

October 29, 2021

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

RE: Project: TEP-RIVER RANCH A-RISER SPILL  
Pace Project No.: 60384346

Dear Kris Rowe:

Enclosed are the analytical results for sample(s) received by the laboratory on October 28, 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: TEP-RIVER RANCH A-RISER SPILL

Pace Project No.: 60384346

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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: TEP-RIVER RANCH A-RISER SPILL

Pace Project No.: 60384346

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60384346001	WETLAND-BREACH PT	Water	10/27/21 15:15	10/28/21 09:00
60384346002	WETLAND-DG 1	Water	10/27/21 15:30	10/28/21 09:00

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: TEP-RIVER RANCH A-RISER SPILL

Pace Project No.: 60384346

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60384346001	WETLAND-BREACH PT	EPA 5030B/8260	PGH	11	PASI-K
		SM 2540C	BLA	1	PASI-K
		EPA 300.0	ALH	2	PASI-K
60384346002	WETLAND-DG 1	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: TEP-RIVER RANCH A-RISER SPILL

Pace Project No.: 60384346

Sample: WETLAND-BREACH PT		Lab ID: 60384346001		Collected: 10/27/21 15:15		Received: 10/28/21 09:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260 Pace Analytical Services - Kansas City							
Benzene	1.3	ug/L	0.50	0.14	1		10/29/21 08:21	71-43-2	
Ethylbenzene	ND	ug/L	0.50	0.12	1		10/29/21 08:21	100-41-4	
Naphthalene	ND	ug/L	10.0	0.82	1		10/29/21 08:21	91-20-3	
Toluene	4.0	ug/L	1.0	0.25	1		10/29/21 08:21	108-88-3	
1,2,4-Trimethylbenzene	1.3	ug/L	1.0	0.32	1		10/29/21 08:21	95-63-6	
1,3,5-Trimethylbenzene	3.5	ug/L	1.0	0.090	1		10/29/21 08:21	108-67-8	
Xylene (Total)	10.1	ug/L	1.5	0.28	1		10/29/21 08:21	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	80-120		1		10/29/21 08:21	460-00-4	
Toluene-d8 (S)	100	%	80-120		1		10/29/21 08:21	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	101	%	80-120		1		10/29/21 08:21	2199-69-1	
Preservation pH	1.0		0.10		1		10/29/21 08:21		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	994	mg/L	10.0	10.0	1		10/28/21 13:08		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	225	mg/L	20.0	7.8	20		10/29/21 13:55	16887-00-6	
Sulfate	153	mg/L	20.0	8.4	20		10/29/21 13:55	14808-79-8	

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## ANALYTICAL RESULTS

Project: TEP-RIVER RANCH A-RISER SPILL

Pace Project No.: 60384346

Sample: WETLAND-DG 1		Lab ID: 60384346002		Collected: 10/27/21 15:30		Received: 10/28/21 09:00		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	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	0.14	1		10/29/21 08:36	71-43-2	
Ethylbenzene	ND	ug/L	0.50	0.12	1		10/29/21 08:36	100-41-4	
Naphthalene	ND	ug/L	10.0	0.82	1		10/29/21 08:36	91-20-3	
Toluene	0.41J	ug/L	1.0	0.25	1		10/29/21 08:36	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.32	1		10/29/21 08:36	95-63-6	
1,3,5-Trimethylbenzene	0.36J	ug/L	1.0	0.090	1		10/29/21 08:36	108-67-8	
Xylene (Total)	ND	ug/L	1.5	0.28	1		10/29/21 08:36	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	80-120		1		10/29/21 08:36	460-00-4	
Toluene-d8 (S)	102	%	80-120		1		10/29/21 08:36	2037-26-5	
1,2-Dichlorobenzene-d4 (S)	104	%	80-120		1		10/29/21 08:36	2199-69-1	
Preservation pH	1.0		0.10		1		10/29/21 08:36		
<b>2540C Total Dissolved Solids</b>		Analytical Method: SM 2540C Pace Analytical Services - Kansas City							
Total Dissolved Solids	932	mg/L	13.3	13.3	1		10/28/21 13:08		
<b>300.0 IC Anions 28 Days</b>		Analytical Method: EPA 300.0 Pace Analytical Services - Kansas City							
Chloride	229	mg/L	20.0	7.8	20		10/29/21 14:29	16887-00-6	
Sulfate	158	mg/L	20.0	8.4	20		10/29/21 14:29	14808-79-8	

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## QUALITY CONTROL DATA

Project: TEP-RIVER RANCH A-RISER SPILL  
Pace Project No.: 60384346

QC Batch:	752907	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: 60384346001, 60384346002

METHOD BLANK: 3013513 Matrix: Water

Associated Lab Samples: 60384346001, 60384346002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	ND	1.0	0.32	10/29/21 07:39	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	0.090	10/29/21 07:39	
Benzene	ug/L	ND	0.50	0.14	10/29/21 07:39	
Ethylbenzene	ug/L	ND	0.50	0.12	10/29/21 07:39	
Naphthalene	ug/L	ND	10.0	0.82	10/29/21 07:39	
Toluene	ug/L	ND	1.0	0.25	10/29/21 07:39	
Xylene (Total)	ug/L	ND	1.5	0.28	10/29/21 07:39	
1,2-Dichlorobenzene-d4 (S)	%	101	80-120		10/29/21 07:39	
4-Bromofluorobenzene (S)	%	104	80-120		10/29/21 07:39	
Toluene-d8 (S)	%	100	80-120		10/29/21 07:39	

LABORATORY CONTROL SAMPLE: 3013514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	21.4	107	80-125	
1,3,5-Trimethylbenzene	ug/L	20	21.4	107	80-125	
Benzene	ug/L	20	21.3	106	80-120	
Ethylbenzene	ug/L	20	21.0	105	80-120	
Naphthalene	ug/L	20	18.4	92	70-120	
Toluene	ug/L	20	20.4	102	80-120	
Xylene (Total)	ug/L	60	64.9	108	80-120	
1,2-Dichlorobenzene-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			103	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.

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## QUALITY CONTROL DATA

Project: TEP-RIVER RANCH A-RISER SPILL

Pace Project No.: 60384346

QC Batch: 752753

Analysis Method: SM 2540C

QC Batch Method: SM 2540C

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Kansas City

Associated Lab Samples: 60384346001, 60384346002

METHOD BLANK: 3012930

Matrix: Water

Associated Lab Samples: 60384346001, 60384346002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	5.0	5.0	10/28/21 13:08	

LABORATORY CONTROL SAMPLE: 3012931

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	1000	1010	101	80-120	

SAMPLE DUPLICATE: 3012932

Parameter	Units	60384346001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	994	959	4	10	

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## QUALITY CONTROL DATA

Project: TEP-RIVER RANCH A-RISER SPILL  
Pace Project No.: 60384346

QC Batch:	752756	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: 60384346001, 60384346002

METHOD BLANK: 3012945 Matrix: Water

Associated Lab Samples: 60384346001, 60384346002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	0.46J	1.0	0.39	10/29/21 12:58	
Sulfate	mg/L	ND	1.0	0.42	10/29/21 12:58	

LABORATORY CONTROL SAMPLE: 3012946

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	5	5.1	102	90-110	
Sulfate	mg/L	5	5.4	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3012947 3012948

Parameter	Units	60384346001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	225	100	100	325	323	99	98	80-120	1	15	
Sulfate	mg/L	153	100	100	252	252	100	99	80-120	0	15	

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.

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## QUALIFIERS

Project: TEP-RIVER RANCH A-RISER SPILL

Pace Project No.: 60384346

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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: 752907

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

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TEP-RIVER RANCH A-RISER SPILL

Pace Project No.: 60384346

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60384346001	WETLAND-BREACH PT	EPA 5030B/8260	752907		
60384346002	WETLAND-DG 1	EPA 5030B/8260	752907		
60384346001	WETLAND-BREACH PT	SM 2540C	752753		
60384346002	WETLAND-DG 1	SM 2540C	752753		
60384346001	WETLAND-BREACH PT	EPA 300.0	752756		
60384346002	WETLAND-DG 1	EPA 300.0	752756		

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**Sample Condition Upon Receipt****WO# : 60384346**Client Name: HRL/Terra EnergyCourier: FedEx ☒ UPS ☐ VIA ☐ Clay ☐ PEX ☐ ECI ☐ Pace ☐ Xroads ☐ Client ☐ Other ☐Tracking #: 5002 06518805 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 2.3 Corr. Factor -0.2 Corrected 2.1

Date and initials of person examining contents:

Temperature should be above freezing to 6°C

PV 10/28/21

Chain of Custody present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Samples arrived within holding time:	<input type="checkbox"/> Yes <input checked="" 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	<u>24 Hr</u>
Sufficient volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Correct containers used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers intact:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Unpreserved 5035A / TX1005/1006 soils frozen in 48hrs?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Sample labels match COC: Date / time / ID / analyses	<input type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> No <input 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 checked="" type="checkbox"/> No	
Potassium iodide test strip turns blue/purple? (Preserve)	<input type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Additional labels attached to 5035A / TX1005 vials in the field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	

Client Notification/ Resolution:

Copy COC to Client? Y ☒ N ☐Field Data Required? Y ☐ N ☒

Person Contacted: \_\_\_\_\_

Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

**9608 Loriet Blvd  
Lenexa, KS 66219  
Ph: 913-563-1407  
Ph: 702-888-2153**

[illegible]

*Matrix	SS-Soil	GW-Groundwater	WW-WasteWater	DW-Drinking Water	OT-Other
<b>Remarks: Run the full COGCC Table 915-1 water analysis (See Attached)</b> <b>Pace Profile #: 14987 (Water)</b>					

Relinquished by (Sign)	Date: 10/27/21	Time: 1630	Relinquished by (Sign)	Samples Returned Via UPS FedEx	Condition: (Lab Use)
Relinquished by (Sign)	Date: 10/25/21	Time: 1700	Relinquished by (Sign)	Temp: 2.1 °C # Bot	COC Seal Intact Y N
Relinquished by (Sign)	Date: 10/25/21	Time: 1700	Relinquished by (Sign)	Date: 10/28/2020	pH Checked