2057 Commerce Drive
Midland, TX 79703

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432.520.7701 FAX

www.trcsolutions.com

February 8, 2018

Mike Bratcher
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 2
811 S. First Street
Artesia, NM 88210

Shelly Tucker
Carlsbad Field Office
United States Department of the Interior
Bureau of Land Management
620 E. Greene Street
Carlsbad, New Mexico 88220

Re: Soil Investigation Summary and Proposed Remediation Workplan
Canvasback 13 Federal #002H (2RP-4324)
GPS: N 32. 222781° W 103.723080°
Unit Letter "A", Section 13, Township 24 South, Range 31 East
Eddy County, New Mexico

Dear Mr. Bratcher and Ms. Tucker,

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG) has prepared this Soil Investigation Summary and Proposed Remediation Workplan (Workplan) for the Canvasback 13 Federal #002H Release Site (Release Site). The purpose of this Workplan is to propose remediation activities designed to advance the Canvasback 13 Federal #002H Release Site toward a New Mexico Oil Conservation Division (NMOCD) and Bureau of Land Management (BLM) approved Site Closure Status. The legal description of the Release Site is Unit Letter "A", Section 13, Township 24 South, Range 31 East, in Eddy County, New Mexico. The GPS coordinates for the site are N 32.222781° W 103.723080°. The subject property is owned by the United States Department of the Interior and administered by the BLM. A Site Location Map and Site and Sample Location Map are provided as Figure 1 and Figure 2, respectively.

On July 26, 2017, COG discovered a release had occurred near the Canvasback 13 Federal #002H. The release was attributed to the failure of a flowline, resulting in the release of approximately eighteen (18) barrels (bbls) of produced water, affecting an area measuring approximately three thousand (3,000) square feet (sq. ft.). During initial response activities, vacuum trucks were utilized to recover approximately sixteen

(16) bbls of produced water with a net loss of two (2) bbls. Upon discovering the release, the NMOCD and BLM were notified. Please reference the attached Release Notification and Corrective Action (Form C-141) for additional details.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) did not identify any registered water wells in Section 13, Township 24 South, Range 31 East. A reference map utilized by the NMOCD Artesia District Office indicates groundwater should be encountered between approximately three hundred (350) and three hundred seventy-five (375) ft. below ground surface (bgs). Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

No water wells were observed within one-thousand (1,000) feet of the Release Site. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

No surface water was observed within one-thousand (1,000) feet of the release. Based on the NMOCD site classification system, zero (0) points will be assigned to the subject area ranking as a result of this criterion.

Based on the NMOCD Site Classification criteria, the Release Site soil remediation levels are 10 milligrams per kilogram (mg/kg) for benzene, 50 mg/kg for benzene, toluene, ethylbenzene and xylenes (BTEX), and five thousand (5,000) mg/kg for total petroleum hydrocarbons (TPH). Per NMOCD request, chloride remediation levels for the Release Site will be 600 mg/kg.

On December 28, 2017, TRC conducted an initial investigation at the site. During the initial investigation, a series of hand-augered soil bores (SP #2 and SP #4) were advanced within the release margins in an effort to determine the vertical extent of soil impact. During the advancement of the soil bores, nine (8) soil samples (SP #2 @ Surf., SP #2 @ 1', SP #2 @ 2', SP #2 @3', SP #4 @ Surf., SP #4 @ 1', SP #4 @ 2', SP #4 @ 3') were collected and submitted to Xenco Laboratories in Midland, Texas for determination of chloride using Method 300/300.1. (See attached Figure 2 and Table 1 for sample locations and a summary of laboratory analytical results). Laboratory analytical results indicated chloride concentrations ranged from 439 mg/kg for soil sample SP #4 @ 3'to less than the applicable laboratory reporting limit (RL) in soil samples SP #4 @ Surface and SP #4 @ 1'. Chloride concentrations were less than the NMOCD RRAL in all of the submitted soil samples.

Soil samples SP #2 @ Surf. and SP #4 @ Surf. were also analyzed for concentrations of TPH and BTEX using methods Method SW 846-8015M and Method SW 846-8021B, respectively. Laboratory analytical results indicated TPH and BTEX concentrations were less than the applicable laboratory RL in each of the submitted soil samples.

In addition, TRC collected four (4) soil samples (North @ 1', South @ 1', East @ 1' and West @ 1') from the edges of the inferred release margins and submitted them to the laboratory for analysis of chloride. Laboratory analytical results indicated chloride concentrations were less than the applicable laboratory RL in each of the submitted soil samples with the exception of soil sample East @ 1', which exhibited a chloride concentration of 29.1 mg/kg. Chloride concentrations were less than the NMOCD RRAL in all of the submitted soil samples.

On January 19, 2018, TRC revisited the site in an effort to determine if soil was affected above the NMOCD RRAL for chloride. During the site visit, a series of investigated hand-augered soil bores were advanced within the release margins. During the advancement of the investigative hand-augered soil bores, field soil samples were collected a field screened for concentrations of chloride. Chloride field screen results indicated soil samples collected from one soil bore (SP-1) exhibited chloride concentrations above the NMOCD RRAL. Based on chloride field screen results, three (3) confirmation soil samples (SP-1 @ 1', SP-1 @ 2', and SP-1 @ 3') were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations ranged from 1,330 mg/kg in soil sample SP-1 @ 2' to 153 mg/kg in soil sample SP-1 @ 3'.

Based on the analytical results from soil samples collected during the initial release assessment on December 28, 2017, and January 19, 2018, COG proposes the following field activities designed to remediate the Canvasback 13 Federal #002H Release Site:

- Utilizing a backhoe and/or shovels, excavate impacted soil within the release margins in the areas represented by soil samples SP #1 @ 1' and SP #1 @ 2'to a depth of approximately three (3) ft. bgs, or until field test results indicated impacted soil affected above the NMOCD RRAL for chloride has been removed.
- Advance the sidewalls of the excavation toward the east and west until laboratory analytical results from confirmation soil samples indicate impacted soil affected above the NMOCD RRAL for chloride has been removed.
- Excavated soil will be temporarily stockpiled on-site, atop an impermeable liner, pending final disposition at an NMOCD-approved disposal facility.
- Upon receiving laboratory analytical results from confirmation soil samples, transport impacted soil to an NMOCD-approved disposal facility and backfill the excavated area with locally-sourced, non-impacted caliche.
- Upon completion of remediation activities and receipt of laboratory analytical result from confirmation soil samples, TRC will prepare and submit a "Remediation Summary and Site Closure Request" to the NMOCD and BLM detailing remediation activities and laboratory analytical results from confirmation soil samples.
- Upon completion of remediation activities, areas within the affected pasture disturbed by remediation activities will be reseeded with a BLM-approved seed mixture appropriate for the site. Seed may be spread utilizing a broadcaster and/or seed drill dependent on conditions at the site. In the event broadcasting is chosen as the seeding method, the affected area will be raked and/or dragged to inhibit the redisposition of seed.

COG is prepared to begin the activities outlined in this Proposed Remediation Workplan on NMOCD and BLM approval.

If you have any questions, or need any additional information, please feel free to contact Becky Haskell or myself by phone or email.

Respectfully,

Joel Lowry
Senior Project Manager
TRC Environmental Corporation

Jeff Kindley
Senior Project Manager
TRC Environmental Corporation

Attachments:

Figure 1 - Site Location Map
Figure 2 - Site and Sample Location Map
Table 1 - Concentrations of Benzene, BTEX, TPH and Chloride in Soil
Laboratory Analytical Results
Release Notification and Corrective Action (Form C-141)

cc: File

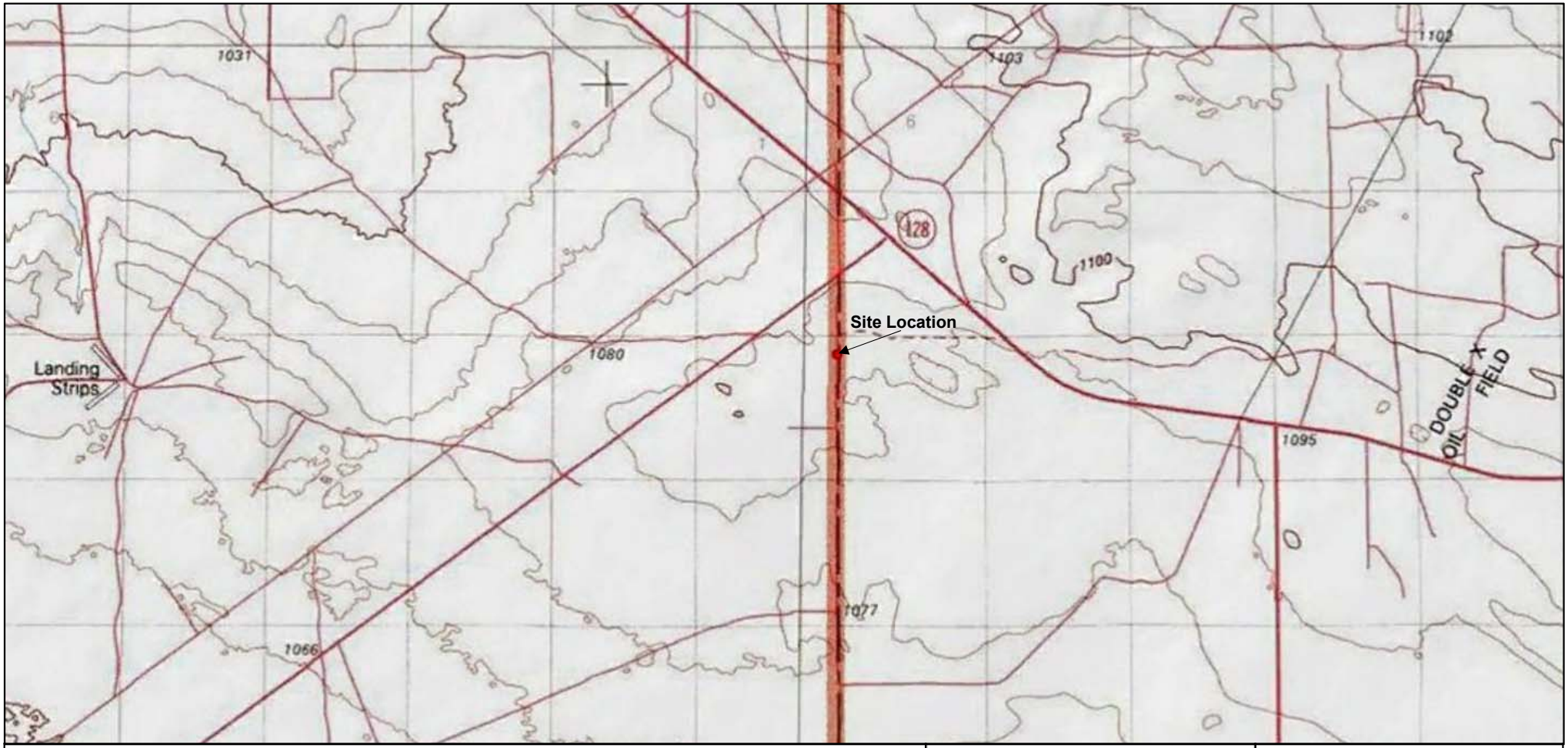


Figure 1

Site Location Map

COG Operating, LLC

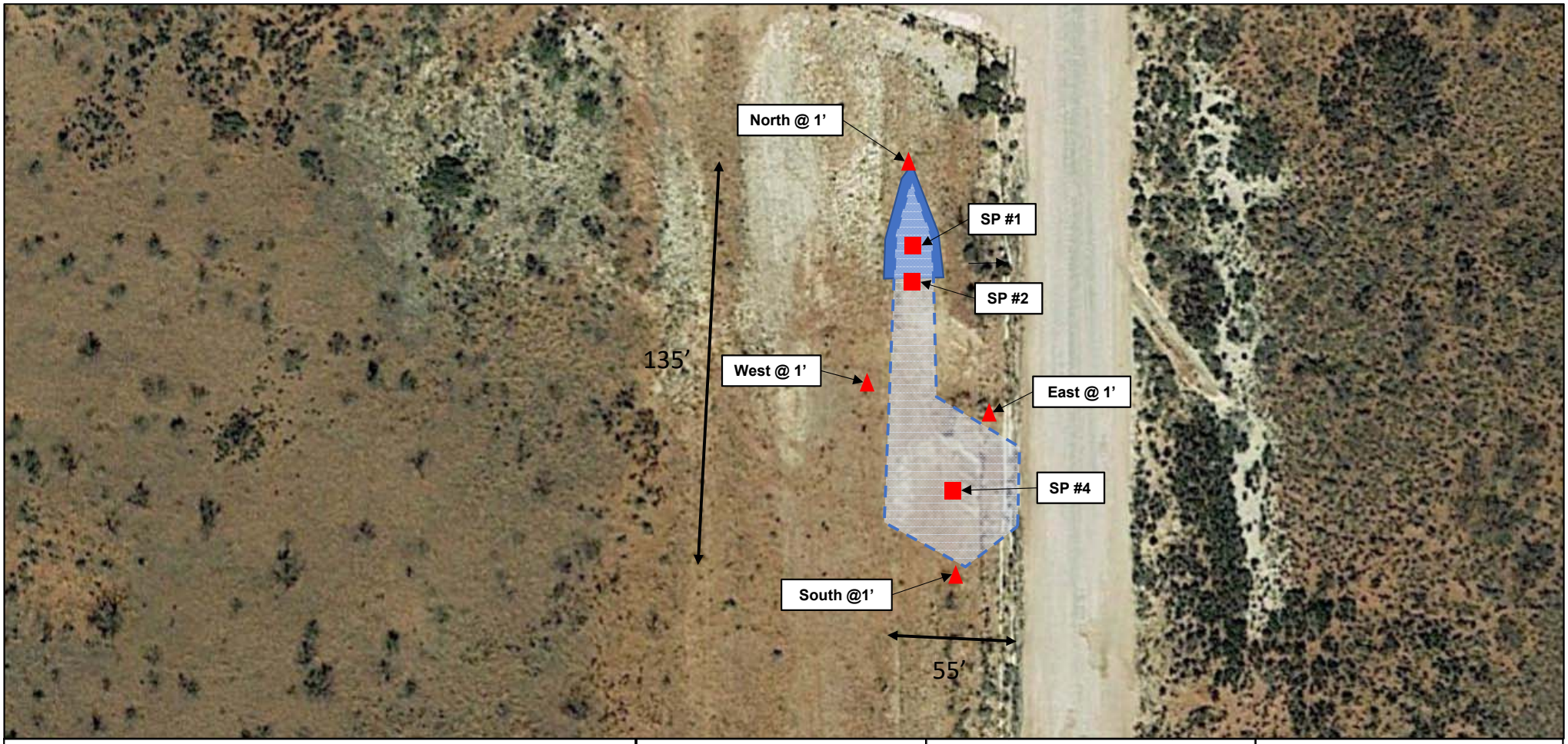
Canvasback 13 Federal #002H

Eddy County, New Mexico

Scale 1" = ~5,000'	
Drafted by: ZC	Checked by: JL
Draft: January 12, 2018	
Lat. N 32.222781 Long. W 103.723080	
UL "A", Sec. 13, T24S, R31E	
TRC Proj. No.: 293104	

TRC
Results you can rely on

2057 Commerce Drive
Midland, Texas 79703
432.520.7720



LEGEND:
- Vertical Delineation Sample Location
- Horizontal Delineation Sample Location
- Affected Area
- Excavate to ~3' bgs

Figure 2

Site & Sample Location Map
COG Operating, LLC
Canvasback 13 Federal #002H

Eddy County, New Mexico

Scale 1" = ~50'	
Drafted by: ZC	Checked by: JL
Draft: January 16, 2018	
Lat. N 32.222781 Long. W 103.723080	
UL "A", Sec. 13, T24S, R31E	
TRC Proj. No.: 293104	

TRC
Results you can rely on
2057 Commerce Drive
Midland, Texas 79703
432.520.7720

TABLE 1

CONCENTRATIONS OF BENZENE, BTEX, TPH AND CHLORIDE IN SOIL

COG OPERATING, LLC
CANVASBACK 13 FEDERAL 2H (1RP-4324)
LEA COUNTY, NEW MEXICO

All concentrations are reported in mg/Kg

SAMPLE LOCATION	SAMPLE DATE	SOIL STATUS	METHODS: SW 846-8021b						METHOD: SW 8015M				E 300.1
			BENZENE	TOLUENE	ETHYL-BENZENE	m, p - XYLENES	o - XYLENE	TOTAL BTEX	TPH GRO C_6-C_{10}	TPH DRO C_{10}-C_{28}	TPH ORO C_{28}-C_{35}	TOTAL TPH C_6-C_{35}	CHLORIDE
SP #2 @ Surface	12/28/17	In-Situ	<0.00199	<0.00199	<0.00199	<0.00398	<0.00199	<0.00398	<15.0	<15.0	<15.0	<15.0	40.1
SP #2 @ 1'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	419
SP #2 @ 2'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	422
SP #2 @ 3'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	36.8
North @ 1'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	<4.96
East @ 1'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	29.1
South @ 1'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	<4.96
West @ 1'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	<5.00
SP #4 @ Surface	12/28/17	In-Situ	<0.00201	<0.00201	<0.00201	<0.00402	<0.00201	<0.00402	<15.0	<15.0	<15.0	<15.0	<4.93
SP #4 @ 1'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	<4.90
SP #4 @ 2'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	19.8
SP #4 @ 3'	12/28/17	In-Situ	-	-	-	-	-	-	-	-	-	-	439
SP-1 @ 1'	01/19/18	In-Situ	-	-	-	-	-	-	-	-	-	-	**603**
SP-1 @ 2'	01/19/18	In-Situ	-	-	-	-	-	-	-	-	-	-	**1,330**
SP-1 @ 3'	01/19/18	In-Situ	-	-	-	-	-	-	-	-	-	-	153
NMOCD Recommended Remediation Action Levels			**10**					**50**				**5,000**	**600**

Certificate of Analysis Summary 572384

TRC Solutions, Inc, Midland, TX

Project Name: Canvasback 13 FED 2H

Project Id:

Contact: Joel Lowry

Project Location: Eddy Co, NM

Date Received in Lab: Fri Dec-29-17 12:45 pm

Report Date: 10-JAN-18

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	572384-001		572384-002		572384-003		572384-004		572384-005		572384-006	
	Field Id:	SP #2 @ SUR		SP #2 @ 1'		SP #2 @ 2'		SP #2 @ 3'		North @ 1'		East @ 1'	
	Depth:	0- In		1- ft		1- ft		1- ft		1- ft		1- ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-28-17 10:00		Dec-28-17 10:05		Dec-28-17 10:10		Dec-28-17 10:15		Dec-28-17 10:20		Dec-28-17 10:25	
BTEX by EPA 8021B	***Extracted:***	Jan-02-18 16:00											
	Analyzed:	Jan-03-18 12:17											
	Units/RL:	mg/kg	RL										
Benzene		<0.00199	0.00199										
Toluene		<0.00199	0.00199										
Ethylbenzene		<0.00199	0.00199										
m,p-Xylenes		<0.00398	0.00398										
o-Xylene		<0.00199	0.00199										
Total Xylenes		<0.00199	0.00199										
Total BTEX		<0.00199	0.00199										
Chloride by EPA 300	***Extracted:***	Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30	
	Analyzed:	Jan-02-18 21:58		Jan-02-18 22:19		Jan-02-18 22:26		Jan-02-18 22:47		Jan-02-18 22:54		Jan-02-18 23:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		40.1	4.99	419	4.98	422	4.97	36.8	4.97	<4.96	4.96	29.1	4.99
TPH by SW8015 Mod	***Extracted:***	Jan-08-18 12:00											
	Analyzed:	Jan-09-18 00:14											
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0										
Diesel Range Organics (DRO)		<15.0	15.0										
Oil Range Hydrocarbons (ORO)		<15.0	15.0										
Total TPH		<15	15										

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 572384

TRC Solutions, Inc, Midland, TX

Project Name: Canvasback 13 FED 2H

Project Id:
Contact: Joel Lowry
Project Location: Eddy Co, NM

Date Received in Lab: Fri Dec-29-17 12:45 pm
Report Date: 10-JAN-18
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	572384-007		572384-008		572384-009		572384-010					
	Field Id:	South @ 1'		West @ 1'		SP #4 @ SUR		SP #4 @1'					
	Depth:	1- ft		1- ft		1- ft		1- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Dec-28-17 10:30		Dec-28-17 10:35		Dec-28-17 10:40		Dec-28-17 10:45					
BTEX by EPA 8021B	***Extracted:***					Jan-02-18 16:00							
	Analyzed:					Jan-03-18 12:36							
	Units/RL:					mg/kg	RL						
Benzene						<0.00201	0.00201						
Toluene						<0.00201	0.00201						
Ethylbenzene						<0.00201	0.00201						
m,p-Xylenes						<0.00402	0.00402						
o-Xylene						<0.00201	0.00201						
Total Xylenes						<0.00201	0.00201						
Total BTEX						<0.00201	0.00201						
Chloride by EPA 300	***Extracted:***	Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30		Jan-02-18 16:30					
	Analyzed:	Jan-02-18 23:08		Jan-02-18 23:15		Jan-02-18 23:22		Jan-02-18 23:29					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		<4.96	4.96	<5.00	5.00	<4.93	4.93	<4.90	4.90				
TPH by SW8015 Mod	***Extracted:***					Jan-03-18 10:00							
	Analyzed:					Jan-04-18 00:37							
	Units/RL:					mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)						<15.0	15.0						
Diesel Range Organics (DRO)						<15.0	15.0						
Oil Range Hydrocarbons (ORO)						<15.0	15.0						
Total TPH						<15	15						

Kelsey Brooks
Project Manager

Analytical Report 572384

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Canvasback 13 FED 2H

10-JAN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

10-JAN-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **572384**
Canvasback 13 FED 2H
Project Address: Eddy Co, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 572384. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 572384 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP #2 @ SUR	S	12-28-17 10:00	0 In	572384-001
SP #2 @ 1'	S	12-28-17 10:05	1 ft	572384-002
SP #2 @ 2'	S	12-28-17 10:10	1 ft	572384-003
SP #2 @ 3'	S	12-28-17 10:15	1 ft	572384-004
North @ 1'	S	12-28-17 10:20	1 ft	572384-005
East @ 1'	S	12-28-17 10:25	1 ft	572384-006
South @ 1'	S	12-28-17 10:30	1 ft	572384-007
West @ 1'	S	12-28-17 10:35	1 ft	572384-008
SP #4 @ SUR	S	12-28-17 10:40	1 ft	572384-009
SP #4 @1'	S	12-28-17 10:45	1 ft	572384-010

Client Name: TRC Solutions, Inc
Project Name: Canvasback 13 FED 2H

Project ID:
Work Order Number(s): *572384*

Report Date: *10-JAN-18*
Date Received: *12/29/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:
Batch: LBA-3037402 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**SP #2 @ SUR**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-001	Date Collected:	12.28.17 10.00	Sample Depth:	0 In

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**40.1**	4.99	mg/kg	01.02.18 21.58		1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.08.18 12.00	Basis:	Wet Weight
Seq Number:	3037897				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.09.18 00.14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.09.18 00.14	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.09.18 00.14	U	1
Total TPH	PHC635	<15	15	mg/kg	01.09.18 00.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	01.09.18 00.14	
o-Terphenyl	84-15-1	106	%	70-135	01.09.18 00.14	

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**SP #2 @ SUR**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-001	Date Collected:	12.28.17 10.00	Sample Depth:	0 In
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.03.18 12.17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.03.18 12.17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.03.18 12.17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.03.18 12.17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.03.18 12.17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.03.18 12.17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.03.18 12.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	80-120	01.03.18 12.17	
1,4-Difluorobenzene	540-36-3	98	%	80-120	01.03.18 12.17	

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**SP #2 @ 1'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-002	Date Collected:	12.28.17 10.05	Sample Depth:	1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**419**	4.98	mg/kg	01.02.18 22.19		1

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**SP #2 @ 2'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-003	Date Collected:	12.28.17 10.10	Sample Depth:	1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**422**	4.97	mg/kg	01.02.18 22.26		1

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**SP #2 @ 3'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-004	Date Collected:	12.28.17 10.15	Sample Depth:	1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**36.8**	4.97	mg/kg	01.02.18 22.47		1

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**North @ 1'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-005	Date Collected:	12.28.17 10.20	Sample Depth:	1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	01.02.18 22.54	U	1

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**East @ 1'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-006	Date Collected:	12.28.17 10.25	Sample Depth:	1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**29.1**	4.99	mg/kg	01.02.18 23.01		1

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**South @ 1'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-007	Date Collected:	12.28.17 10.30	Sample Depth:	1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	01.02.18 23.08	U	1

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**West @ 1'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-008	Date Collected:	12.28.17 10.35	Sample Depth:	1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	01.02.18 23.15	U	1

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**SP #4 @ SUR**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-009	Date Collected:	12.28.17 10.40	Sample Depth:	1 ft

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.93	4.93	mg/kg	01.02.18 23.22	U	1

Analytical Method:	TPH by SW8015 Mod			Prep Method:	TX1005P
Tech:	JUM			% Moisture:	
Analyst:	JUM	Date Prep:	01.03.18 10.00	Basis:	Wet Weight
Seq Number:	3037559				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	01.04.18 00.37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	01.04.18 00.37	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	01.04.18 00.37	U	1
Total TPH	PHC635	<15	15	mg/kg	01.04.18 00.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	01.04.18 00.37	
o-Terphenyl	84-15-1	95	%	70-135	01.04.18 00.37	

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**SP #4 @ SUR**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-009	Date Collected:	12.28.17 10.40	Sample Depth:	1 ft
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	01.02.18 16.00	Basis:	Wet Weight
Seq Number:	3037402				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.03.18 12.36	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.03.18 12.36	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.03.18 12.36	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.03.18 12.36	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.03.18 12.36	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.03.18 12.36	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.03.18 12.36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	93	%	80-120	01.03.18 12.36	
1,4-Difluorobenzene	540-36-3	93	%	80-120	01.03.18 12.36	

Certificate of Analytical Results 572384

TRC Solutions, Inc, Midland, TX

Canvasback 13 FED 2H

Sample Id:	**SP #4 @1'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572384-010	Date Collected:	12.28.17 10.45	Sample Depth:	1 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.02.18 16.30	Basis:	Wet Weight
Seq Number:	3037498				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.90	4.90	mg/kg	01.02.18 23.29	U	1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

QC Summary 572384

TRC Solutions, Inc

Canvasback 13 FED 2H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037498 Matrix: Solid Date Prep: 01.02.18
MB Sample Id: 7636857-1-BLK LCS Sample Id: 7636857-1-BKS LCSD Sample Id: 7636857-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	241	96	247	99	90-110	2	20	mg/kg	01.02.18 20:07	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037498 Matrix: Soil Date Prep: 01.02.18
Parent Sample Id: 572348-016 MS Sample Id: 572348-016 S MSD Sample Id: 572348-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	54.9	249	297	97	316	105	90-110	6	20	mg/kg	01.02.18 20:28	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037498 Matrix: Soil Date Prep: 01.02.18
Parent Sample Id: 572384-001 MS Sample Id: 572384-001 S MSD Sample Id: 572384-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.1	250	302	105	293	101	90-110	3	20	mg/kg	01.02.18 22:05	

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3037559 Matrix: Solid Date Prep: 01.03.18
MB Sample Id: 7637042-1-BLK LCS Sample Id: 7637042-1-BKS LCSD Sample Id: 7637042-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1020	102	942	94	70-135	8	35	mg/kg	01.03.18 20:12	
Diesel Range Organics (DRO)	<15.0	1000	1040	104	1000	100	70-135	4	35	mg/kg	01.03.18 20:12	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	106		114		102		70-135	%	01.03.18 20:12
o-Terphenyl	110		116		88		70-135	%	01.03.18 20:12

MS/MSD Percent Recovery [D] = 100*(C-A) / B LCS = Laboratory Control Sample MS = Matrix Spike
Relative Percent Difference RPD = 200* | (C-E) / (C+E) | A = Parent Result B = Spike Added
LCS/LCSD Recovery [D] = 100 * (C) / [B] C = MS/LCS Result D = MSD/LCSD % Rec
E = MSD/LCSD Result

QC Summary 572384

TRC Solutions, Inc

Canvasback 13 FED 2H

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3037897 Matrix: Solid Date Prep: 01.08.18
MB Sample Id: 7637141-1-BLK LCS Sample Id: 7637141-1-BKS LCSD Sample Id: 7637141-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	832	83	794	79	70-135	5	35	mg/kg	01.08.18 15:52	
Diesel Range Organics (DRO)	<15.0	999	866	87	823	82	70-135	5	35	mg/kg	01.08.18 15:52	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	82		86		82		70-135	%	01.08.18 15:52
o-Terphenyl	84		77		90		70-135	%	01.08.18 15:52

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3037559 Matrix: Soil Date Prep: 01.03.18
Parent Sample Id: 572348-021 MS Sample Id: 572348-021 S MSD Sample Id: 572348-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	773	77	784	78	70-135	1	35	mg/kg	01.03.18 21:10	
Diesel Range Organics (DRO)	31.4	1000	832	80	836	80	70-135	0	35	mg/kg	01.03.18 21:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		110		70-135	%	01.03.18 21:10
o-Terphenyl	108		111		70-135	%	01.03.18 21:10

Analytical Method: **TPH by SW8015 Mod** Prep Method: TX1005P
Seq Number: 3037897 Matrix: Soil Date Prep: 01.08.18
Parent Sample Id: 572801-001 MS Sample Id: 572801-001 S MSD Sample Id: 572801-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	998	585	59	591	59	70-135	1	35	mg/kg	01.08.18 16:56	X
Diesel Range Organics (DRO)	<15.0	998	646	65	610	61	70-135	6	35	mg/kg	01.08.18 16:56	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	77		77		70-135	%	01.08.18 16:56
o-Terphenyl	77		75		70-135	%	01.08.18 16:56

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

QC Summary 572384

TRC Solutions, Inc

Canvasback 13 FED 2H

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3037402 Matrix: Solid Date Prep: 01.02.18

MB Sample Id: 7636912-1-BLK LCS Sample Id: 7636912-1-BKS LCSD Sample Id: 7636912-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0760	76	0.0750	75	70-130	1	35	mg/kg	01.02.18 22:59	
Toluene	<0.00200	0.100	0.0755	76	0.0763	76	70-130	1	35	mg/kg	01.02.18 22:59	
Ethylbenzene	<0.00200	0.100	0.0895	90	0.0882	88	71-129	1	35	mg/kg	01.02.18 22:59	
m,p-Xylenes	<0.00401	0.200	0.174	87	0.171	86	70-135	2	35	mg/kg	01.02.18 22:59	
o-Xylene	<0.00200	0.100	0.0863	86	0.0851	85	71-133	1	35	mg/kg	01.02.18 22:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		116		115		80-120	%	01.02.18 22:59
4-Bromofluorobenzene	85		120		109		80-120	%	01.02.18 22:59

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B

Seq Number: 3037402 Matrix: Soil Date Prep: 01.02.18

Parent Sample Id: 572348-015 MS Sample Id: 572348-015 S MSD Sample Id: 572348-015 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0450	45	0.0464	46	70-130	3	35	mg/kg	01.02.18 23:37	X
Toluene	<0.00199	0.0996	0.0439	44	0.0433	43	70-130	1	35	mg/kg	01.02.18 23:37	X
Ethylbenzene	<0.00199	0.0996	0.0515	52	0.0492	49	71-129	5	35	mg/kg	01.02.18 23:37	X
m,p-Xylenes	<0.00398	0.199	0.101	51	0.0936	47	70-135	8	35	mg/kg	01.02.18 23:37	X
o-Xylene	<0.00199	0.0996	0.0502	50	0.0484	48	71-133	4	35	mg/kg	01.02.18 23:37	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		102		80-120	%	01.02.18 23:37
4-Bromofluorobenzene	93		98		80-120	%	01.02.18 23:37

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200) | San Antonio, Texas (210-509-3334) | Phoenix, Arizona (480-355-0900)

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Xenco Quote # | Xenco Job # 572384

Client / Reporting Information

Company Name / Branch: TRC Environmental
Company Address: 2057 Commerce Drive, Midland, TX 79703
Email: jlowry@trcsolutions.com | Phone No:
Project Contact: Joel Lowry
Samplers's Name Joel Lowry

Project Information

Project Name/Number: Canvasback 13 Fed 2H
Project Location: Eddy County, New Mexico
Invoice To: COG % Becky Haskell
Invoice:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	CLORIDE E300	TPH 8015 M Ext	BTEX 8021	Field Comments
1	SP #2 @ SUR	0	12/28/2017	10:00	S	1									X	X	X	
2	SP #2 @ 1'	1'	12/28/2017	10:05	S	1									X			
3	SP #2 @ 2'	2'	12/28/2017	10:10	S	1									X			
4	SP #2 @ 3'	3'	12/28/2017	10:15	S	1									X			
5	NORTH @ 1'	1'	12/28/2017	10:20	S	1									X			
	EAST @ 1'	1'	12/28/2017	10:25	S	1									X			
7	SOUTH @ 1'	1'	12/28/2017	10:30	S	1									X			
8	WEST @ 1'	1'	12/28/2017	10:35	S	1									X			
9	SP #4 @ SUR	0	12/28/2017	10:40	S	1									X	X	X	
10	SP #4 @ 1'	1'	12/28/2017	10:45	S	1									X			

Temp: 2.5 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.3

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

email: RHaskell@concho.com Jlowry@trcsolutions.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12/28 4:55	Brittany COX			
2				B COX	12/29/17 12:45	
3						
4						1.02.17 12:00
5						

Custody Seal # | Preserved where applicable | On Ice | Cooler Temp. 0.7 | Thermo. Corr. Factor

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 12/29/2017 12:45:00 PM

Work Order #: 572384

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.7
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**Yes**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 01/02/2018

Checklist reviewed by: Date:

Certificate of Analysis Summary 572383

TRC Solutions, Inc, Midland, TX

Project Name: Canvasback 13 Fed 2H

Project Id:
Contact: Joel Lowry
Project Location: Eddy Co, NM

Date Received in Lab: Fri Dec-29-17 12:45 pm
Report Date: 09-JAN-18
Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	572383-001		572383-002			
	Field Id:	SP #4 @ 2'		SP #4 @ 3'			
	Depth:	2- ft		3- ft			
	Matrix:	SOIL		SOIL			
	Sampled:	Dec-28-17 10:50		Dec-28-17 10:55			
Chloride by EPA 300	***Extracted:***	Jan-03-18 11:00		Jan-03-18 11:00			
	Analyzed:	Jan-03-18 12:47		Jan-03-18 13:15			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		19.8	4.91	439	4.91		

Kelsey Brooks
Project Manager

Analytical Report 572383

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Canvasback 13 Fed 2H

09-JAN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

09-JAN-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **572383**
Canvasback 13 Fed 2H
Project Address: Eddy Co, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 572383. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 572383 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 572383

TRC Solutions, Inc, Midland, TX

Canvasback 13 Fed 2H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP #4 @ 2'	S	12-28-17 10:50	2 ft	572383-001
SP #4 @ 3'	S	12-28-17 10:55	3 ft	572383-002

Client Name: TRC Solutions, Inc
Project Name: Canvasback 13 Fed 2H

Project ID:
Work Order Number(s): *572383*

Report Date: *09-JAN-18*
Date Received: *12/29/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 572383

TRC Solutions, Inc, Midland, TX

Canvasback 13 Fed 2H

Sample Id:	**SP #4 @ 2'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572383-001	Date Collected:	12.28.17 10.50	Sample Depth:	2 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	01.03.18 11.00	Basis:	Wet Weight
Seq Number:	3037363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**19.8**	4.91	mg/kg	01.03.18 12.47		1

Certificate of Analytical Results 572383

TRC Solutions, Inc, Midland, TX

Canvasback 13 Fed 2H

Sample Id:	**SP #4 @ 3'**	Matrix:	Soil	Date Received:	12.29.17 12.45
Lab Sample Id:	572383-002	Date Collected:	12.28.17 10.55	Sample Depth:	3 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	LRI			% Moisture:	
Analyst:	LRI	Date Prep:	01.03.18 11.00	Basis:	Wet Weight
Seq Number:	3037363				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**439**	4.91	mg/kg	01.03.18 13.15		1

Final 1.000

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

QC Summary 572383

TRC Solutions, Inc

Canvasback 13 Fed 2H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037363 Matrix: Solid Date Prep: 01.03.18
MB Sample Id: 7636873-1-BLK LCS Sample Id: 7636873-1-BKS LCSD Sample Id: 7636873-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	236	94	234	94	90-110	1	20	mg/kg	01.03.18 10:47	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037363 Matrix: Soil Date Prep: 01.03.18
Parent Sample Id: 572383-001 MS Sample Id: 572383-001 S MSD Sample Id: 572383-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.8	246	269	101	270	102	90-110	0	20	mg/kg	01.03.18 12:54	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3037363 Matrix: Soil Date Prep: 01.03.18
Parent Sample Id: 572416-006 MS Sample Id: 572416-006 S MSD Sample Id: 572416-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.90	245	241	98	241	98	90-110	0	20	mg/kg	01.03.18 11:16	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

Final 1.000

CHAIN OF CUSTODY

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Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote # | Xenco Job # 572383

Client / Reporting Information

Company Name / Branch: TRC Environmental
Company Address: 2057 Commerce Drive, Midland, TX 79703
Email: jlowry@trcsolutions.com
Phone No:
Project Contact: Joel Lowry
Samplers's Name Joel Lowry

Project Information

Project Name/Number: Canvasback 13 Fed 2H
Project Location: Eddy County, New M
Invoice To: COG C/O Becky Haskell
Invoice:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH8015 M	CLORIDE E300	BTEX 8021	Field Comments
1	SP #4 @ 2'	2'	12/28/2017	10:50	S	1										X		
2	SP #4 @ 3'	3'	12/28/2017	10:55	S	1										X		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

email: RHaskell@concho.com Jlowry@trcsolutions.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date/Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12/28/1455	Brittany Cox	BCox	12-29-17 1245	
2						
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. 0.7 / Thermo. Corr. Factor
6						

CHAIN OF CUSTODY

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Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Quote #

Xenco Job # 572383

Client / Reporting Information

Company Name / Branch: TRC Environmental
Company Address: 2057 Commerce Drive, Midland, TX 79703
Email: jlowry@trcsolutions.com
Phone No:
Project Contact: Joel Lowry
Samplers's Name Joel Lowry

Project Information

Project Name/Number: Canvasback 13 Fed 2H
Project Location: Eddy County, New M
Invoice To: COG C/O Becky Haskell
Invoice:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	TPH8015 M	CLORIDE E300	BTEX 8021	Field Comments
1	SP #4 @ 2'	2'	12/28/2017	10:50	s	1										X		
2	SP #4 @ 3'	3'	12/28/2017	10:55	s	1										X		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Temp: 2.5 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.3

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

email: RHaskell@concho.com Jlowry@trcsolutions.com

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12/28/1455	Brittany Cox	2 BCox	12-29-17 1205	2 Maxwell Smith 1-02-17 12:00
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
						0.7

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 12/29/2017 12:45:00 PM

Work Order #: 572383

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	.7
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**
#5 Custody Seals intact on sample bottles?	**Yes**
#6*Custody Seals Signed and dated?	**Yes**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Shawnee Smith Date: 01/02/2018
Shawnee Smith

Checklist reviewed by: Kelsey Brooks Date: 01/02/2018
Kelsey Brooks

Certificate of Analysis Summary 574261

TRC Solutions, Inc, Midland, TX

Project Name: Canvasback 13 Federal #002H

Project Id:
Contact: Joel Lowry
Project Location: Lea Co, NM

Date Received in Lab: Mon Jan-22-18 03:45 pm
Report Date: 29-JAN-18
Project Manager: Kelsey Brooks

Analysis Requested											
	Lab Id:	574261-001		574261-002		574261-003					
	Field Id:	SP-1 @ 1'		SP-1 @ 2'		SP-1 @ 3'					
	Depth:	1'-		2'-		3'-					
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	Jan-19-18 11:00		Jan-19-18 11:05		Jan-19-18 11:10					
Chloride by EPA 300	***Extracted:***	Jan-25-18 15:00		Jan-25-18 15:00		Jan-25-18 15:00					
	Analyzed:	Jan-26-18 17:53		Jan-26-18 18:00		Jan-26-18 18:07					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		603	5.00	1330	25.0	153	4.98				

Kelsey Brooks
Project Manager

Analytical Report 574261

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Canvasback 13 Federal #002H

29-JAN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-17-23), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab code: TX01468):
Texas (T104704295-17-15), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12)
Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

29-JAN-18

Project Manager: **Joel Lowry**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **574261**
Canvasback 13 Federal #002H
Project Address: Lea Co, NM

Joel Lowry:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 574261. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 574261 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Sample Cross Reference 574261

TRC Solutions, Inc, Midland, TX

Canvasback 13 Federal #002H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1 @ 1'	S	01-19-18 11:00	1'	574261-001
SP-1 @ 2'	S	01-19-18 11:05	2'	574261-002
SP-1 @ 3'	S	01-19-18 11:10	3'	574261-003

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 574261

TRC Solutions, Inc, Midland, TX

Canvasback 13 Federal #002H

Sample Id:	**SP-1 @ 1'**	Matrix:	Soil	Date Received:	01.22.18 15.45
Lab Sample Id:	574261-001	Date Collected:	01.19.18 11.00	Sample Depth:	1'
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.25.18 15.00	Basis:	Wet Weight
Seq Number:	3039480				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**603**	5.00	mg/kg	01.26.18 17.53		1

Final 1.000

Certificate of Analytical Results 574261

TRC Solutions, Inc, Midland, TX

Canvasback 13 Federal #002H

Sample Id:	**SP-1 @ 2'**	Matrix:	Soil	Date Received:	01.22.18 15.45
Lab Sample Id:	574261-002	Date Collected:	01.19.18 11.05	Sample Depth:	2'
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.25.18 15.00	Basis:	Wet Weight
Seq Number:	3039480				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1330**	25.0	mg/kg	01.26.18 18.00		5

Certificate of Analytical Results 574261

TRC Solutions, Inc, Midland, TX

Canvasback 13 Federal #002H

Sample Id:	**SP-1 @ 3'**	Matrix:	Soil	Date Received:	01.22.18 15.45
Lab Sample Id:	574261-003	Date Collected:	01.19.18 11.10	Sample Depth:	3'
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	OJS			% Moisture:	
Analyst:	OJS	Date Prep:	01.25.18 15.00	Basis:	Wet Weight
Seq Number:	3039480				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**153**	4.98	mg/kg	01.26.18 18.07		1

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

***** (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(281) 240-4280
9701 Harry Hines Blvd , Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Blackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282	(602) 437-0330	

QC Summary 574261

TRC Solutions, Inc

Canvasback 13 Federal #002H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039480 Matrix: Solid Date Prep: 01.25.18
MB Sample Id: 7638082-1-BLK LCS Sample Id: 7638082-1-BKS LCSD Sample Id: 7638082-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	249	100	247	99	90-110	1	20	mg/kg	01.26.18 15:27	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039480 Matrix: Soil Date Prep: 01.25.18
Parent Sample Id: 573940-001 MS Sample Id: 573940-001 S MSD Sample Id: 573940-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	260	104	90-110	1	20	mg/kg	01.26.18 15:48	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3039480 Matrix: Soil Date Prep: 01.25.18
Parent Sample Id: 574260-005 MS Sample Id: 574260-005 S MSD Sample Id: 574260-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	94.3	255	350	100	349	100	90-110	0	20	mg/kg	01.26.18 17:26	

MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery

[D] = 100*(C-A) / B
RPD = 200* | (C-E) / (C+E) |
[D] = 100 * (C) / [B]

LCS = Laboratory Control Sample
A = Parent Result
C = MS/LCS Result
E = MSD/LCSD Result

MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200)
Dallas Texas (214-902-0300)
San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

Xenco Job # 574261

Client / Reporting Information

Company Name / Branch: TRC Environmental Corporation
Company Address: 2057 Commerce Drive, Midland, TX 79703
Email: jlowry@trcsolutions.com, zconder@trcsolutions.com
Phone No: 432-466-4450
Project Contact: Joel Lowry
Samplers's Name: Zach Conder

Project Information

Project Name/Number: Canvasback 13 Federal #002H
Project Location: Eddy Co, NM
Invoice To: COG Operating C/O Becky Haskell
Invoice:

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Analytical Information: TPH 8015 M Ext	Chloride E 300	BTEX 8021B	Hold	Field Comments
1	SP-1 @1'	1'	1/19/2018	11:00	S	1										X			
2	SP-1 @2'	2'	1/19/2018	11:05	S	1										X			
3	SP-1 @3'	3'	1/19/2018	11:10	S	1										X			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			

Temp: 2.1 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 1.9

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [x] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

ilowry@trcsolutions.com zconder@trcsolutions.com
rhaskell@concho.com
kblackburn@trcsolutions.com
dneel2@concho.com
FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1/22 3:45	1 GShearer	2 GShearer	1/22/18 3:45	2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By: 1/23/18 11:04
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. 1.3 / Thermo. Corr. Factor

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of $75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: TRC Solutions, Inc

Date/ Time Received: 01/22/2018 03:45:00 PM

Work Order #: 574261

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.3
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**No**
#18 Water VOC samples have zero headspace?	**N/A**

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Connie Hernandez Date: 01/23/2018

Checklist reviewed by: Kelsey Brooks Date: 01/23/2018

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 03 2017
RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised August 8, 2011

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

nAB1721951543 217955 OPERATOR ☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC OGRID # 229137		Contact:	Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701		Telephone No.	432-683-7443
Facility Name: Canvasback 13 Federal #002H		Facility Type:	Flowline

Surface Owner: Federal	Mineral Owner: Federal	API No. 30-015-40538

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	13	24S	31E	330	North	480	East	Eddy

Latitude 32.222781 Longitude -103.723080

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 18 bbls.	Volume Recovered: 16 bbls.
Source of Release: Flowline	Date and Hour of Occurrence: July 26, 2017 3:00 pm	Date and Hour of Discovery: July 26, 2017 3:00 pm
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The release was due to a ruptured flowline. The flowline was repaired.

Describe Area Affected and Cleanup Action Taken.*

The release was within a pasture. The fluid released originated from the Triste Draw 5 Federal Com #002H (API 30-025-40581) which is located in Lea County. The release occurred in Eddy county near the Canvasback 13 Federal #002H pad. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Rebecca Haskell	OIL CONSERVATION DIVISION
Printed Name: Rebecca Haskell	Signed By Mike Bratcher Approved by Environmental Specialist:
Title: Senior HSE Coordinator	Approval Date: 8/4/17 Expiration Date: N/A
E-mail Address: rhaskell@concho.com	Conditions of Approval: See attached ☐ Attached
Date: August 3, 2017 Phone: 432-683-7443	

* Attach Additional Sheets If Necessary

2RP-4324

8/4/17 AB