

October 22, 2021

Kris Rowe  
HRL Compliance Solutions, Inc.  
2385 F 1/2 Road  
Grand Junction, CO 81505

RE: Project: TERRA ENERGY PARTNERS-RIVER RA  
Pace Project No.: 60383831

Dear Kris Rowe:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2021. 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 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

cc: Mike Gardner, Terra Energy Partners



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

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### **Pace Analytical Services Kansas**

9608 Loiret Boulevard, Lenexa, KS 66219

Missouri Inorganic Drinking Water Certification #: 10090

Arkansas Drinking Water

Arkansas Certification #: 20-020-0

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 #: T104704407-19-12

Utah Certification #: KS000212019-9

Illinois Certification #: 004592

Kansas Field Laboratory Accreditation: # E-92587

Missouri SEKS Micro Certification: 10070

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60383831001	WETLAND-UG 1	Water	10/20/21 14:00	10/21/21 07:30
60383831002	WETLAND-BREACH PT	Water	10/20/21 14:10	10/21/21 07:30
60383831003	WETLAND-DG 1	Water	10/20/21 14:20	10/21/21 07:30
60383831004	CONFLUENCE-DG 2	Water	10/20/21 14:40	10/21/21 07:30
60383831005	ACCESS RD CULVERT-DG 3	Water	10/20/21 15:00	10/21/21 07:30
60383831006	ROBINSON A CULVERT-DG 4	Water	10/20/21 13:50	10/21/21 07:30
60383831007	DRAINAGE MID PT-DG 5	Water	10/20/21 13:00	10/21/21 07:30
60383831008	CO RIVER CONFLUENCE-DG 6	Water	10/20/21 13:20	10/21/21 07:30

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## SAMPLE ANALYTE COUNT

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60383831001	WETLAND-UG 1	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
60383831002	WETLAND-BREACH PT	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
60383831003	WETLAND-DG 1	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
60383831004	CONFLUENCE-DG 2	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
60383831005	ACCESS RD CULVERT-DG 3	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
60383831006	ROBINSON A CULVERT-DG 4	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
60383831007	DRAINAGE MID PT-DG 5	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
60383831008	CO RIVER CONFLUENCE-DG 6	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K

PASI-K = Pace Analytical Services - Kansas City

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## ANALYTICAL RESULTS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

Sample: WETLAND-UG 1		Lab ID: 60383831001		Collected: 10/20/21 14:00		Received: 10/21/21 07:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Benzene	ND	ug/L	0.50	1		10/22/21 08:19	71-43-2		
Ethylbenzene	ND	ug/L	0.50	1		10/22/21 08:19	100-41-4		
Naphthalene	ND	ug/L	10.0	1		10/22/21 08:19	91-20-3		
Toluene	ND	ug/L	1.0	1		10/22/21 08:19	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/21 08:19	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/21 08:19	108-67-8		
Xylene (Total)	ND	ug/L	1.5	1		10/22/21 08:19	1330-20-7		
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120	1		10/22/21 08:19	460-00-4		
Toluene-d8 (S)	102	%	80-120	1		10/22/21 08:19	2037-26-5		
1,2-Dichlorobenzene-d4 (S)	97	%	80-120	1		10/22/21 08:19	2199-69-1		
Preservation pH	3.0		0.10	1		10/22/21 08:19		pH	
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	880	mg/L	13.3	1		10/21/21 14:12			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	206	mg/L	20.0	20		10/22/21 09:44	16887-00-6		
Sulfate	145	mg/L	20.0	20		10/22/21 09:44	14808-79-8		

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## ANALYTICAL RESULTS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

Sample: WETLAND-BREACH PT		Lab ID: 60383831002	Collected: 10/20/21 14:10	Received: 10/21/21 07:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City						
Benzene	<b>0.71J</b>	ug/L	0.50	1		10/22/21 09:02	71-43-2	
Ethylbenzene	ND	ug/L	0.50	1		10/22/21 09:02	100-41-4	
Naphthalene	ND	ug/L	10.0	1		10/22/21 09:02	91-20-3	
Toluene	<b>3.3</b>	ug/L	1.0	1		10/22/21 09:02	108-88-3	
1,2,4-Trimethylbenzene	<b>1.4</b>	ug/L	1.0	1		10/22/21 09:02	95-63-6	
1,3,5-Trimethylbenzene	<b>2.1</b>	ug/L	1.0	1		10/22/21 09:02	108-67-8	
Xylene (Total)	<b>11.5</b>	ug/L	1.5	1		10/22/21 09:02	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	97	%	80-120	1		10/22/21 09:02	460-00-4	
Toluene-d8 (S)	98	%	80-120	1		10/22/21 09:02	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120	1		10/22/21 09:02	2199-69-1	
Preservation pH	<b>1.0</b>		0.10	1		10/22/21 09:02		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Kansas City						
Total Dissolved Solids	<b>891</b>	mg/L	13.3	1		10/21/21 14:13		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City						
Chloride	<b>200</b>	mg/L	50.0	50		10/22/21 11:55	16887-00-6	
Sulfate	<b>277</b>	mg/L	20.0	20		10/22/21 10:43	14808-79-8	

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## ANALYTICAL RESULTS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

Sample: WETLAND-DG 1		Lab ID: 60383831003		Collected: 10/20/21 14:20		Received: 10/21/21 07:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Benzene	0.54J	ug/L	0.50	1		10/22/21 09:30	71-43-2		
Ethylbenzene	ND	ug/L	0.50	1		10/22/21 09:30	100-41-4		
Naphthalene	ND	ug/L	10.0	1		10/22/21 09:30	91-20-3		
Toluene	1.8	ug/L	1.0	1		10/22/21 09:30	108-88-3		
1,2,4-Trimethylbenzene	0.81J	ug/L	1.0	1		10/22/21 09:30	95-63-6		
1,3,5-Trimethylbenzene	1.5	ug/L	1.0	1		10/22/21 09:30	108-67-8		
Xylene (Total)	5.4	ug/L	1.5	1		10/22/21 09:30	1330-20-7		
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120	1		10/22/21 09:30	460-00-4		
Toluene-d8 (S)	103	%	80-120	1		10/22/21 09:30	2037-26-5		
1,2-Dichlorobenzene-d4 (S)	98	%	80-120	1		10/22/21 09:30	2199-69-1		
Preservation pH	1.0		0.10	1		10/22/21 09:30			
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	895	mg/L	13.3	1		10/21/21 14:13			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	207	mg/L	20.0	20		10/22/21 10:55	16887-00-6		
Sulfate	143	mg/L	20.0	20		10/22/21 10:55	14808-79-8		

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## ANALYTICAL RESULTS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

Sample: CONFLUENCE-DG 2		Lab ID: 60383831004	Collected: 10/20/21 14:40	Received: 10/21/21 07:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City						
Benzene	0.76J	ug/L	0.50	1		10/22/21 09:16	71-43-2	
Ethylbenzene	ND	ug/L	0.50	1		10/22/21 09:16	100-41-4	
Naphthalene	ND	ug/L	10.0	1		10/22/21 09:16	91-20-3	
Toluene	0.39J	ug/L	1.0	1		10/22/21 09:16	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/21 09:16	95-63-6	
1,3,5-Trimethylbenzene	0.93J	ug/L	1.0	1		10/22/21 09:16	108-67-8	
Xylene (Total)	1.6J	ug/L	1.5	1		10/22/21 09:16	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	99	%	80-120	1		10/22/21 09:16	460-00-4	
Toluene-d8 (S)	99	%	80-120	1		10/22/21 09:16	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	98	%	80-120	1		10/22/21 09:16	2199-69-1	
Preservation pH	1.0		0.10	1		10/22/21 09:16		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Kansas City						
Total Dissolved Solids	879	mg/L	13.3	1		10/21/21 14:13		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City						
Chloride	207	mg/L	20.0	20		10/22/21 11:07	16887-00-6	
Sulfate	143	mg/L	20.0	20		10/22/21 11:07	14808-79-8	

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## ANALYTICAL RESULTS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

**Sample:** ACCESS RD CULVERT-DG 3 **Lab ID:** 60383831005 **Collected:** 10/20/21 15:00 **Received:** 10/21/21 07:30 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Pace Analytical Services - Kansas City								
Benzene	1.6	ug/L	0.50	1		10/22/21 07:51	71-43-2	
Ethylbenzene	ND	ug/L	0.50	1		10/22/21 07:51	100-41-4	
Naphthalene	ND	ug/L	10.0	1		10/22/21 07:51	91-20-3	
Toluene	0.51J	ug/L	1.0	1		10/22/21 07:51	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/21 07:51	95-63-6	
1,3,5-Trimethylbenzene	0.42J	ug/L	1.0	1		10/22/21 07:51	108-67-8	
Xylene (Total)	ND	ug/L	1.5	1		10/22/21 07:51	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	105	%	80-120	1		10/22/21 07:51	460-00-4	
Toluene-d8 (S)	98	%	80-120	1		10/22/21 07:51	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	103	%	80-120	1		10/22/21 07:51	2199-69-1	
Preservation pH	1.0		0.10	1		10/22/21 07:51		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Pace Analytical Services - Kansas City								
Total Dissolved Solids	1130	mg/L	13.3	1		10/21/21 14:13		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Pace Analytical Services - Kansas City								
Chloride	214	mg/L	20.0	20		10/22/21 11:19	16887-00-6	
Sulfate	265	mg/L	20.0	20		10/22/21 11:19	14808-79-8	

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## ANALYTICAL RESULTS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

**Sample:** ROBINSON A CULVERT-DG 4 **Lab ID:** 60383831006 **Collected:** 10/20/21 13:50 **Received:** 10/21/21 07:30 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Pace Analytical Services - Kansas City								
Benzene	ND	ug/L	0.50	1		10/22/21 08:05	71-43-2	
Ethylbenzene	ND	ug/L	0.50	1		10/22/21 08:05	100-41-4	
Naphthalene	ND	ug/L	10.0	1		10/22/21 08:05	91-20-3	
Toluene	ND	ug/L	1.0	1		10/22/21 08:05	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/21 08:05	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		10/22/21 08:05	108-67-8	
Xylene (Total)	ND	ug/L	1.5	1		10/22/21 08:05	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	103	%	80-120	1		10/22/21 08:05	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		10/22/21 08:05	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	99	%	80-120	1		10/22/21 08:05	2199-69-1	
Preservation pH	1.0		0.10	1		10/22/21 08:05		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Pace Analytical Services - Kansas City								
Total Dissolved Solids	1550	mg/L	20.0	1		10/21/21 14:13		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Pace Analytical Services - Kansas City								
Chloride	252	mg/L	20.0	20		10/22/21 11:06	16887-00-6	
Sulfate	508	mg/L	50.0	50		10/22/21 13:20	14808-79-8	

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## ANALYTICAL RESULTS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

Sample: DRAINAGE MID PT-DG 5		Lab ID: 60383831007		Collected: 10/20/21 13:00		Received: 10/21/21 07:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Benzene	0.83J	ug/L	0.50	1		10/22/21 08:34	71-43-2		
Ethylbenzene	ND	ug/L	0.50	1		10/22/21 08:34	100-41-4		
Naphthalene	ND	ug/L	10.0	1		10/22/21 08:34	91-20-3		
Toluene	ND	ug/L	1.0	1		10/22/21 08:34	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/21 08:34	95-63-6		
1,3,5-Trimethylbenzene	0.27J	ug/L	1.0	1		10/22/21 08:34	108-67-8		
Xylene (Total)	ND	ug/L	1.5	1		10/22/21 08:34	1330-20-7		
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120	1		10/22/21 08:34	460-00-4		
Toluene-d8 (S)	99	%	80-120	1		10/22/21 08:34	2037-26-5		
1,2-Dichlorobenzene-d4 (S)	103	%	80-120	1		10/22/21 08:34	2199-69-1		
Preservation pH	1.0		0.10	1		10/22/21 08:34			
2540C Total Dissolved Solids		Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	1070	mg/L	13.3	1		10/21/21 14:14			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	218	mg/L	20.0	20		10/22/21 11:19	16887-00-6		
Sulfate	260	mg/L	20.0	20		10/22/21 11:19	14808-79-8		

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## ANALYTICAL RESULTS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

**Sample:** CO RIVER CONFLUENCE-DG 6 **Lab ID:** 60383831008 **Collected:** 10/20/21 13:20 **Received:** 10/21/21 07:30 **Matrix:** Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>								
Analytical Method: EPA 5030B/8260								
Pace Analytical Services - Kansas City								
Benzene	ND	ug/L	0.50	1		10/22/21 08:48	71-43-2	
Ethylbenzene	ND	ug/L	0.50	1		10/22/21 08:48	100-41-4	
Naphthalene	ND	ug/L	10.0	1		10/22/21 08:48	91-20-3	
Toluene	ND	ug/L	1.0	1		10/22/21 08:48	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		10/22/21 08:48	95-63-6	
1,3,5-Trimethylbenzene	<b>0.12J</b>	ug/L	1.0	1		10/22/21 08:48	108-67-8	
Xylene (Total)	ND	ug/L	1.5	1		10/22/21 08:48	1330-20-7	
<b>Surrogates</b>								
4-Bromofluorobenzene (S)	101	%	80-120	1		10/22/21 08:48	460-00-4	
Toluene-d8 (S)	102	%	80-120	1		10/22/21 08:48	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	100	%	80-120	1		10/22/21 08:48	2199-69-1	
Preservation pH	<b>1.0</b>		0.10	1		10/22/21 08:48		
<b>2540C Total Dissolved Solids</b>								
Analytical Method: SM 2540C								
Pace Analytical Services - Kansas City								
Total Dissolved Solids	<b>1030</b>	mg/L	13.3	1		10/21/21 14:14		
<b>300.0 IC Anions 28 Days</b>								
Analytical Method: EPA 300.0								
Pace Analytical Services - Kansas City								
Chloride	<b>210</b>	mg/L	20.0	20		10/22/21 11:33	16887-00-6	
Sulfate	<b>234</b>	mg/L	20.0	20		10/22/21 11:33	14808-79-8	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

QC Batch:	751152	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60383831001, 60383831002, 60383831003, 60383831004, 60383831005, 60383831006, 60383831007, 60383831008		

METHOD BLANK: 3007552

Matrix: Water

Associated Lab Samples: 60383831001, 60383831002, 60383831003, 60383831004, 60383831005, 60383831006, 60383831007, 60383831008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	ND	1.0	10/22/21 07:37	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	10/22/21 07:37	
Benzene	ug/L	ND	0.50	10/22/21 07:37	
Ethylbenzene	ug/L	ND	0.50	10/22/21 07:37	
Naphthalene	ug/L	ND	10.0	10/22/21 07:37	
Toluene	ug/L	ND	1.0	10/22/21 07:37	
Xylene (Total)	ug/L	ND	1.5	10/22/21 07:37	
1,2-Dichlorobenzene-d4 (S)	%	99	80-120	10/22/21 07:37	
4-Bromofluorobenzene (S)	%	99	80-120	10/22/21 07:37	
Toluene-d8 (S)	%	96	80-120	10/22/21 07:37	

LABORATORY CONTROL SAMPLE: 3007553

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.6	108	80-125	
1,3,5-Trimethylbenzene	ug/L	20	21.5	107	80-125	
Benzene	ug/L	20	22.2	111	80-120	
Ethylbenzene	ug/L	20	21.4	107	80-120	
Naphthalene	ug/L	20	21.1	106	70-120	
Toluene	ug/L	20	20.8	104	80-120	
Xylene (Total)	ug/L	60	67.2	112	80-120	
1,2-Dichlorobenzene-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

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

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

QC Batch:	751115	Analysis Method:	SM 2540C
QC Batch Method:	SM 2540C	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60383831001, 60383831002, 60383831003, 60383831004, 60383831005, 60383831006, 60383831007, 60383831008		

METHOD BLANK:	3007404	Matrix:	Water
Associated Lab Samples:	60383831001, 60383831002, 60383831003, 60383831004, 60383831005, 60383831006, 60383831007, 60383831008		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	10/21/21 14:12	

LABORATORY CONTROL SAMPLE:	3007405					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	983	98	80-120	

SAMPLE DUPLICATE:	3007406					
Parameter	Units	60383831001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	880	893	2	10	

SAMPLE DUPLICATE:	3007407					
Parameter	Units	60383833003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2370	2490	5	10	

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## QUALITY CONTROL DATA

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

QC Batch:	751199	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Kansas City
Associated Lab Samples:	60383831001, 60383831002, 60383831003, 60383831004, 60383831005, 60383831006, 60383831007, 60383831008		

METHOD BLANK:	3007668	Matrix:	Water
Associated Lab Samples:	60383831001, 60383831002, 60383831003, 60383831004, 60383831005, 60383831006, 60383831007, 60383831008		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/22/21 09:20	
Sulfate	mg/L	ND	1.0	10/22/21 09:20	

LABORATORY CONTROL SAMPLE: 3007669						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	4.6	93	90-110	
Sulfate	mg/L	5	5.0	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3007670 3007671												
Parameter	Units	60383831001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	206	100	100	317	299	111	94	80-120	6	15	
Sulfate	mg/L	145	100	100	253	235	107	90	80-120	7	15	

MATRIX SPIKE SAMPLE: 3007672							
Parameter	Units	60383833002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L		29.0	25	53.3	97	80-120
Sulfate	mg/L		729	500	1220	99	80-120

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## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

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### 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.

### BATCH QUALIFIERS

Batch: 751152

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TERRA ENERGY PARTNERS-RIVER RA

Pace Project No.: 60383831

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60383831001	WETLAND-UG 1	EPA 5030B/8260	751152		
60383831002	WETLAND-BREACH PT	EPA 5030B/8260	751152		
60383831003	WETLAND-DG 1	EPA 5030B/8260	751152		
60383831004	CONFLUENCE-DG 2	EPA 5030B/8260	751152		
60383831005	ACCESS RD CULVERT-DG 3	EPA 5030B/8260	751152		
60383831006	ROBINSON A CULVERT-DG 4	EPA 5030B/8260	751152		
60383831007	DRAINAGE MID PT-DG 5	EPA 5030B/8260	751152		
60383831008	CO RIVER CONFLUENCE-DG 6	EPA 5030B/8260	751152		
60383831001	WETLAND-UG 1	SM 2540C	751115		
60383831002	WETLAND-BREACH PT	SM 2540C	751115		
60383831003	WETLAND-DG 1	SM 2540C	751115		
60383831004	CONFLUENCE-DG 2	SM 2540C	751115		
60383831005	ACCESS RD CULVERT-DG 3	SM 2540C	751115		
60383831006	ROBINSON A CULVERT-DG 4	SM 2540C	751115		
60383831007	DRAINAGE MID PT-DG 5	SM 2540C	751115		
60383831008	CO RIVER CONFLUENCE-DG 6	SM 2540C	751115		
60383831001	WETLAND-UG 1	EPA 300.0	751199		
60383831002	WETLAND-BREACH PT	EPA 300.0	751199		
60383831003	WETLAND-DG 1	EPA 300.0	751199		
60383831004	CONFLUENCE-DG 2	EPA 300.0	751199		
60383831005	ACCESS RD CULVERT-DG 3	EPA 300.0	751199		
60383831006	ROBINSON A CULVERT-DG 4	EPA 300.0	751199		
60383831007	DRAINAGE MID PT-DG 5	EPA 300.0	751199		
60383831008	CO RIVER CONFLUENCE-DG 6	EPA 300.0	751199		

## REPORT OF LABORATORY ANALYSIS

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### Sample Condition Upon Receipt

# WO# : 60383831



Client Name: Terra Energy

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

Tracking #: 500206519250/9250 Pace Shipping Label Used? Yes ☐ No ☒

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

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

Thermometer Used: T-299 Type of Ice: Wet Blue ☐ None ☐

Cooler Temperature (°C): As-read 1.8 Corr. Factor -0.2 Corrected 1.6

Date and initials of person examining contents:

Temperature should be above freezing to 6°C 2.1

1.9

10/21/21

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>24hr</u>
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>WT</u>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers requiring pH preservation in compliance? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , HCl<2; NaOH>9 Sulfide, NaOH>10 Cyanide) (Exceptions: VOA, Micro, O&G, KS TPH, OK-DRO) LOT#	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	List sample IDs, volumes, lot #'s of preservative and the date/time added.
Cyanide water sample checks:		
Lead acetate strip turns dark? (Record only)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples from USDA Regulated Area: State:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" 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:

Date:



**Table 915-1  
CLEANUP CONCENTRATIONS**

<b>Contaminant of Concern</b>	<b>Concentrations</b>
Soil TPH (total volatile [C <sub>8</sub> -C <sub>10</sub> ] and extractable [C <sub>10</sub> -C <sub>36</sub> ] hydrocarbons)	500mg/kg
Soils and Groundwater - liquid hydrocarbons including condensate and oil	below visual detection limits
<b>Soil Suitability for Reclamation</b>	
Electrical conductivity (EC) (by saturated paste method) <sup>1,2</sup>	<4mmhos/cm
Sodium adsorption ratio (SAR) (by saturated paste method) <sup>1,2,3</sup>	<6
pH (by saturated paste method) <sup>1,2</sup>	6-8.3
boron (hot water soluble soil extract) <sup>1,2,3</sup>	2mg/l
<b>Organic Compounds in Groundwater<sup>4</sup></b>	
benzene	5µg/l
toluene <sup>5</sup>	560 to 1,000µg/l
ethylbenzene	700µg/l
xylene (sum of o-, m- and p- isomers = total xylenes) <sup>5</sup>	1,400 to 10,000µg/l
naphthalene	140µg/l
1,2,4-trimethylbenzene	67µg/l
1,3,5-trimethylbenzene	67µg/l
<b>Groundwater Inorganic Parameters<sup>4</sup></b>	
total dissolved solids (TDS) <sup>1</sup>	<1.25 X local background
chloride ion <sup>1</sup>	250mg/l or <1.25 X local background
sulfate ion <sup>1</sup>	250mg/l or <1.25 X local background