0.29	1	09/16/22 08:12	09/20/22 14:08	7439-92-1	
Nickel	11.4	mg/kg	0.51	0.25	1	09/16/22 08:12	09/20/22 14:08	7440-02-0	
Selenium	0.51J	mg/kg	1.5	0.31	1	09/16/22 08:12	09/20/22 14:08	7782-49-2	
Silver	ND	mg/kg	0.71	0.11	1	09/16/22 08:12	09/20/22 14:08	7440-22-4	
Zinc	44.3	mg/kg	10.1	0.21	1	09/16/22 08:12	09/20/22 14:08	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	5.7	mg/kg	0.87	0.20	10	09/16/22 08:25	09/22/22 16:37	7440-38-2	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
Acenaphthene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:08	83-32-9	
Anthracene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:08	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0035	0.0020	1	09/15/22 20:56	09/19/22 18:08	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0035	0.0015	1	09/15/22 20:56	09/19/22 18:08	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0035	0.0020	1	09/15/22 20:56	09/19/22 18:08	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0035	0.0020	1	09/15/22 20:56	09/19/22 18:08	207-08-9	
Chrysene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:08	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:08	53-70-3	
Fluoranthene	ND	mg/kg	0.0035	0.0025	1	09/15/22 20:56	09/19/22 18:08	206-44-0	
Fluorene	ND	mg/kg	0.0035	0.0023	1	09/15/22 20:56	09/19/22 18:08	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:08	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-3 **Lab ID: 60410331003** Collected: 09/09/22 10:40 Received: 09/14/22 11:10 Matrix: Solid

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
1-Methylnaphthalene	ND	mg/kg	0.0035	0.0017	1	09/15/22 20:56	09/19/22 18:08	90-12-0	L2
2-Methylnaphthalene	ND	mg/kg	0.0035	0.0022	1	09/15/22 20:56	09/19/22 18:08	91-57-6	
Naphthalene	ND	mg/kg	0.0035	0.0018	1	09/15/22 20:56	09/19/22 18:08	91-20-3	
Pyrene	ND	mg/kg	0.0035	0.0023	1	09/15/22 20:56	09/19/22 18:08	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71	%	40-120		1	09/15/22 20:56	09/19/22 18:08	321-60-8	
Terphenyl-d14 (S)	79	%	45-130		1	09/15/22 20:56	09/19/22 18:08	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0026J	mg/kg	0.0057	0.00052	1	09/15/22 14:48	09/16/22 11:07	71-43-2	
Ethylbenzene	ND	mg/kg	0.0057	0.00098	1	09/15/22 14:48	09/16/22 11:07	100-41-4	
Toluene	ND	mg/kg	0.023	0.0051	1	09/15/22 14:48	09/16/22 11:07	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0057	0.00078	1	09/15/22 14:48	09/16/22 11:07	95-63-6	
1,3,5-Trimethylbenzene	0.00057J	mg/kg	0.0057	0.00049	1	09/15/22 14:48	09/16/22 11:07	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0042	1	09/15/22 14:48	09/16/22 11:07	1330-20-7	
Surrogates									
Toluene-d8 (S)	109	%	80-120		1	09/15/22 14:48	09/16/22 11:07	2037-26-5	
4-Bromofluorobenzene (S)	103	%	83-119		1	09/15/22 14:48	09/16/22 11:07	460-00-4	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120		1	09/15/22 14:48	09/16/22 11:07	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	6.8	%	0.50	0.50	1		09/15/22 09:26		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	93.6	%			1	09/19/22 15:12	09/19/22 15:18		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.07	0.272	1	10/03/22 18:00	10/05/22 02:19	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	7.95	Std. Units		0.10	1	09/27/22 15:00	09/27/22 16:00		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	8910	umhos/cm	10.0	10.0	1	09/24/22 10:39	09/24/22 12:20		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	27.4				1	09/29/22 22:20	09/29/22 22:20	SAR	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-4 **Lab ID: 60410331004** Collected: 09/09/22 10:50 Received: 09/14/22 11:10 Matrix: Solid

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015B Diesel Range Organics									
Analytical Method: EPA 8015B Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
TPH-RRO (C28-C36)	ND	mg/kg	21.1	4.7	1	09/15/22 21:00	09/16/22 09:10		
TPH-DRO (C10-C28)	ND	mg/kg	10.6	4.7	1	09/15/22 21:00	09/16/22 09:10		
Surrogates									
n-Tetracosane (S)	66	%	31-152		1	09/15/22 21:00	09/16/22 09:10	646-31-1	
p-Terphenyl (S)	71	%	46-130		1	09/15/22 21:00	09/16/22 09:10	92-94-4	
Gasoline Range Organics									
Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
TPH-GRO	ND	mg/kg	11.1	1.4	1	09/22/22 16:01	09/23/22 01:03		
Surrogates									
4-Bromofluorobenzene (S)	100	%	66-130		1	09/22/22 16:01	09/23/22 01:03	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	1260	ug/L	200	16.7	1	09/20/22 10:47	09/30/22 02:37	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	224	mg/kg	0.38	0.075	1	09/16/22 08:12	09/20/22 14:10	7440-39-3	
Cadmium	0.47	mg/kg	0.38	0.055	1	09/16/22 08:12	09/20/22 14:10	7440-43-9	
Copper	14.6	mg/kg	1.5	0.31	1	09/16/22 08:12	09/20/22 14:10	7440-50-8	
Lead	11.6	mg/kg	0.76	0.22	1	09/16/22 08:12	09/20/22 14:10	7439-92-1	
Nickel	13.4	mg/kg	0.38	0.19	1	09/16/22 08:12	09/20/22 14:10	7440-02-0	
Selenium	0.46J	mg/kg	1.1	0.23	1	09/16/22 08:12	09/20/22 14:10	7782-49-2	
Silver	ND	mg/kg	0.53	0.082	1	09/16/22 08:12	09/20/22 14:10	7440-22-4	
Zinc	46.5	mg/kg	7.6	0.16	1	09/16/22 08:12	09/20/22 14:10	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	8.9	mg/kg	1.0	0.23	10	09/16/22 08:25	09/22/22 16:40	7440-38-2	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
Acenaphthene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:27	83-32-9	
Anthracene	ND	mg/kg	0.0035	0.0018	1	09/15/22 20:56	09/19/22 18:27	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:27	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0035	0.0014	1	09/15/22 20:56	09/19/22 18:27	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:27	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0035	0.0020	1	09/15/22 20:56	09/19/22 18:27	207-08-9	
Chrysene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:27	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0035	0.0019	1	09/15/22 20:56	09/19/22 18:27	53-70-3	
Fluoranthene	ND	mg/kg	0.0035	0.0024	1	09/15/22 20:56	09/19/22 18:27	206-44-0	
Fluorene	ND	mg/kg	0.0035	0.0023	1	09/15/22 20:56	09/19/22 18:27	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0035	0.0018	1	09/15/22 20:56	09/19/22 18:27	193-39-5	

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-4 **Lab ID: 60410331004** Collected: 09/09/22 10:50 Received: 09/14/22 11:10 Matrix: Solid

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

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
1-Methylnaphthalene	ND	mg/kg	0.0035	0.0017	1	09/15/22 20:56	09/19/22 18:27	90-12-0	L2
2-Methylnaphthalene	ND	mg/kg	0.0035	0.0021	1	09/15/22 20:56	09/19/22 18:27	91-57-6	
Naphthalene	ND	mg/kg	0.0035	0.0018	1	09/15/22 20:56	09/19/22 18:27	91-20-3	
Pyrene	ND	mg/kg	0.0035	0.0023	1	09/15/22 20:56	09/19/22 18:27	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	68	%	40-120		1	09/15/22 20:56	09/19/22 18:27	321-60-8	
Terphenyl-d14 (S)	74	%	45-130		1	09/15/22 20:56	09/19/22 18:27	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0015J	mg/kg	0.0056	0.00051	1	09/15/22 14:48	09/16/22 11:27	71-43-2	
Ethylbenzene	ND	mg/kg	0.0056	0.00097	1	09/15/22 14:48	09/16/22 11:27	100-41-4	
Toluene	ND	mg/kg	0.022	0.0050	1	09/15/22 14:48	09/16/22 11:27	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0056	0.00077	1	09/15/22 14:48	09/16/22 11:27	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0056	0.00049	1	09/15/22 14:48	09/16/22 11:27	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0041	1	09/15/22 14:48	09/16/22 11:27	1330-20-7	
Surrogates									
Toluene-d8 (S)	109	%	80-120		1	09/15/22 14:48	09/16/22 11:27	2037-26-5	
4-Bromofluorobenzene (S)	103	%	83-119		1	09/15/22 14:48	09/16/22 11:27	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1	09/15/22 14:48	09/16/22 11:27	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	5.6	%	0.50	0.50	1		09/15/22 09:26		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	95.7	%			1	09/19/22 15:12	09/19/22 15:18		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.05	0.267	1	10/03/22 18:00	10/05/22 02:24	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	7.86	Std. Units		0.10	1	09/27/22 15:00	09/27/22 16:00		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	15700	umhos/cm	10.0	10.0	1	09/24/22 10:39	09/24/22 12:20		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	40.7				1	09/30/22 16:13	09/30/22 16:13	SAR	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-5 **Lab ID: 60410331005** Collected: 09/09/22 11:00 Received: 09/14/22 11:10 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)	11.8J	mg/kg	21.0	4.7	1	09/15/22 21:00	09/16/22 09:18		
TPH-DRO (C10-C28)	ND	mg/kg	10.5	4.7	1	09/15/22 21:00	09/16/22 09:18		
Surrogates									
n-Tetracosane (S)	63	%	31-152		1	09/15/22 21:00	09/16/22 09:18	646-31-1	
p-Terphenyl (S)	68	%	46-130		1	09/15/22 21:00	09/16/22 09:18	92-94-4	
Gasoline Range Organics									
Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
TPH-GRO	ND	mg/kg	11.0	1.3	1	09/22/22 16:01	09/23/22 01:19		
Surrogates									
4-Bromofluorobenzene (S)	101	%	66-130		1	09/22/22 16:01	09/23/22 01:19	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	1810	ug/L	200	16.7	1	09/20/22 10:47	09/30/22 02:40	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	137	mg/kg	0.37	0.074	1	09/16/22 08:12	09/20/22 14:12	7440-39-3	
Cadmium	0.41	mg/kg	0.37	0.054	1	09/16/22 08:12	09/20/22 14:12	7440-43-9	
Copper	12.0	mg/kg	1.5	0.31	1	09/16/22 08:12	09/20/22 14:12	7440-50-8	
Lead	11.4	mg/kg	0.75	0.22	1	09/16/22 08:12	09/20/22 14:12	7439-92-1	
Nickel	11.3	mg/kg	0.37	0.19	1	09/16/22 08:12	09/20/22 14:12	7440-02-0	
Selenium	0.53J	mg/kg	1.1	0.23	1	09/16/22 08:12	09/20/22 14:12	7782-49-2	
Silver	ND	mg/kg	0.52	0.081	1	09/16/22 08:12	09/20/22 14:12	7440-22-4	
Zinc	43.0	mg/kg	7.5	0.16	1	09/16/22 08:12	09/20/22 14:12	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	7.8	mg/kg	0.70	0.16	10	09/16/22 08:25	09/22/22 16:46	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	0.0069	0.0038	1	09/15/22 20:56	09/19/22 18:45	83-32-9	
Anthracene	ND	mg/kg	0.0069	0.0036	1	09/15/22 20:56	09/19/22 18:45	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0069	0.0038	1	09/15/22 20:56	09/19/22 18:45	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0069	0.0029	1	09/15/22 20:56	09/19/22 18:45	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0069	0.0038	1	09/15/22 20:56	09/19/22 18:45	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0069	0.0039	1	09/15/22 20:56	09/19/22 18:45	207-08-9	
Chrysene	ND	mg/kg	0.0069	0.0037	1	09/15/22 20:56	09/19/22 18:45	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0069	0.0037	1	09/15/22 20:56	09/19/22 18:45	53-70-3	
Fluoranthene	ND	mg/kg	0.0069	0.0048	1	09/15/22 20:56	09/19/22 18:45	206-44-0	
Fluorene	ND	mg/kg	0.0069	0.0045	1	09/15/22 20:56	09/19/22 18:45	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0069	0.0036	1	09/15/22 20:56	09/19/22 18:45	193-39-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-5 **Lab ID: 60410331005** Collected: 09/09/22 11:00 Received: 09/14/22 11:10 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	0.0069	0.0033	1	09/15/22 20:56	09/19/22 18:45	90-12-0	L2
2-Methylnaphthalene	ND	mg/kg	0.0069	0.0043	1	09/15/22 20:56	09/19/22 18:45	91-57-6	
Naphthalene	ND	mg/kg	0.0069	0.0035	1	09/15/22 20:56	09/19/22 18:45	91-20-3	
Pyrene	ND	mg/kg	0.0069	0.0045	1	09/15/22 20:56	09/19/22 18:45	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	71	%	40-120		1	09/15/22 20:56	09/19/22 18:45	321-60-8	
Terphenyl-d14 (S)	77	%	45-130		1	09/15/22 20:56	09/19/22 18:45	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0015J	mg/kg	0.0056	0.00051	1	09/15/22 14:48	09/16/22 11:48	71-43-2	
Ethylbenzene	ND	mg/kg	0.0056	0.00096	1	09/15/22 14:48	09/16/22 11:48	100-41-4	
Toluene	ND	mg/kg	0.022	0.0049	1	09/15/22 14:48	09/16/22 11:48	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0056	0.00076	1	09/15/22 14:48	09/16/22 11:48	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0056	0.00048	1	09/15/22 14:48	09/16/22 11:48	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0041	1	09/15/22 14:48	09/16/22 11:48	1330-20-7	
Surrogates									
Toluene-d8 (S)	110	%	80-120		1	09/15/22 14:48	09/16/22 11:48	2037-26-5	
4-Bromofluorobenzene (S)	104	%	83-119		1	09/15/22 14:48	09/16/22 11:48	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	09/15/22 14:48	09/16/22 11:48	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	5.6	%	0.50	0.50	1		09/15/22 09:26		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	94.7	%			1	09/19/22 14:57	09/19/22 15:03		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.06	0.269	1	10/04/22 04:00	10/05/22 07:27	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	7.68	Std. Units		0.10	1	09/27/22 15:00	09/27/22 16:00		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	13700	umhos/cm	10.0	10.0	1	09/24/22 10:39	09/24/22 12:20		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	25.8				1	09/30/22 13:47	09/30/22 13:47	SAR	

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: UPGRAIENT **Lab ID: 60410331006** Collected: 09/09/22 11:20 Received: 09/14/22 11:10 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
Metals (ICP) 6010B-NE493 Ch 2									
Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron Pace National - Mt. Juliet									
Boron, Hot Water Soluble	487	ug/L	200	16.7	1	09/20/22 10:47	09/30/22 02:48	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City									
Barium	168	mg/kg	0.51	0.10	1	09/16/22 08:12	09/20/22 14:21	7440-39-3	
Cadmium	0.53	mg/kg	0.51	0.074	1	09/16/22 08:12	09/20/22 14:21	7440-43-9	
Copper	13.9	mg/kg	2.0	0.42	1	09/16/22 08:12	09/20/22 14:21	7440-50-8	
Lead	14.8	mg/kg	1.0	0.29	1	09/16/22 08:12	09/20/22 14:21	7439-92-1	
Nickel	13.0	mg/kg	0.51	0.25	1	09/16/22 08:12	09/20/22 14:21	7440-02-0	
Selenium	0.62J	mg/kg	1.5	0.31	1	09/16/22 08:12	09/20/22 14:21	7782-49-2	
Silver	ND	mg/kg	0.71	0.11	1	09/16/22 08:12	09/20/22 14:21	7440-22-4	
Zinc	53.1	mg/kg	10.2	0.22	1	09/16/22 08:12	09/20/22 14:21	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050 Pace Analytical Services - Kansas City									
Arsenic	7.7	mg/kg	0.74	0.17	10	09/16/22 08:25	09/22/22 16:49	7440-38-2	
Percent Moisture									
Analytical Method: ASTM D2974 Pace Analytical Services - Kansas City									
Percent Moisture	5.3	%	0.50	0.50	1		09/15/22 09:26		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	95.5	%			1	09/19/22 14:57	09/19/22 15:03		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.05	0.267	1	10/04/22 04:00	10/05/22 07:43	18540-29-9	ML
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D Pace National - Mt. Juliet									
pH	8.22	Std. Units		0.10	1	09/27/22 15:00	09/27/22 16:00		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A Pace National - Mt. Juliet									
Specific Conductance @ 25 C	187	umhos/cm	10.0	10.0	1	09/24/22 10:39	09/24/22 12:20		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc Pace National - Mt. Juliet									
Sodium Adsorption Ratio	0.289				1	10/08/22 13:44	10/08/22 13:44	SAR	

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-6 **Lab ID: 60410331007** Collected: 09/09/22 11:10 Received: 09/14/22 11:10 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)	34.5	mg/kg	21.3	4.8	1	09/15/22 21:00	09/16/22 09:26		
TPH-DRO (C10-C28)	19.5	mg/kg	10.6	4.8	1	09/15/22 21:00	09/16/22 09:26		
Surrogates									
n-Tetracosane (S)	64	%	31-152		1	09/15/22 21:00	09/16/22 09:26	646-31-1	
p-Terphenyl (S)	66	%	46-130		1	09/15/22 21:00	09/16/22 09:26	92-94-4	
Gasoline Range Organics									
Analytical Method: EPA 8015B Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
TPH-GRO	ND	mg/kg	11.3	1.4	1	09/22/22 16:01	09/23/22 01:35		
Surrogates									
4-Bromofluorobenzene (S)	99	%	66-130		1	09/22/22 16:01	09/23/22 01:35	460-00-4	
Metals (ICP) 6010B-NE493 Ch 2									
Analytical Method: 6010B-NE493 Ch 2 Preparation Method: HWS Boron									
Pace National - Mt. Juliet									
Boron, Hot Water Soluble	998	ug/L	200	16.7	1	09/20/22 10:47	09/30/22 02:51	7440-42-8H	
6010 MET ICP Red. Interference									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Barium	215	mg/kg	0.49	0.097	1	09/16/22 08:12	09/20/22 14:23	7440-39-3	
Cadmium	0.57	mg/kg	0.49	0.071	1	09/16/22 08:12	09/20/22 14:23	7440-43-9	
Copper	17.1	mg/kg	2.0	0.40	1	09/16/22 08:12	09/20/22 14:23	7440-50-8	
Lead	13.9	mg/kg	0.98	0.28	1	09/16/22 08:12	09/20/22 14:23	7439-92-1	
Nickel	14.8	mg/kg	0.49	0.24	1	09/16/22 08:12	09/20/22 14:23	7440-02-0	
Selenium	0.38J	mg/kg	1.5	0.30	1	09/16/22 08:12	09/20/22 14:23	7782-49-2	
Silver	ND	mg/kg	0.68	0.11	1	09/16/22 08:12	09/20/22 14:23	7440-22-4	
Zinc	62.6	mg/kg	9.8	0.21	1	09/16/22 08:12	09/20/22 14:23	7440-66-6	
6020 MET ICPMS									
Analytical Method: EPA 6020 Preparation Method: EPA 3050									
Pace Analytical Services - Kansas City									
Arsenic	7.9	mg/kg	0.88	0.20	10	09/16/22 08:25	09/22/22 16:51	7440-38-2	
8270 MSSV PAH by SIM									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Pace Analytical Services - Kansas City									
Acenaphthene	ND	mg/kg	0.0071	0.0039	1	09/15/22 20:56	09/19/22 19:03	83-32-9	
Anthracene	ND	mg/kg	0.0071	0.0037	1	09/15/22 20:56	09/19/22 19:03	120-12-7	
Benzo(a)anthracene	ND	mg/kg	0.0071	0.0039	1	09/15/22 20:56	09/19/22 19:03	56-55-3	
Benzo(a)pyrene	ND	mg/kg	0.0071	0.0029	1	09/15/22 20:56	09/19/22 19:03	50-32-8	
Benzo(b)fluoranthene	ND	mg/kg	0.0071	0.0039	1	09/15/22 20:56	09/19/22 19:03	205-99-2	
Benzo(k)fluoranthene	ND	mg/kg	0.0071	0.0040	1	09/15/22 20:56	09/19/22 19:03	207-08-9	
Chrysene	ND	mg/kg	0.0071	0.0038	1	09/15/22 20:56	09/19/22 19:03	218-01-9	
Dibenz(a,h)anthracene	ND	mg/kg	0.0071	0.0038	1	09/15/22 20:56	09/19/22 19:03	53-70-3	
Fluoranthene	ND	mg/kg	0.0071	0.0049	1	09/15/22 20:56	09/19/22 19:03	206-44-0	
Fluorene	ND	mg/kg	0.0071	0.0046	1	09/15/22 20:56	09/19/22 19:03	86-73-7	
Indeno(1,2,3-cd)pyrene	ND	mg/kg	0.0071	0.0037	1	09/15/22 20:56	09/19/22 19:03	193-39-5	

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ANALYTICAL RESULTS

Project: 915-1
Pace Project No.: 60410331

Sample: SL-6 **Lab ID: 60410331007** Collected: 09/09/22 11:10 Received: 09/14/22 11:10 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	0.0071	0.0034	1	09/15/22 20:56	09/19/22 19:03	90-12-0	L2
2-Methylnaphthalene	ND	mg/kg	0.0071	0.0044	1	09/15/22 20:56	09/19/22 19:03	91-57-6	
Naphthalene	ND	mg/kg	0.0071	0.0036	1	09/15/22 20:56	09/19/22 19:03	91-20-3	
Pyrene	ND	mg/kg	0.0071	0.0046	1	09/15/22 20:56	09/19/22 19:03	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	80	%	40-120		1	09/15/22 20:56	09/19/22 19:03	321-60-8	
Terphenyl-d14 (S)	89	%	45-130		1	09/15/22 20:56	09/19/22 19:03	1718-51-0	
8260C MSV 5035A Low Level									
Analytical Method: EPA 8260C Preparation Method: EPA 5035A/5030B									
Pace Analytical Services - Kansas City									
Benzene	0.0015J	mg/kg	0.0057	0.00052	1	09/15/22 14:48	09/16/22 12:08	71-43-2	
Ethylbenzene	ND	mg/kg	0.0057	0.00099	1	09/15/22 14:48	09/16/22 12:08	100-41-4	
Toluene	ND	mg/kg	0.023	0.0051	1	09/15/22 14:48	09/16/22 12:08	108-88-3	
1,2,4-Trimethylbenzene	ND	mg/kg	0.0057	0.00079	1	09/15/22 14:48	09/16/22 12:08	95-63-6	
1,3,5-Trimethylbenzene	ND	mg/kg	0.0057	0.00049	1	09/15/22 14:48	09/16/22 12:08	108-67-8	
Xylene (Total)	ND	mg/kg	0.017	0.0042	1	09/15/22 14:48	09/16/22 12:08	1330-20-7	
Surrogates									
Toluene-d8 (S)	112	%	80-120		1	09/15/22 14:48	09/16/22 12:08	2037-26-5	
4-Bromofluorobenzene (S)	102	%	83-119		1	09/15/22 14:48	09/16/22 12:08	460-00-4	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120		1	09/15/22 14:48	09/16/22 12:08	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974									
Pace Analytical Services - Kansas City									
Percent Moisture	6.8	%	0.50	0.50	1		09/15/22 09:26		
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	94.8	%			1	09/19/22 14:57	09/19/22 15:03		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	ND	mg/kg	1.06	0.269	1	10/03/22 18:00	10/05/22 02:29	18540-29-9	
Wet Chemistry 9045D									
Analytical Method: EPA 9045D Preparation Method: 9045C/9045D									
Pace National - Mt. Juliet									
pH	7.98	Std. Units		0.10	1	09/27/22 15:00	09/27/22 16:00		H3
Wet Chemistry 9050AMod									
Analytical Method: EPA 9050 Preparation Method: 9050A									
Pace National - Mt. Juliet									
Specific Conductance @ 25 C	375	umhos/cm	10.0	10.0	1	09/24/22 10:39	09/24/22 12:20		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc									
Pace National - Mt. Juliet									
Sodium Adsorption Ratio	1.47				1	09/29/22 22:26	09/29/22 22:26	SAR	

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch: 808947 Analysis Method: EPA 8015B
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331007

METHOD BLANK: 3217660 Matrix: Solid
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH-GRO	mg/kg	ND	10.0	1.2	09/23/22 00:00	
4-Bromofluorobenzene (S)	%	100	66-130		09/23/22 00:00	

LABORATORY CONTROL SAMPLE: 3217661

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-GRO	mg/kg	50	54.7	109	70-130	
4-Bromofluorobenzene (S)	%			99	66-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3217662 3217663

Parameter	Units	60410331001 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	49.9	49.9	58.3	57.6	116	114	70-130	1	25	
4-Bromofluorobenzene (S)	%						102	104	66-130			

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	1928101	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: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

METHOD BLANK: R3843099-1 Matrix: Solid
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron, Hot Water Soluble	ug/L	ND	200	16.7	09/30/22 02:15	

LABORATORY CONTROL SAMPLE & LCSD: R3843099-2		R3843099-3								
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	1090	1080	109	108	80.0-120	0.897	20	

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	807994	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

METHOD BLANK: 3214265 Matrix: Solid
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Barium	mg/kg	0.20J	0.50	0.099	09/20/22 13:55	
Cadmium	mg/kg	ND	0.50	0.072	09/20/22 13:55	
Copper	mg/kg	ND	2.0	0.41	09/20/22 13:55	
Lead	mg/kg	ND	1.0	0.29	09/20/22 13:55	
Nickel	mg/kg	ND	0.50	0.25	09/20/22 13:55	
Selenium	mg/kg	ND	1.5	0.31	09/20/22 13:55	
Silver	mg/kg	ND	0.70	0.11	09/20/22 13:55	
Zinc	mg/kg	ND	10.0	0.21	09/20/22 13:55	

LABORATORY CONTROL SAMPLE: 3214266

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/kg	100	97.7	98	80-120	
Cadmium	mg/kg	100	94.8	95	80-120	
Copper	mg/kg	100	94.4	94	80-120	
Lead	mg/kg	100	96.0	96	80-120	
Nickel	mg/kg	100	99.1	99	80-120	
Selenium	mg/kg	100	82.1	82	80-120	
Silver	mg/kg	50	44.3	89	80-120	
Zinc	mg/kg	100	95.9	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3214267 3214268

Parameter	Units	60410331001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	mg/kg	214	78.8	78.8	284	268	89	69	75-125	6	20	M1
Cadmium	mg/kg	0.49	78.8	78.8	61.8	62.3	78	78	75-125	1	20	
Copper	mg/kg	15.9	78.8	78.8	86.1	87.0	89	90	75-125	1	20	
Lead	mg/kg	12.2	78.8	78.8	75.7	76.0	81	81	75-125	0	20	
Nickel	mg/kg	14.2	78.8	78.8	79.5	80.1	83	84	75-125	1	20	
Selenium	mg/kg	0.56J	78.8	78.8	57.2	57.5	72	72	75-125	0	20	M1
Silver	mg/kg	ND	39.4	39.4	32.0	31.9	81	81	75-125	0	20	
Zinc	mg/kg	50.7	78.8	78.8	116	117	83	85	75-125	1	20	

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	807998	Analysis Method:	EPA 6020
QC Batch Method:	EPA 3050	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

METHOD BLANK: 3214275 Matrix: Solid

Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	0.23	09/22/22 16:18	

LABORATORY CONTROL SAMPLE: 3214276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	97.1	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3214277 3214278

Parameter	Units	60410331001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	8.1	88	86.6	91.5	90.5	95	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch: 807907 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: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331007

METHOD BLANK: 3214062 Matrix: Solid
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	ND	0.0050	0.00069	09/16/22 08:47	
1,3,5-Trimethylbenzene	mg/kg	ND	0.0050	0.00043	09/16/22 08:47	
Benzene	mg/kg	ND	0.0050	0.00046	09/16/22 08:47	
Ethylbenzene	mg/kg	ND	0.0050	0.00087	09/16/22 08:47	
Toluene	mg/kg	ND	0.020	0.0044	09/16/22 08:47	
Xylene (Total)	mg/kg	ND	0.015	0.0037	09/16/22 08:47	
1,2-Dichlorobenzene-d4 (S)	%	100	80-120		09/16/22 08:47	
4-Bromofluorobenzene (S)	%	104	83-119		09/16/22 08:47	
Toluene-d8 (S)	%	110	80-120		09/16/22 08:47	

LABORATORY CONTROL SAMPLE: 3214063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	mg/kg	1.2	1.3	104	79-121	
1,3,5-Trimethylbenzene	mg/kg	1.2	1.3	102	81-122	
Benzene	mg/kg	1.2	1.3	107	67-126	
Ethylbenzene	mg/kg	1.2	1.2	100	69-127	
Toluene	mg/kg	1.2	1.2	95	80-118	
Xylene (Total)	mg/kg	3.8	3.8	101	69-130	
1,2-Dichlorobenzene-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	83-119	
Toluene-d8 (S)	%			93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3214064 3214065

Parameter	Units	60410341006 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	1.6	1.6	1.5	1.6	93	99	10-124	7	68	
1,3,5-Trimethylbenzene	mg/kg	ND	1.6	1.6	1.5	1.6	91	98	10-125	7	65	
Benzene	mg/kg	0.0027J	1.6	1.6	1.6	1.7	95	100	17-134	6	53	
Ethylbenzene	mg/kg	ND	1.6	1.6	1.5	1.6	90	97	10-137	7	60	
Toluene	mg/kg	ND	1.6	1.6	1.4	1.5	86	91	13-131	6	60	
Xylene (Total)	mg/kg	ND	5	5	4.5	4.8	92	97	10-137	6	58	
1,2-Dichlorobenzene-d4 (S)	%						100	99	80-120			
4-Bromofluorobenzene (S)	%						102	101	83-119			
Toluene-d8 (S)	%						93	93	80-120			

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch: 807897 Analysis Method: EPA 8015B
QC Batch Method: EPA 3546 Analysis Description: EPA 8015B
Laboratory: Pace Analytical Services - Kansas City
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331007

METHOD BLANK: 3214033 Matrix: Solid
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH-DRO (C10-C28)	mg/kg	ND	10	4.5	09/16/22 08:21	
TPH-RRO (C28-C36)	mg/kg	ND	19.9	4.5	09/16/22 08:21	
n-Tetracosane (S)	%	60	31-152		09/16/22 08:21	
p-Terphenyl (S)	%	66	46-130		09/16/22 08:21	

LABORATORY CONTROL SAMPLE: 3214034

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH-DRO (C10-C28)	mg/kg	83	71.5	86	74-124	
n-Tetracosane (S)	%			91	31-152	
p-Terphenyl (S)	%			100	46-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3214035 3214036

Parameter	Units	60410341001 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	44.0	102	101	97.6	103	53	58	30-130	5	35	
n-Tetracosane (S)	%						76	85	31-152			
p-Terphenyl (S)	%						78	80	46-130			

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch: 807896 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: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331007

METHOD BLANK: 3214028

Matrix: Solid

Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	mg/kg	ND	0.0033	0.0016	09/19/22 16:19	
2-Methylnaphthalene	mg/kg	ND	0.0033	0.0020	09/19/22 16:19	
Acenaphthene	mg/kg	ND	0.0033	0.0018	09/19/22 16:19	
Anthracene	mg/kg	ND	0.0033	0.0017	09/19/22 16:19	
Benzo(a)anthracene	mg/kg	ND	0.0033	0.0018	09/19/22 16:19	
Benzo(a)pyrene	mg/kg	ND	0.0033	0.0014	09/19/22 16:19	
Benzo(b)fluoranthene	mg/kg	ND	0.0033	0.0018	09/19/22 16:19	
Benzo(k)fluoranthene	mg/kg	ND	0.0033	0.0019	09/19/22 16:19	
Chrysene	mg/kg	ND	0.0033	0.0018	09/19/22 16:19	
Dibenz(a,h)anthracene	mg/kg	ND	0.0033	0.0018	09/19/22 16:19	
Fluoranthene	mg/kg	ND	0.0033	0.0023	09/19/22 16:19	
Fluorene	mg/kg	ND	0.0033	0.0021	09/19/22 16:19	
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.0033	0.0017	09/19/22 16:19	
Naphthalene	mg/kg	ND	0.0033	0.0017	09/19/22 16:19	
Pyrene	mg/kg	ND	0.0033	0.0021	09/19/22 16:19	
2-Fluorobiphenyl (S)	%	68	40-120		09/19/22 16:19	
Terphenyl-d14 (S)	%	75	45-130		09/19/22 16:19	

LABORATORY CONTROL SAMPLE: 3214029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	mg/kg	0.033	0.022	67	70-130	1e
2-Methylnaphthalene	mg/kg	0.033	0.023	69	55-120	
Acenaphthene	mg/kg	0.033	0.024	72	45-120	
Anthracene	mg/kg	0.033	0.025	75	50-120	
Benzo(a)anthracene	mg/kg	0.033	0.024	72	55-125	
Benzo(a)pyrene	mg/kg	0.033	0.023	69	45-120	
Benzo(b)fluoranthene	mg/kg	0.033	0.024	72	50-125	
Benzo(k)fluoranthene	mg/kg	0.033	0.024	72	55-120	
Chrysene	mg/kg	0.033	0.023	70	55-120	
Dibenz(a,h)anthracene	mg/kg	0.033	0.023	70	40-125	
Fluoranthene	mg/kg	0.033	0.026	78	50-125	
Fluorene	mg/kg	0.033	0.024	72	50-120	
Indeno(1,2,3-cd)pyrene	mg/kg	0.033	0.026	77	44-125	
Naphthalene	mg/kg	0.033	0.022	67	45-120	
Pyrene	mg/kg	0.033	0.025	75	50-125	
2-Fluorobiphenyl (S)	%			73	40-120	
Terphenyl-d14 (S)	%			75	45-130	

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QUALITY CONTROL DATA

Project: 915-1

Pace Project No.: 60410331

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3214030 3214031												
Parameter	Units	60410331001		MS	MSD	MS		MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike	Spike	Result	Result	% Rec	% Rec	Limits	RPD	
1-Methylnaphthalene	mg/kg	ND	0.035	0.035	0.035	0.023	0.019	66	55	50-145	18	61
2-Methylnaphthalene	mg/kg	ND	0.035	0.035	0.035	0.024	0.020	70	57	50-120	19	61
Acenaphthene	mg/kg	ND	0.035	0.035	0.035	0.025	0.021	72	61	10-150	16	42
Anthracene	mg/kg	ND	0.035	0.035	0.035	0.027	0.024	79	68	10-160	14	54
Benzo(a)anthracene	mg/kg	ND	0.035	0.035	0.035	0.028	0.024	79	69	10-160	14	62
Benzo(a)pyrene	mg/kg	ND	0.035	0.035	0.035	0.026	0.023	74	65	10-150	13	66
Benzo(b)fluoranthene	mg/kg	ND	0.035	0.035	0.035	0.028	0.024	80	70	10-165	13	61
Benzo(k)fluoranthene	mg/kg	ND	0.035	0.035	0.035	0.026	0.023	75	66	10-165	13	53
Chrysene	mg/kg	ND	0.035	0.035	0.035	0.025	0.022	72	63	10-150	13	57
Dibenz(a,h)anthracene	mg/kg	ND	0.035	0.035	0.035	0.025	0.022	72	64	10-175	11	48
Fluoranthene	mg/kg	ND	0.035	0.035	0.035	0.031	0.026	88	74	10-180	16	54
Fluorene	mg/kg	ND	0.035	0.035	0.035	0.026	0.022	74	64	20-145	15	39
Indeno(1,2,3-cd)pyrene	mg/kg	ND	0.035	0.035	0.035	0.028	0.024	80	70	10-150	13	59
Naphthalene	mg/kg	ND	0.035	0.035	0.035	0.022	0.018	64	52	10-165	21	54
Pyrene	mg/kg	ND	0.035	0.035	0.035	0.028	0.024	82	69	10-180	16	61
2-Fluorobiphenyl (S)	%							71	61	40-120		
Terphenyl-d14 (S)	%							79	71	45-130		

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	807796	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Kansas City

Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

METHOD BLANK: 3213542 Matrix: Solid

Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	0.50	09/15/22 09:26	

SAMPLE DUPLICATE: 3213543

Parameter	Units	60410331001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.3	5.3	0	20	

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	1928305	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: 60410331001, 60410331002, 60410331003, 60410331004

METHOD BLANK: R3839261-1 Matrix: Solid
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	%	0.00900			09/19/22 15:18	

LABORATORY CONTROL SAMPLE: R3839261-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	%	50.0	50.1	100	85.0-115	

SAMPLE DUPLICATE: R3839261-3

Parameter	Units	L1536689-02 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	78.8	79.0	0.297	10	

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	1928307	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: 60410331005, 60410331006, 60410331007

METHOD BLANK: R3839254-1 Matrix: Solid
Associated Lab Samples: 60410331005, 60410331006, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Solids	%	0.00800			09/19/22 15:03	

LABORATORY CONTROL SAMPLE: R3839254-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	%	50.0	50.1	100	85.0-115	

SAMPLE DUPLICATE: R3839254-3

Parameter	Units	60410331006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	95.5	95.2	0.292	10	

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch: 1936617 Analysis Method: EPA 7199
QC Batch Method: 3060A Analysis Description: Wet Chemistry 7199
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331007

METHOD BLANK: R3844728-1 Matrix: Solid
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	ND	1.00	0.255	10/05/22 00:11	

LABORATORY CONTROL SAMPLE: R3844728-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10.0	9.35	93.5	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3844728-6 R3844728-7

Parameter	Units	L1541362-01 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/kg	ND	25.7	25.7	22.3	22.6	86.5	87.9	75.0-125	1.55	20	

MATRIX SPIKE SAMPLE: R3844728-8

Parameter	Units	L1541362-01 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	ND	827	687	83.1	75.0-125	

SAMPLE DUPLICATE: R3844728-3

Parameter	Units	L1536689-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	ND	ND	0.00	20	

SAMPLE DUPLICATE: R3844728-4

Parameter	Units	60410331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	ND	ND	0.00	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	1936620	Analysis Method:	EPA 7199
QC Batch Method:	3060A	Analysis Description:	Wet Chemistry 7199
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 60410331005, 60410331006

METHOD BLANK: R3844819-1 Matrix: Solid

Associated Lab Samples: 60410331005, 60410331006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	ND	1.00	0.255	10/05/22 06:38	

LABORATORY CONTROL SAMPLE: R3844819-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10.0	9.84	98.4	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3844819-5 R3844819-6

Parameter	Units	60410331006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/kg	ND	20.9	20.9	9.24	7.67	44.1	36.6	75.0-125	18.6	20	ML

MATRIX SPIKE SAMPLE: R3844819-8

Parameter	Units	60410331006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	ND	671	654	97.5	75.0-125	

SAMPLE DUPLICATE: R3844819-9

Parameter	Units	L1536961-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	0.891	0.924J	3.68	20 J	

SAMPLE DUPLICATE: R3844819-11

Parameter	Units	L1536961-06 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	40.0	37.6	6.21	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	1932334	Analysis Method:	EPA 9045D
QC Batch Method:	9045C/9045D	Analysis Description:	Wet Chemistry 9045D
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 60410331001

LABORATORY CONTROL SAMPLE: R3841306-1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH	Std. Units	10.0	9.92	99.2	99.0-101	

SAMPLE DUPLICATE: R3841306-2

Parameter	Units	L1539326-02 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.44	7.41	0.404	1	

SAMPLE DUPLICATE: R3841306-3

Parameter	Units	L1539447-06 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.37	8.33	0.479	1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	1933058	Analysis Method:	EPA 9045D
QC Batch Method:	9045C/9045D	Analysis Description:	Wet Chemistry 9045D
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

LABORATORY CONTROL SAMPLE: R3842014-1

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: R3842014-3

Parameter	Units	L1536793-01 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.17	8.17	0.00	1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch: 1928750 Analysis Method: EPA 9050
QC Batch Method: EPA 9050 Analysis Description: Wet Chemistry 9050AMod
Laboratory: Pace National - Mt. Juliet
Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

METHOD BLANK: R3840953-1 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	09/24/22 12:20	

LABORATORY CONTROL SAMPLE: R3840953-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1120	1120	100	85.0-115	

SAMPLE DUPLICATE: R3840953-3

Parameter	Units	L1536652-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	8720	8730	0.115	20	

SAMPLE DUPLICATE: R3840953-4

Parameter	Units	60410331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1500	1500	0.134	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 915-1
Pace Project No.: 60410331

QC Batch:	1928750	Analysis Method:	EPA 9050
QC Batch Method:	9050A	Analysis Description:	Wet Chemistry 9050AMod
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 60410331001, 60410331002, 60410331003, 60410331004, 60410331005, 60410331006, 60410331007

METHOD BLANK: R3840953-1 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	09/24/22 12:20	

LABORATORY CONTROL SAMPLE: R3840953-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1120	1120	100	85.0-115	

SAMPLE DUPLICATE: R3840953-3

Parameter	Units	L1536652-01 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	8720	8730	0.115	20	

SAMPLE DUPLICATE: R3840953-4

Parameter	Units	60410331002 Result	Dup Result	RPD	Max RPD	Qualifiers
Specific Conductance @ 25 C	umhos/cm	1500	1500	0.134	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: 915-1
Pace Project No.: 60410331

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: 60410331001

[1] Wet Chemistry by Method 9045D - 7.86 at 21.1C

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

Sample: 60410331002

[1] Wet Chemistry by Method 9045D - 8.58 at 20.5C

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

Sample: 60410331003

[1] Wet Chemistry by Method 9045D - 7.95 at 20.5C

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

Sample: 60410331004

[1] Wet Chemistry by Method 9045D - 7.86 at 20.4C

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

Sample: 60410331005

[1] Wet Chemistry by Method 9045D - 7.68 at 20.4C

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

Sample: 60410331006

[1] Wet Chemistry by Method 9045D - 8.22 at 20.2C

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 915-1
Pace Project No.: 60410331

SAMPLE QUALIFIERS

Sample: 60410331006
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: 60410331007
[1] Wet Chemistry by Method 9045D - 7.98 at 20.1C
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3840953-1
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3840953-2
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3840953-3
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3840953-4
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: R3841306-1
[1] Wet Chemistry by Method 9045D - 9.92 at 20.7C

Sample: R3841306-2
[1] Wet Chemistry by Method 9045D - 7.41 at 21.1C

Sample: R3841306-3
[1] Wet Chemistry by Method 9045D - 8.33 at 20.6C

Sample: R3842014-1
[1] Wet Chemistry by Method 9045D - 9.9 at 19.8C

Sample: R3842014-3
[1] Wet Chemistry by Method 9045D - 8.17 at 20.1C

Sample: L1536652-01
[1] Wet Chemistry by Method 9050AMod - at 25C

Sample: L1536793-01
[1] Wet Chemistry by Method 9045D - 8.17 at 20.2C

Sample: L1539326-02
[1] Wet Chemistry by Method 9045D - 7.44 at 21C

Sample: L1539447-06
[1] Wet Chemistry by Method 9045D - 8.37 at 20.3C

ANALYTE QUALIFIERS

1e	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low. Confirmed by re-analyses.
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.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
ML	Matrix spike recovery and/or matrix spike duplicate recovery was below laboratory control limits. Result may be biased low.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 915-1

Pace Project No.: 60410331

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60410331001	SL-1	EPA 3546	807897	EPA 8015B	807988
60410331002	SL-2	EPA 3546	807897	EPA 8015B	807988
60410331003	SL-3	EPA 3546	807897	EPA 8015B	807988
60410331004	SL-4	EPA 3546	807897	EPA 8015B	807988
60410331005	SL-5	EPA 3546	807897	EPA 8015B	807988
60410331007	SL-6	EPA 3546	807897	EPA 8015B	807988
60410331001	SL-1	EPA 5035A/5030B	808947	EPA 8015B	809156
60410331002	SL-2	EPA 5035A/5030B	808947	EPA 8015B	809156
60410331003	SL-3	EPA 5035A/5030B	808947	EPA 8015B	809156
60410331004	SL-4	EPA 5035A/5030B	808947	EPA 8015B	809156
60410331005	SL-5	EPA 5035A/5030B	808947	EPA 8015B	809156
60410331007	SL-6	EPA 5035A/5030B	808947	EPA 8015B	809156
60410331001	SL-1	HWS Boron	1928101	6010B-NE493 Ch 2	1928101
60410331002	SL-2	HWS Boron	1928101	6010B-NE493 Ch 2	1928101
60410331003	SL-3	HWS Boron	1928101	6010B-NE493 Ch 2	1928101
60410331004	SL-4	HWS Boron	1928101	6010B-NE493 Ch 2	1928101
60410331005	SL-5	HWS Boron	1928101	6010B-NE493 Ch 2	1928101
60410331006	UPGRADIENT	HWS Boron	1928101	6010B-NE493 Ch 2	1928101
60410331007	SL-6	HWS Boron	1928101	6010B-NE493 Ch 2	1928101
60410331001	SL-1	EPA 3050	807994	EPA 6010	808083
60410331002	SL-2	EPA 3050	807994	EPA 6010	808083
60410331003	SL-3	EPA 3050	807994	EPA 6010	808083
60410331004	SL-4	EPA 3050	807994	EPA 6010	808083
60410331005	SL-5	EPA 3050	807994	EPA 6010	808083
60410331006	UPGRADIENT	EPA 3050	807994	EPA 6010	808083
60410331007	SL-6	EPA 3050	807994	EPA 6010	808083
60410331001	SL-1	EPA 3050	807998	EPA 6020	808085
60410331002	SL-2	EPA 3050	807998	EPA 6020	808085
60410331003	SL-3	EPA 3050	807998	EPA 6020	808085
60410331004	SL-4	EPA 3050	807998	EPA 6020	808085
60410331005	SL-5	EPA 3050	807998	EPA 6020	808085
60410331006	UPGRADIENT	EPA 3050	807998	EPA 6020	808085
60410331007	SL-6	EPA 3050	807998	EPA 6020	808085
60410331001	SL-1	EPA 3546	807896	EPA 8270 by SIM	808223
60410331002	SL-2	EPA 3546	807896	EPA 8270 by SIM	808223
60410331003	SL-3	EPA 3546	807896	EPA 8270 by SIM	808223
60410331004	SL-4	EPA 3546	807896	EPA 8270 by SIM	808223
60410331005	SL-5	EPA 3546	807896	EPA 8270 by SIM	808223
60410331007	SL-6	EPA 3546	807896	EPA 8270 by SIM	808223
60410331001	SL-1	EPA 5035A/5030B	807907	EPA 8260C	807946
60410331002	SL-2	EPA 5035A/5030B	807907	EPA 8260C	807946
60410331003	SL-3	EPA 5035A/5030B	807907	EPA 8260C	807946
60410331004	SL-4	EPA 5035A/5030B	807907	EPA 8260C	807946
60410331005	SL-5	EPA 5035A/5030B	807907	EPA 8260C	807946
60410331007	SL-6	EPA 5035A/5030B	807907	EPA 8260C	807946

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 915-1
Pace Project No.: 60410331

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60410331001	SL-1	ASTM D2974	807796		
60410331002	SL-2	ASTM D2974	807796		
60410331003	SL-3	ASTM D2974	807796		
60410331004	SL-4	ASTM D2974	807796		
60410331005	SL-5	ASTM D2974	807796		
60410331006	UPGRADIENT	ASTM D2974	807796		
60410331007	SL-6	ASTM D2974	807796		
60410331001	SL-1	SM 2540 G	1928305	SM 2540G	1928305
60410331002	SL-2	SM 2540 G	1928305	SM 2540G	1928305
60410331003	SL-3	SM 2540 G	1928305	SM 2540G	1928305
60410331004	SL-4	SM 2540 G	1928305	SM 2540G	1928305
60410331005	SL-5	SM 2540 G	1928307	SM 2540G	1928307
60410331006	UPGRADIENT	SM 2540 G	1928307	SM 2540G	1928307
60410331007	SL-6	SM 2540 G	1928307	SM 2540G	1928307
60410331001	SL-1	3060A	1936617	EPA 7199	1936617
60410331002	SL-2	3060A	1936617	EPA 7199	1936617
60410331003	SL-3	3060A	1936617	EPA 7199	1936617
60410331004	SL-4	3060A	1936617	EPA 7199	1936617
60410331005	SL-5	3060A	1936620	EPA 7199	1936620
60410331006	UPGRADIENT	3060A	1936620	EPA 7199	1936620
60410331007	SL-6	3060A	1936617	EPA 7199	1936617
60410331001	SL-1	9045C/9045D	1932334	EPA 9045D	1932334
60410331002	SL-2	9045C/9045D	1933058	EPA 9045D	1933058
60410331003	SL-3	9045C/9045D	1933058	EPA 9045D	1933058
60410331004	SL-4	9045C/9045D	1933058	EPA 9045D	1933058
60410331005	SL-5	9045C/9045D	1933058	EPA 9045D	1933058
60410331006	UPGRADIENT	9045C/9045D	1933058	EPA 9045D	1933058
60410331007	SL-6	9045C/9045D	1933058	EPA 9045D	1933058
60410331001	SL-1	9050A	1928750	EPA 9050	1928750
60410331002	SL-2	9050A	1928750	EPA 9050	1928750
60410331003	SL-3	9050A	1928750	EPA 9050	1928750
60410331004	SL-4	9050A	1928750	EPA 9050	1928750
60410331005	SL-5	9050A	1928750	EPA 9050	1928750
60410331006	UPGRADIENT	9050A	1928750	EPA 9050	1928750
60410331007	SL-6	9050A	1928750	EPA 9050	1928750
60410331001	SL-1	Calc	1932206	Calculated	1932206
60410331002	SL-2	Calc	1932206	Calculated	1932206
60410331003	SL-3	Calc	1932206	Calculated	1932206
60410331004	SL-4	Calc	1932206	Calculated	1932206
60410331005	SL-5	Calc	1934206	Calculated	1934206
60410331006	UPGRADIENT	Calc	1938855	Calculated	1938855
60410331007	SL-6	Calc	1932206	Calculated	1932206

REPORT OF LABORATORY ANALYSIS

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

Revision: 2

Effective Date: 01/12/20

WO#: 60410331



60410331

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 ☒ 201CThermometer Used: 7299 Type of Ice: Wet Blue ☐ None ☐Cooler Temperature (°C): As-read 3.1 Corr. Factor 0.0 Corrected 3.1Date and initials of person
examining contents: 09.14.2022

Temperature should be above freezing to 6°C

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 type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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 type="checkbox"/> No <input checked="" 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 type="checkbox"/> No <input checked="" 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: _____

REVIEWED

By Trudy Gipson at 1:41 pm, 9/15/22

Date: _____

CHAIN-OF-CUSTODY / Analytical Request Document

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

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

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Mull Drilling Company	Report To:	James Belman	Attention:	
Address:	1700 N Waterfront Pkwy Wichita, KS 67206	Copy To:		Company Name:	
Email:	jbelman@mulldrilling.com	Purchase Order #:		Address:	
Phone:	316-364-6386	Project Name:	915-1	Pace Quote:	
Fax:		Project #:	<i>OLD spill / Break Form</i>	Pace Project Manager:	nollie.wood@pacelabs.com,
Requested Due Date:		Package Profile #:	15035, 2	State / Location:	CO
				Regulatory Agency	
				State / Location	
				CO	

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	DATE	TIME	DATE	TIME	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Received on	Ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
			START	END																		
1	SL-1		9/14/12	1020	4		9/14/12	1020				9/14	1110	3.1	Y	NY						
2	SL-2			1030	4			1030														
3	SL-3			1040	4			1040														
4	SL-4			1050	4			1050														
5	SL-5			1100	4			1100														
6	Background Up gradient			1120	2			1120														
7	SL-6			1110	4			1110														
8																						
9																						
10																						
11																						
12																						

Requested Analysis Filtered (Y/N)

Analyses Test

Preservatives

Unpreserved

H2SO4

HNO3

HCl

NaOH

Na2S2O3

Methanol

Other

Residual Chlorine (Y/N)

60410331

SAMPLE ID

One Character per box.

(A-Z, 0-9, /, -)

Sample IDs must be unique

DATE SIGNED:

9/16/12

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE SIGNED:

9/16/12

ADDITIONAL COMMENTS

Send 7199 CrV Saturated Paste EC, SAR, pH, and Hot Water Boron to Pace National

TEMP in C

Received on

Ice

Sealed

Custody

Cooler

Samples Intact

Mud Drilling

Client:

Profile #

1567U-8260SMUL

Site:

915-1

Notes

1 W6KV-SI-Wet (7199 cu, boron paste (S
SI-met

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	SL															2	2													
2																2	2													
3																2	2													
4																2	2													
5																2	2													
6																2	2													
7																2	2													
8																														
9																														
10																														
11																														
12																														

Container Codes

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

Work Order Number:

60410331

Internal Transfer Chain of Custody



☐ Samples Pre-Logged into eCOC.

State Of Origin: CO

Cert. Needed: ☐ Yes

☒ No

Owner Received Date:

9/14/2022

Results Requested By: 9/26/2022

Workorder: 60410331

Workorder Name: 915-1



Report To			Subcontract To			Requested Analysis																					
Heather Wilson Pace Analytical Kansas 9608 Loiret Blvd. Lenexa, KS 66219 Phone 1(913)563-1407			Pace National 12065 Lebanon Rd Mt. Juliet, TN 37122 Phone (615) 758-5858																								
						Preserved Containers																					
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Unpreserved							7199 CrIV	Hot Water Boron	Paste EC, SAR, pH											LAB USE ONLY	
1	SL-1	PS	9/9/2022 10:20	60410331001	Solid	1							X	X	X										U153669		
2	SL-2	PS	9/9/2022 10:30	60410331002	Solid	1							X	X	X										U1		
3	SL-3	PS	9/9/2022 10:40	60410331003	Solid	1							X	X	X										U2		
4	SL-4	PS	9/9/2022 10:50	60410331004	Solid	1							X	X	X										U3		
5	SL-5	PS	9/9/2022 11:00	60410331005	Solid	1							X	X	X										U4		
6	UPGRADIENT	PS	9/9/2022 11:20	60410331006	Solid	1							X	X	X										U5		
7	SL-6	PS	9/9/2022 11:10	60410331007	Solid	1							X	X	X										U6		
													Comments														
Transfers	Released By	Date/Time	Received By	Date/Time																							
1	[Signature]	9/15/2022	[Signature]	9-16-22 09:00																							
2																											
3																											
Cooler Temperature on Receipt °C					Custody Seal Y or N	Received on Ice Y or N					Samples Intact Y or N																

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

5645 8496 6617

Sample Receipt Checklist

COC Seal Present/Intact: 1 N If Applicable

COC Signed/Accurate: 1 N VOA Zero Headspace: Y N

Bottles arrive intact: 1 N Pres. Correct/Check: Y N

Correct bottles used: 1 N

Sufficient volume sent: 1 N JAA7 3.8 + 0 = 3.8

RAD Screen <0.5 mR/hr: 1 N



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

INTER_LABORATORY WORK ORDER # 60410331

(To be completed by sending lab)

Sending Project No:	60410331
Receiving Project No:	
Check Box for Consolidated Invoice:	<input type="checkbox"/>
Date Prepared:	09/15/22
REQUESTED COMPLETION DATE:	9/26/2022

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? ☐ Dry Weight ☐ IRWO Lab Need to run? Cert. Needed No

WORK REQUESTED				
Method Description	Container Type	Quantity of containers	Preservative	Quantity of Samples
Hot Water Boron	WGKU	7	Unpreserved	7
7199 CrIV			Unpreserved	7
Paste EC, SAR, pH			Unpreserved	7
TOTAL				\$1,456.00

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	\$861.00	\$688.80	\$172.20
Wet Chemistry	21	\$595.00	\$476.00	\$119.00
* Custom Revenue Allocation	TOTAL	\$1,456.00	\$1,164.80	\$291.20

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.