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December 20, 2018

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

Ryan Mann
Hobbs Field Office
New Mexico State Land Office
2827 North Dal Paso Street, Suite 117
Hobbs, NM 88240

Re: Remediation Summary and Closure Report
Myox 32 Fee #002H
API No. 30-015-41521
GPS: Latitude 32.093593 Longitude -104.110361
UL "N", Sec. 29, T25S, R28E
Eddy County, NM
NMOCD Ref. No. 2RP-4953

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this Remediation Summary and Closure Report for the Release Site known as the **Myox 32 Fee #002H.** Details of the release are summarized below:

RELEASE DETAILS					
Type of Release:	Produced Water	**Volume of Release:**	50 bbls		
		Volume Recovered:	45 bbls		
Source of Release:	Trunk Line	**Date of Release:**	8/23/18	**Date of Discovery:**	8/23/18
Was Immediate Notice Given?	Yes	**If, YES, to Whom?**	NMOCD District II		
Was a Watercourse Reached?	No	**If YES, Volume Impacting the Watercourse:**	NA		
Surface Owner:	State	**Mineral Owner:**	State		
Describe Cause of Problem and Remedial Action Taken:					
The release was attributed to a third party contractor striking a trunk line. The line was replaced and placed in service. A vacuum truck was dispatched to recover all freestanding fluids. The release affected an area in the pasture measuring approximately 3,750 square feet.					

Topographical and Aerial Maps are provided as Attachments #1 and #2. General Site Photographs are provided as Attachment #7. A Copy of the Initial Release Notification and Corrective Action (NMOCD Form C-141) is provided as Attachment #8.

REGULATORY FRAMEWORK

Surface impacts from unauthorized releases of crude oil, gases, produced water, condensate or other oil field waste which occur during normal oilfield operations are generally regulated by the New Mexico Oil Conservation Division (NMOCD) in accordance with 19.15.29 of the New Mexico Administrative Code (NMAC). 19.15.29 NMAC establishes reporting, site assessment/characterization, remediation, closure, variance and enforcement procedures. Table I of 19.15.29.12 NMAC determines the closure criteria for soils impacted by a release based on the depth to groundwater and the following site characteristics:

Approximate Depth to Groundwater	<50 ft
	☐ Yes ☑ No
Within 300 ft. of any continuously flowing or significant watercourse?	☐ Yes ☑ No
Within 200 ft. of any lakebed, sinkhole, or playa lake?	☐ Yes ☑ No
Within 300 ft. of an occupied permanent residence, school, hospital, or institution?	☐ Yes ☑ No
Within 500 ft. of a spring or private, domestic fresh water well?	☐ Yes ☑ No
Within 1,000 ft. of any fresh water well?	☐ Yes ☑ No
Within the incorporated municipal boundaries or within a municipal well field?	☐ Yes ☑ No
Within 300 ft. of a wetland?	☐ Yes ☑ No
Within the area overlying a subsurface mine?	☐ Yes ☑ No
Within an unstable area?	☐ Yes ☑ No
Within a 100-year floodplain?	☐ Yes ☑ No

A search of a groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) was conducted to determine the average depth to groundwater within a 1 Mile radius of the Release Site and identify any registered water wells within a 1/2 Mile of the Release Site. If none were identified, the approximate depth to groundwater was extrapolated from a Depth to Groundwater Map utilized by the NMOCD. Depth to groundwater information is provided as Attachment #4.

Based on the approximate depth to groundwater and site characteristics, the NMOCD Closure Criteria are as follows:

Table I
Closure Criteria for Soils Impacted by a Release

Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
< 50 ft	Chloride***	EPA 300.0 or SM4500 Cl B	600 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	100 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

SUMMARY OF FIELD ACTIVITIES

During the installation of a new underground flowline, a third-party contractor struck a COG underground trunk line resulting in the release of approximately fifty (50) barrels (bbls) of produce water. A vacuum truck was dispatched to the Release Site where it recovered forty-five (45) bbls of produced water. During initial response activities, a third party contractor repaired the damaged utility and conducted remediation activities, in an effort to advance the Site towards closure. TRC was later dispatched to the location and collected twelve (12) confirmation soil samples from the floor and sidewalls of the excavated area, each soil sample representing no more than 200 SqFt. The collected soil samples were submitted to the laboratory for analysis of Benzene, BTEX, TPH, and/or chloride concentrations. Upon receiving laboratory analytical data, sample areas exhibiting chloride concentrations above NMOCD Closure Criteria were advanced until visual and olfactory evidence suggested concentrations were below NMOCD Closure Criteria. An additional three (3) soil samples were collected from the floor and sidewalls of the excavated area representing no more than 200 SqFt. The collected samples were submitted to the laboratory for analysis of chloride concentrations. Upon receiving laboratory analytical results exhibiting concentrations below NMOCD Closure Criteria, the third-party contractor was dispatched to the Site and impacted soil was transported under manifest to a NMOCD-approved facility. The excavated area was backfilled with locally sourced, non-impacted "like" material. Figure 3 depicts the locations of confirmation soil samples. A table summarizing laboratory analytical results from confirmation soil samples is provided below:

Concentrations of BTEX, TPH and/or Chloride in Soil

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C_6-C_{10} (mg/kg)	DRO C_{10}-C_{28} (mg/kg)	GRO + DRO C_6-C_{28} (mg/kg)	ORO C_{28}-C_{35} (mg/kg)	TPH C_6-C_{35} (mg/kg)	Chloride (mg/kg)
East Floor Comp 1	10/2/2018	2'	Excavated	<0.0196	<0.0196	<3.92	<25.2	<25.2	<25.2	<25.2	**654**
East Floor Comp 1B @ 3'	11/19/2018	3'	In-Situ	-	-	-	-	-	-	-	<16.0
East Floor Comp 2	10/2/2018	2'	Excavated	<0.0198	<0.0198	<3.97	<25.1	<25.1	<25.1	<25.1	**645**
East Floor Comp 2B @ 3'	11/19/2018	3'	In-Situ	-	-	-	-	-	-	-	32.0
East Floor Comp 3	10/2/2018	2'	In-Situ	<0.0195	<0.0195	<3.91	<24.8	<24.8	<24.8	<24.8	328
East Floor Comp 4	10/2/2018	2'	In-Situ	<0.0195	<0.0195	<3.91	<25.0	<25.0	<25.0	<25.0	307
East EW Comp	10/2/2018	1'	In-Situ	<0.0199	<0.0199	<3.98	<25.0	<25.0	<25.0	<25.0	563
East NW Comp	10/2/2018	1'	In-Situ	<0.0178	<0.0178	<3.57	<25.2	<25.2	<25.2	<25.2	309
East SW Comp	10/2/2018	1'	In-Situ	<0.0200	<0.0200	<3.99	<25.1	<25.1	<25.1	<25.1	337
PT-1 @ 3.5'	10/2/2018	3.5'	In-Situ	<0.0188	<0.0188	<3.75	<24.8	<24.8	<24.8	<24.8	562
North Wall	10/2/2018	1.5'	In-Situ	<0.0200	<0.02	<4.00	<25.2	<25.2	<25.2	<25.2	45.0
South Wall	10/2/2018	1.5'	Excavated	<0.0196	<0.0196	<3.92	<25.2	<25.2	<25.2	<25.2	**1,260**
South Wall @ 1.5'	11/19/2018	1.5'	In-Situ	-	-	-	-	-	-	-	32.0
West Wall	10/2/2018	1.5'	In-Situ	<0.0199	<0.0199	<3.98	<25.2	<25.2	<25.2	<25.2	53.9
East Wall	10/2/2018	1.5'	In-Situ	<0.0192	<0.0192	<3.83	<25.2	<25.2	<25.2	<25.2	259
Closure Criteria				**10**	**50**	**-**	**-**	**-**	**-**	**100**	**600**

A Photographic Log is provided as Attachment #7.

SITE CLOSURE REQUEST

Based on laboratory analytical results from confirmation soil samples collected during the remediation activities, impacted soil within the release margins was determined to be below the Table I of 19.15.29.12 NMAC Closure Criteria for Soils Impacted by a Release. TRC on behalf of COG , respectfully requests the NMOCD grant closure approval for the Myox Fee #002H, which occurred on August 23, 2018.

Areas affected by the Release and associated remediation activities will be substantially restored to the condition which existed prior to the Release to the maximum extent practicable. Excavated areas will be backfilled with locally sourced, non-impacted "like" material placed at or near original relative positions. Upon reclaiming the affected area, the Site will be reseeded in accordance with the landowner and/or regulatory agency.

If you have any questions, or if additional information is required, please feel free to contact Becky Haskell or either of the undersigned by phone or email.

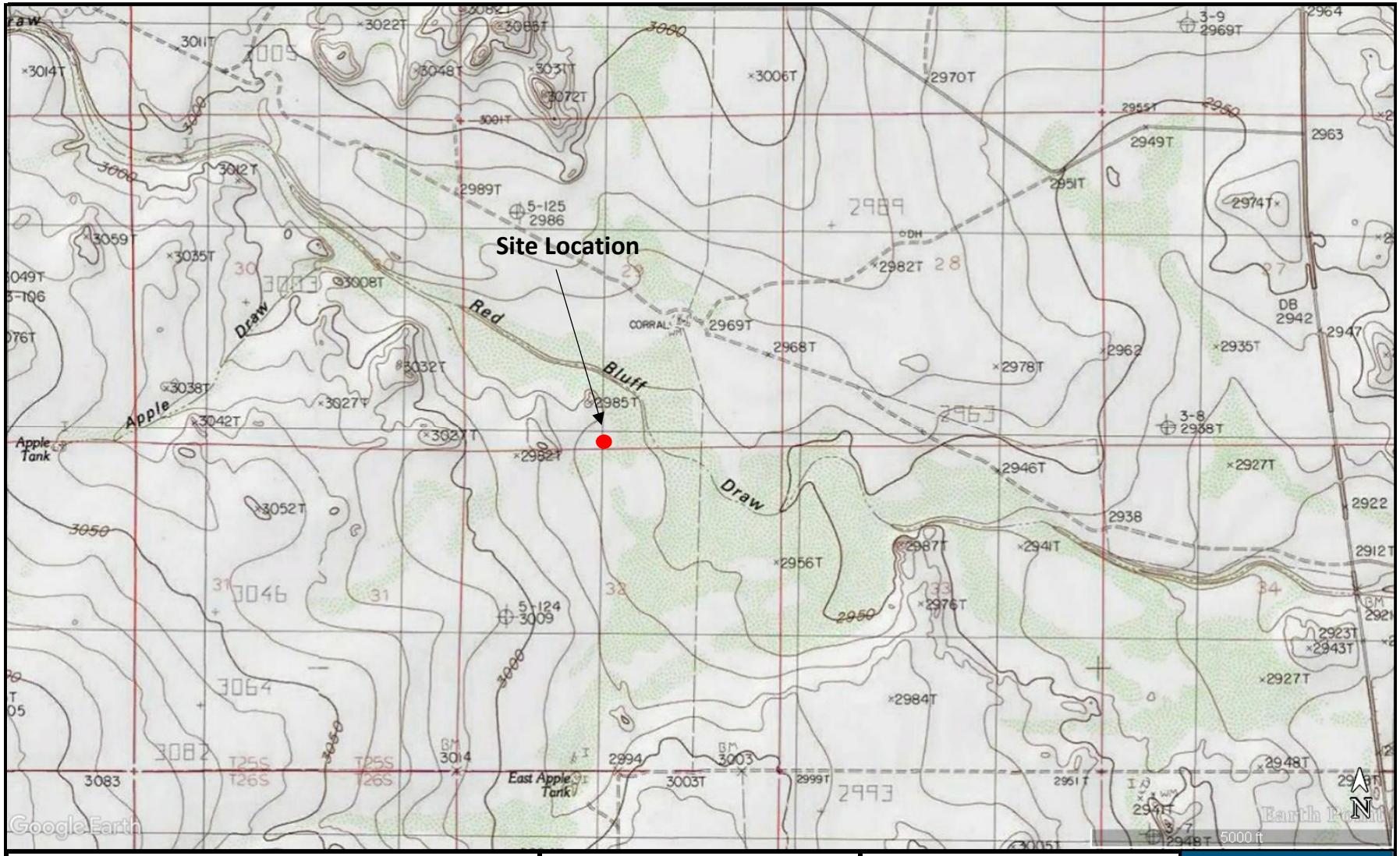
Respectfully,

Zachary Conder
Operations Manager
zconder@trcsolutions.com
(432) 234-5084

Curt Stanley
Senior Project Manager
cdstanley@trcsolutions.com
(432) 559-3296

Attachments:

Attachment #1-	Figure 1 - Topographical Map
Attachment #2-	Figure 2 - Aerial Map
Attachment #3-	Figure 3 - Site & Confirmation Sample Location Map
Attachment #4-	Depth to Groundwater Information
Attachment #5-	Laboratory Analytical Reports
Attachment #6-	Soil Profile
Attachment #7-	General Site Photographs
Attachment #8-	Release Notification and Corrective Action (FORM C-141)



LEGEND:

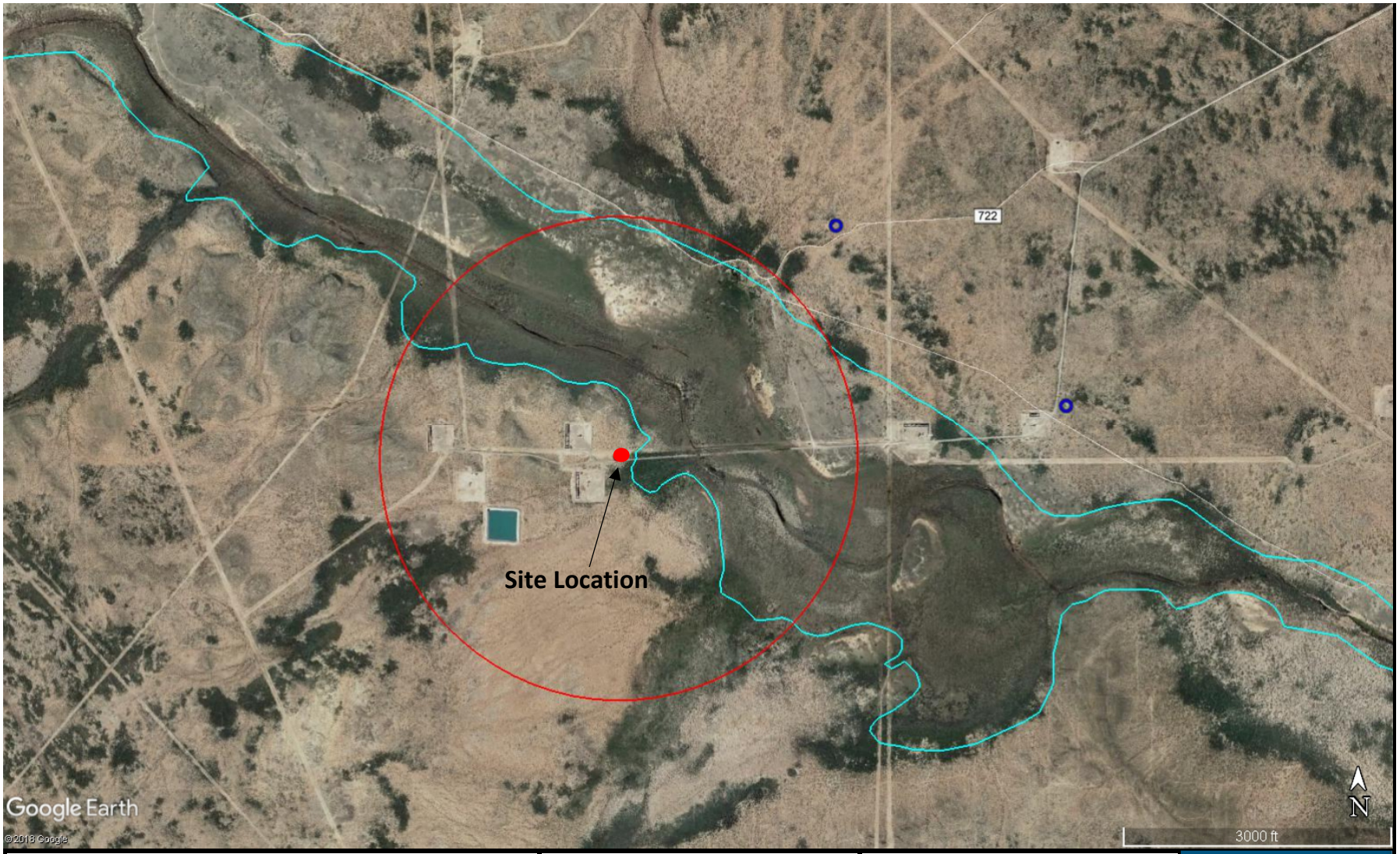
- Site Location

Figure 1

Topographical Map
COG Operating, LLC
Myox 32 Fee #002H
Eddy County, NM

Drafted by: BC | Checked by: ZC	
Draft: December 18, 2018	
GPS:	32.093593 -104.110361
UL "N", Sec. 29, T25S, R28E	
TRC Proj. No:	316870.9

TRC
Results you can rely on



LEGEND:

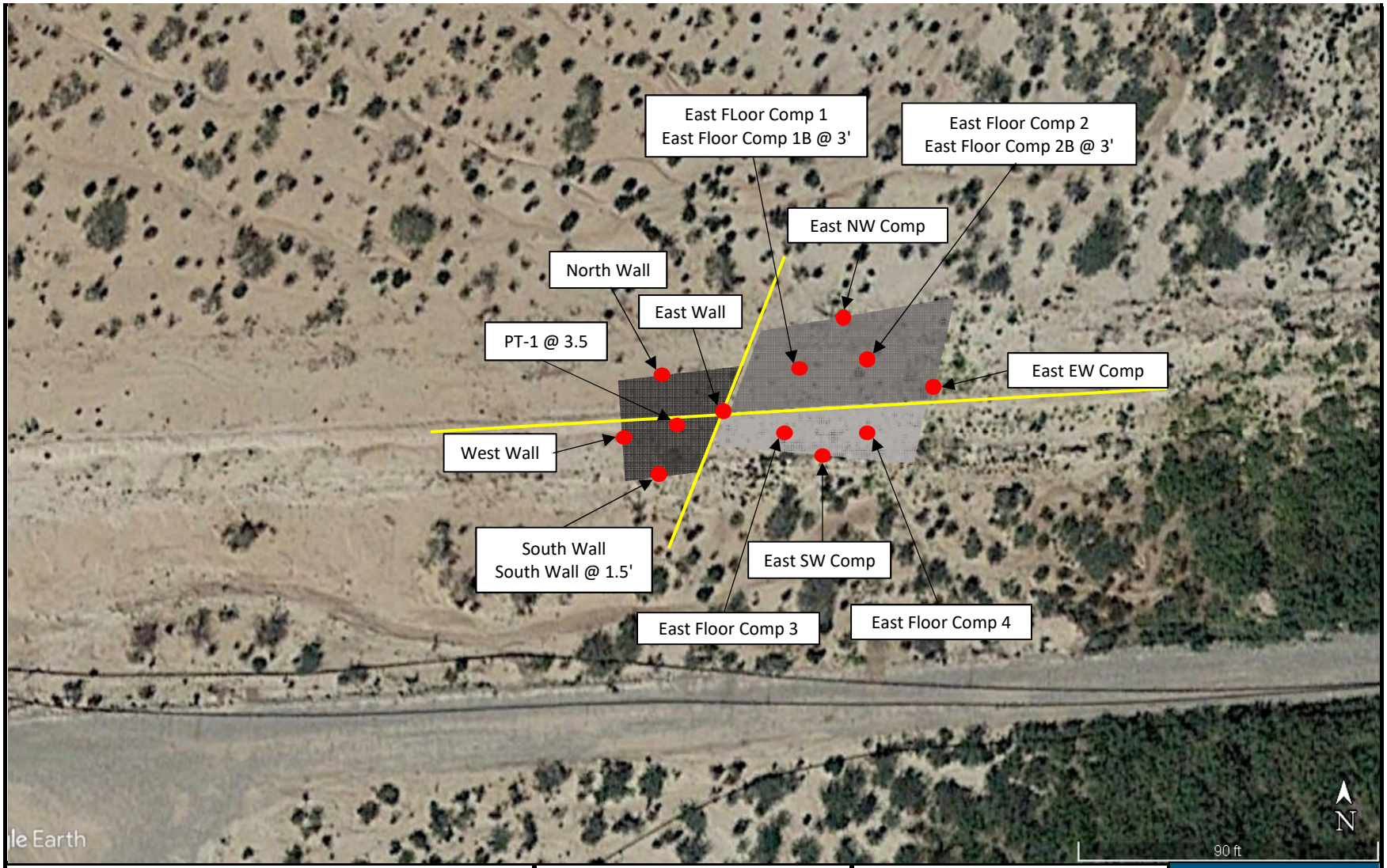
- Site Location
- Fresh Water Well
- 100-Year Floodplain
- High/Critical Karst
- Non-Industrial Building
- Municipal Well Field
- Subsurface Mine
- 1/2 Mile Radius

Figure 2

Aerial Map
COG Operating, LLC
Myox 32 Fee #002H
Eddy County, NM

Drafted by: BC | Checked by: ZC	
Draft: December 18, 2018	
GPS:	32.093593 -104.110361
UL "N", Sec. 29, T25S, R28E	
TRC Proj. No:	316870.9

TRC
Results you can rely on



LEGEND:

- Excavated Area 3.5'
- Excavated Area 3'
- Excavated Area 2'
- Sample Point Location

Figure 3

Site & Sample Location Map
COG Operating, LLC
Myox 32 Fee #002H
Eddy County, NM

Drafted by: BC | Checked by: ZC	
Draft: December 19, 2018	
GPS:	32.093593 -104.110361
UL "N", Sec. 29, T25S, R28E	
TRC Proj. No:	316870.9

TRC
Results you can rely on

New Mexico Office of the State Engineer

Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 03836 POD1		C	ED	2	2	4	29	25S	28E	584682	3551934	1070	300	30	270
C 01278		C	ED		4	3	28	25S	28E	585470	3551338*	1533	205	90	115

Average Depth to Water: **60 feet**

Minimum Depth: **30 feet**

Maximum Depth: **90 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 583947.17 **Northing (Y):** 3551156.13 **Radius:** 1610

***UTM location was derived from PLSS - see Help**

12/18/18 1:18 PM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Analytical Report 601349

for

TRC Solutions, Inc

Project Manager: Joel Lowry

Blackline

10-OCT-18

Collected By: Client

6701 Aberdeen, Suite 9 Lubbock, TX 79424

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

10-OCT-18

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

Reference: XENCO Report No(s): **601349**
Blackline
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) 601349. 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. 601349 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 601349

TRC Solutions, Inc, Midland, TX

Blackline

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
East Floor Comp 1	S	10-02-18 10:00	2 ft	601349-001
East Floor Comp 2	S	10-02-18 10:05	2 ft	601349-002
East Floor Comp 3	S	10-02-18 10:00	2 ft	601349-003
East Floor Comp 4	S	10-02-18 10:15	2 ft	601349-004
East EW Comp	S	10-02-18 10:20		601349-005
East NW Comp	S	10-02-18 10:25		601349-006
East SW Comp	S	10-02-18 10:30		601349-007
PT-1 @ 3.5'	S	10-02-18 10:35	3.5 ft	601349-008
North Wall	S	10-02-18 10:40		601349-009
South Wall	S	10-02-18 10:45		601349-010
West Wall	S	10-02-18 10:50		601349-011
East Wall	S	10-02-18 10:55		601349-012

Client Name: TRC Solutions, Inc
Project Name: Blackline

Project ID:
Work Order Number(s): *601349*

Report Date: *10-OCT-18*
Date Received: *10/03/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3065600 BTEX by EPA 8021B
Surrogate a,a,a-Trifluorotoluene recovered below QC limits Data confirmed by re-analysis. Samples affected are: 7663558-1-BLK,601349-005.
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3065605 TPH GRO by EPA 8015 Mod.
Surrogate a,a,a-Trifluorotoluene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 601349-012 SD,601349-011.

Batch: LBA-3065710 DRO-ORO By SW8015B
Surrogate Tricosane recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 601349-007.

Batch: LBA-3065851 Chloride by EPA 300
Lab Sample ID 601349-009 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 601349-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012.
The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Certificate of Analysis Summary 601349

TRC Solutions, Inc, Midland, TX

Project Name: Blackline

Project Id:

Contact: Joel Lowry

Project Location: Eddy Co, NM

Date Received in Lab: Wed Oct-03-18 04:50 pm

Report Date: 10-OCT-18

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	601349-001		601349-002		601349-003		601349-004		601349-005		601349-006	
	Field Id:	East Floor Comp 1		East Floor Comp 2		East Floor Comp 3		East Floor Comp 4		East EW Comp		East NW Comp	
	Depth:	2- ft		2- ft		2- ft		2- ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-02-18 10:00		Oct-02-18 10:05		Oct-02-18 10:00		Oct-02-18 10:15		Oct-02-18 10:20		Oct-02-18 10:25	
BTEX by EPA 8021B	***Extracted:***	Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30	
	Analyzed:	Oct-05-18 04:18		Oct-05-18 04:45		Oct-05-18 05:12		Oct-05-18 05:38		Oct-05-18 06:05		Oct-05-18 06:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0196	0.0196	<0.0198	0.0198	<0.0195	0.0195	<0.0195	0.0195	<0.0199	0.0199	<0.0178	0.0178
Toluene		<0.0196	0.0196	<0.0198	0.0198	<0.0195	0.0195	<0.0195	0.0195	<0.0199	0.0199	<0.0178	0.0178
Ethylbenzene		<0.0196	0.0196	<0.0198	0.0198	<0.0195	0.0195	<0.0195	0.0195	<0.0199	0.0199	<0.0178	0.0178
m,p-Xylenes		<0.0392	0.0392	<0.0397	0.0397	<0.0391	0.0391	<0.0391	0.0391	<0.0398	0.0398	<0.0357	0.0357
o-Xylene		<0.0196	0.0196	<0.0198	0.0198	<0.0195	0.0195	<0.0195	0.0195	<0.0199	0.0199	<0.0178	0.0178
Total Xylenes		<0.0196	0.0196	<0.0198	0.0198	<0.0195	0.0195	<0.0195	0.0195	<0.0199	0.0199	<0.0178	0.0178
Total BTEX		<0.0196	0.0196	<0.0198	0.0198	<0.0195	0.0195	<0.0195	0.0195	<0.0199	0.0199	<0.0178	0.0178
Chloride by EPA 300	***Extracted:***	Oct-09-18 12:00		Oct-09-18 12:00		Oct-09-18 12:00		Oct-09-18 12:00		Oct-09-18 12:00		Oct-09-18 12:00	
	Analyzed:	Oct-09-18 15:41		Oct-09-18 16:19		Oct-09-18 16:31		Oct-09-18 16:44		Oct-09-18 16:56		Oct-09-18 17:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		654	125	645	125	328	125	307	125	563	250	309	250
DRO-ORO By SW8015B	***Extracted:***	Oct-04-18 13:10		Oct-04-18 13:10		Oct-04-18 13:10		Oct-04-18 13:10		Oct-04-18 13:10		Oct-04-18 13:10	
	Analyzed:	Oct-05-18 19:08		Oct-05-18 20:55		Oct-05-18 21:30		Oct-05-18 22:06		Oct-05-18 22:41		Oct-05-18 23:18	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<25.2	25.2	<25.1	25.1	<24.8	24.8	<25.0	25.0	<25.0	25.0	<25.2	25.2
Oil Range Hydrocarbons (ORO)		<25.2	25.2	<25.1	25.1	<24.8	24.8	<25.0	25.0	<25.0	25.0	<25.2	25.2
TPH GRO by EPA 8015 Mod.	***Extracted:***	Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30	
	Analyzed:	Oct-05-18 04:18		Oct-05-18 04:45		Oct-05-18 05:12		Oct-05-18 05:38		Oct-05-18 06:05		Oct-05-18 06:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		<3.92	3.92	<3.97	3.97	<3.91	3.91	<3.91	3.91	<3.98	3.98	<3.57	3.57

Kelsey Brooks
Project Manager

Certificate of Analysis Summary 601349

TRC Solutions, Inc, Midland, TX

Project Name: Blackline

Project Id:

Contact: Joel Lowry

Project Location: Eddy Co, NM

Date Received in Lab: Wed Oct-03-18 04:50 pm

Report Date: 10-OCT-18

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	601349-007		601349-008		601349-009		601349-010		601349-011		601349-012	
	Field Id:	East SW Comp		PT-1 @ 3.5'		North Wall		South Wall		West Wall		East Wall	
	Depth:			3.5- ft									
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Oct-02-18 10:30		Oct-02-18 10:35		Oct-02-18 10:40		Oct-02-18 10:45		Oct-02-18 10:50		Oct-02-18 10:55	
BTEX by EPA 8021B	***Extracted:***	Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30	
	Analyzed:	Oct-05-18 06:59		Oct-05-18 07:26		Oct-05-18 07:53		Oct-05-18 10:07		Oct-05-18 10:34		Oct-05-18 01:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.0200	0.0200	<0.0188	0.0188	<0.0200	0.0200	<0.0196	0.0196	<0.0199	0.0199	<0.0192	0.0192
Toluene		<0.0200	0.0200	<0.0188	0.0188	<0.0200	0.0200	<0.0196	0.0196	<0.0199	0.0199	<0.0192	0.0192
Ethylbenzene		<0.0200	0.0200	<0.0188	0.0188	<0.0200	0.0200	<0.0196	0.0196	<0.0199	0.0199	<0.0192	0.0192
m,p-Xylenes		<0.0399	0.0399	<0.0375	0.0375	<0.0400	0.0400	<0.0392	0.0392	<0.0398	0.0398	<0.0383	0.0383
o-Xylene		<0.0200	0.0200	<0.0188	0.0188	<0.0200	0.0200	<0.0196	0.0196	<0.0199	0.0199	<0.0192	0.0192
Total Xylenes		<0.02	0.02	<0.0188	0.0188	<0.02	0.02	<0.0196	0.0196	<0.0199	0.0199	<0.0192	0.0192
Total BTEX		<0.02	0.02	<0.0188	0.0188	<0.02	0.02	<0.0196	0.0196	<0.0199	0.0199	<0.0192	0.0192
Chloride by EPA 300	***Extracted:***	Oct-09-18 12:00		Oct-09-18 12:00		Oct-09-18 12:00		Oct-09-18 12:00		Oct-09-18 12:00		Oct-09-18 12:00	
	Analyzed:	Oct-09-18 17:21		Oct-09-18 17:33		Oct-09-18 18:23		Oct-09-18 17:46		Oct-09-18 19:13		Oct-09-18 17:58	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		337	125	562	250	45.0	25.0	1260	250	53.9	25.0	259	125
DRO-ORO By SW8015B	***Extracted:***	Oct-04-18 13:10		Oct-04-18 13:10		Oct-04-18 13:10		Oct-04-18 13:10		Oct-04-18 13:10		Oct-04-18 13:10	
	Analyzed:	Oct-05-18 23:54		Oct-06-18 00:31		Oct-06-18 01:05		Oct-06-18 01:40		Oct-06-18 02:15		Oct-06-18 02:49	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Diesel Range Organics (DRO)		<25.1	25.1	<24.8	24.8	<25.2	25.2	<25.2	25.2	<25.2	25.2	<25.2	25.2
Oil Range Hydrocarbons (ORO)		<25.1	25.1	<24.8	24.8	<25.2	25.2	<25.2	25.2	<25.2	25.2	<25.2	25.2
TPH GRO by EPA 8015 Mod.	***Extracted:***	Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30		Oct-04-18 13:30	
	Analyzed:	Oct-05-18 06:59		Oct-05-18 07:26		Oct-05-18 07:53		Oct-05-18 10:07		Oct-05-18 10:34		Oct-05-18 01:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
TPH-GRO		<3.99	3.99	<3.75	3.75	<4.00	4.00	<3.92	3.92	<3.98	3.98	<3.83	3.83

Kelsey Brooks
Project Manager

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

SMP Client Sample **BLK** Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate **MS** Matrix Spike **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065600 **Sample:** 601349-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 01:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0871	0.100	87	68-120	
a,a,a-Trifluorotoluene	1.48	1.92	77	71-121	

Lab Batch #: 3065605 **Sample:** 601349-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 01:36

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.108	0.100	108	76-123	
a,a,a-Trifluorotoluene	1.54	1.92	80	69-120	

Lab Batch #: 3065600 **Sample:** 601349-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 04:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0904	0.100	90	68-120	
a,a,a-Trifluorotoluene	1.56	1.96	80	71-121	

Lab Batch #: 3065605 **Sample:** 601349-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 04:18

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.112	0.100	112	76-123	
a,a,a-Trifluorotoluene	1.64	1.96	84	69-120	

Lab Batch #: 3065600 **Sample:** 601349-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 04:45

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0844	0.100	84	68-120	
a,a,a-Trifluorotoluene	1.46	1.98	74	71-121	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065605 **Sample:** 601349-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 04:45

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.104	0.100	104	76-123	
a,a,a-Trifluorotoluene	1.38	1.98	70	69-120	

Lab Batch #: 3065600 **Sample:** 601349-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 05:12

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0839	0.100	84	68-120	
a,a,a-Trifluorotoluene	1.43	1.95	73	71-121	

Lab Batch #: 3065605 **Sample:** 601349-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 05:12

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.104	0.100	104	76-123	
a,a,a-Trifluorotoluene	1.43	1.95	73	69-120	

Lab Batch #: 3065600 **Sample:** 601349-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 05:38

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0842	0.100	84	68-120	
a,a,a-Trifluorotoluene	1.43	1.95	73	71-121	

Lab Batch #: 3065605 **Sample:** 601349-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 05:38

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.104	0.100	104	76-123	
a,a,a-Trifluorotoluene	1.47	1.95	75	69-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065600 **Sample:** 601349-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 06:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0796	0.100	80	68-120	
a,a,a-Trifluorotoluene	1.39	1.99	70	71-121	**

Lab Batch #: 3065605 **Sample:** 601349-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 06:05

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0981	0.100	98	76-123	
a,a,a-Trifluorotoluene	1.39	1.99	70	69-120	

Lab Batch #: 3065600 **Sample:** 601349-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 06:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0863	0.100	86	68-120	
a,a,a-Trifluorotoluene	1.35	1.78	76	71-121	

Lab Batch #: 3065605 **Sample:** 601349-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 06:32

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.106	0.100	106	76-123	
a,a,a-Trifluorotoluene	1.32	1.78	74	69-120	

Lab Batch #: 3065600 **Sample:** 601349-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 06:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0818	0.100	82	68-120	
a,a,a-Trifluorotoluene	1.44	2.00	72	71-121	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065605 **Sample:** 601349-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 06:59

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.101	0.100	101	76-123	
a,a,a-Trifluorotoluene	1.54	2.00	77	69-120	

Lab Batch #: 3065600 **Sample:** 601349-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 07:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0879	0.100	88	68-120	
a,a,a-Trifluorotoluene	1.46	1.88	78	71-121	

Lab Batch #: 3065605 **Sample:** 601349-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 07:26

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.109	0.100	109	76-123	
a,a,a-Trifluorotoluene	1.46	1.88	78	69-120	

Lab Batch #: 3065600 **Sample:** 601349-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 07:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0858	0.100	86	68-120	
a,a,a-Trifluorotoluene	1.48	2.00	74	71-121	

Lab Batch #: 3065605 **Sample:** 601349-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 07:53

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.106	0.100	106	76-123	
a,a,a-Trifluorotoluene	1.54	2.00	77	69-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065600 **Sample:** 601349-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 10:07

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0886	0.100	89	68-120	
a,a,a-Trifluorotoluene	1.53	1.96	78	71-121	

Lab Batch #: 3065605 **Sample:** 601349-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 10:07

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.110	0.100	110	76-123	
a,a,a-Trifluorotoluene	1.53	1.96	78	69-120	

Lab Batch #: 3065600 **Sample:** 601349-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 10:34

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0821	0.100	82	68-120	
a,a,a-Trifluorotoluene	1.42	1.99	71	71-121	

Lab Batch #: 3065605 **Sample:** 601349-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 10:34

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.102	0.100	102	76-123	
a,a,a-Trifluorotoluene	1.35	1.99	68	69-120	**

Lab Batch #: 3065710 **Sample:** 601349-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 19:08

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	8.22	10.1	81	65-144	
n-Triacontane	8.96	10.1	89	46-152	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065710 **Sample:** 601349-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 20:55

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	9.92	10.1	98	65-144	
n-Triacontane	9.80	10.1	97	46-152	

Lab Batch #: 3065710 **Sample:** 601349-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 21:30

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	7.35	9.93	74	65-144	
n-Triacontane	9.14	9.93	92	46-152	

Lab Batch #: 3065710 **Sample:** 601349-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 22:06

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	9.55	9.98	96	65-144	
n-Triacontane	9.80	9.98	98	46-152	

Lab Batch #: 3065710 **Sample:** 601349-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 22:41

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	10.6	10.0	106	65-144	
n-Triacontane	9.58	10.0	96	46-152	

Lab Batch #: 3065710 **Sample:** 601349-006 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 23:18

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	7.56	10.1	75	65-144	
n-Triacontane	7.70	10.1	76	46-152	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065710 **Sample:** 601349-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 23:54

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	6.04	10.0	60	65-144	**
n-Triacontane	7.97	10.0	80	46-152	

Lab Batch #: 3065710 **Sample:** 601349-008 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/18 00:31

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	6.99	9.92	70	65-144	
n-Triacontane	8.49	9.92	86	46-152	

Lab Batch #: 3065710 **Sample:** 601349-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/18 01:05

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	9.91	10.1	98	65-144	
n-Triacontane	9.22	10.1	91	46-152	

Lab Batch #: 3065710 **Sample:** 601349-010 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/18 01:40

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	7.71	10.1	76	65-144	
n-Triacontane	7.20	10.1	71	46-152	

Lab Batch #: 3065710 **Sample:** 601349-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/18 02:15

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	10.3	10.1	102	65-144	
n-Triacontane	9.93	10.1	98	46-152	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065710 **Sample:** 601349-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/06/18 02:49

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	7.19	10.1	71	65-144	
n-Triacontane	8.18	10.1	81	46-152	

Lab Batch #: 3065600 **Sample:** 7663558-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/05/18 01:09

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0726	0.100	73	68-120	
a,a,a-Trifluorotoluene	1.39	2.00	70	71-121	**

Lab Batch #: 3065605 **Sample:** 7663561-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/05/18 01:09

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0912	0.100	91	76-123	
a,a,a-Trifluorotoluene	2.40	2.00	120	69-120	

Lab Batch #: 3065710 **Sample:** 7663557-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/05/18 14:52

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	9.19	10.0	92	65-144	
n-Triacontane	8.52	10.0	85	46-152	

Lab Batch #: 3065600 **Sample:** 7663558-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/04/18 22:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0816	0.100	82	68-120	
a,a,a-Trifluorotoluene	1.61	2.00	81	71-121	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065605 **Sample:** 7663561-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/04/18 23:21

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.113	0.100	113	76-123	
a,a,a-Trifluorotoluene	2.40	2.00	120	69-120	

Lab Batch #: 3065710 **Sample:** 7663557-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/05/18 15:29

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	10.3	10.0	103	65-144	
n-Triacontane	9.45	10.0	95	46-152	

Lab Batch #: 3065600 **Sample:** 7663558-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/04/18 22:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0873	0.100	87	68-120	
a,a,a-Trifluorotoluene	1.71	2.00	86	71-121	

Lab Batch #: 3065605 **Sample:** 7663561-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/04/18 23:48

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.106	0.100	106	76-123	
a,a,a-Trifluorotoluene	2.18	2.00	109	69-120	

Lab Batch #: 3065710 **Sample:** 7663557-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 10/05/18 16:05

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	8.31	10.0	83	65-144	
n-Triacontane	7.78	10.0	78	46-152	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065600 **Sample:** 601349-012 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 02:03

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0827	0.100	83	68-120	
a,a,a-Trifluorotoluene	1.61	1.95	83	71-121	

Lab Batch #: 3065605 **Sample:** 601349-012 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 02:57

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.116	0.100	116	76-123	
a,a,a-Trifluorotoluene	1.38	1.97	70	69-120	

Lab Batch #: 3065710 **Sample:** 601349-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 19:43

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	10.8	10.0	108	65-144	
n-Triacontane	10.2	10.0	102	46-152	

Lab Batch #: 3065605 **Sample:** 601349-012 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 03:24

SURROGATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod.

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.111	0.100	111	76-123	
a,a,a-Trifluorotoluene	1.31	1.94	68	69-120	**

Lab Batch #: 3065600 **Sample:** 601349-012 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 16:25

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4-Bromofluorobenzene	0.0921	0.100	92	68-120	
a,a,a-Trifluorotoluene	1.85	1.98	93	71-121	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Blackline

Work Orders : 601349,

Project ID:

Lab Batch #: 3065710 **Sample:** 601349-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 10/05/18 20:19

SURROGATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Tricosane	9.80	10.0	98	65-144	
n-Triacontane	8.26	10.0	83	46-152	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Blackline

Work Order #: 601349 **Project ID:**

Analyst: MIT **Date Prepared:** 10/04/2018 **Date Analyzed:** 10/04/2018

Lab Batch ID: 3065600 **Sample:** 7663558-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.0200	2.00	1.87	94	2.00	1.98	99	6	55-120	20	
Toluene	<0.0200	2.00	1.73	87	2.00	1.84	92	6	77-120	20	
Ethylbenzene	<0.0200	2.00	1.70	85	2.00	1.80	90	6	77-120	20	
m,p-Xylenes	<0.0400	4.00	3.38	85	4.00	3.60	90	6	78-120	20	
o-Xylene	<0.0200	2.00	1.66	83	2.00	1.77	89	6	78-120	20	

Analyst: RNL **Date Prepared:** 10/09/2018 **Date Analyzed:** 10/09/2018

Lab Batch ID: 3065851 **Sample:** 7663834-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<25.0	250	245	98	250	245	98	0	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Blackline

Work Order #: 601349 **Project ID:**

Analyst: PGM **Date Prepared:** 10/04/2018 **Date Analyzed:** 10/05/2018

Lab Batch ID: 3065710 **Sample:** 7663557-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Diesel Range Organics (DRO)	<7.48	100	117	117	100	112	112	4	63-139	20	

Analyst: MIT **Date Prepared:** 10/04/2018 **Date Analyzed:** 10/04/2018

Lab Batch ID: 3065605 **Sample:** 7663561-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-GRO	<0.271	20.0	18.8	94	20.0	18.5	93	2	35-129	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Blackline

Work Order # : 601349 **Project ID:**

Lab Batch ID: 3065600 **QC- Sample ID:** 601349-012 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/05/2018 **Date Prepared:** 10/04/2018 **Analyst:** MIT

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.0195	1.95	1.63	84	1.98	1.63	82	0	54-120	25	
Toluene	<0.0195	1.95	1.55	79	1.98	1.48	75	5	57-120	25	
Ethylbenzene	<0.0195	1.95	1.59	82	1.98	1.43	72	11	58-131	25	
m,p-Xylenes	<0.00665	3.90	3.16	81	3.95	2.82	71	11	62-124	25	
o-Xylene	<0.0195	1.95	1.57	81	1.98	1.50	76	5	62-124	25	

Lab Batch ID: 3065851 **QC- Sample ID:** 601349-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/09/2018 **Date Prepared:** 10/09/2018 **Analyst:** RNL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	654	250	944	116	250	933	112	1	80-120	20	

Lab Batch ID: 3065851 **QC- Sample ID:** 601349-009 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/09/2018 **Date Prepared:** 10/09/2018 **Analyst:** RNL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	45.0	250	354	124	250	320	110	10	80-120	20	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Blackline

Work Order # : 601349 **Project ID:**

Lab Batch ID: 3065710 **QC- Sample ID:** 601349-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/05/2018 **Date Prepared:** 10/04/2018 **Analyst:** PGM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

DRO-ORO By SW8015B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Diesel Range Organics (DRO)	<7.50	100	114	114	100	103	103	10	63-139	20	

Lab Batch ID: 3065605 **QC- Sample ID:** 601349-012 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 10/05/2018 **Date Prepared:** 10/04/2018 **Analyst:** MIT

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH GRO by EPA 8015 Mod. Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
TPH-GRO	<3.94	19.7	14.5	74	19.4	14.5	75	0	35-129	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

CHAIN OF CUSTODY

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

601349

Xenco Quote #

Xenco Job # 601349

Client / Reporting Information

Company Name / Branch: TRC Environmental Corporation
Company Address: 10 Desta Dr. Suite 150E, Midland, TX 79705
Email: jlowry@trcsolutions.com
Phone No: 432-466-4450
Project Contact: Joel Lowry
Samplers's Name: Joel Lowry

Project Information

Project Name/Number: Blackline
Project Location: Eddy Co, NM
Invoice To: COG Operating 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	TPH TX1005	Chloride E 300	NORM	RCI	TCLP Benzene	TCLP RCRA 8 Metals	Chloride	TPH 8015 M Ext (NM)	BTEX 8021B		Field Comments
1	East Floor Comp 1	2ft	10-2-18	10:00	S	1															X	X	X		
2	East Floor Comp 2	2ft		10:05		1															X	X	X		
3	East Floor Comp 3	2ft		10:10		1															X	X	X		
4	East Floor Comp 4	2ft		10:15		1															X	X	X		
5	East EW Comp	[illegible]		10:20		1															X	X	X		
6	East NW Comp	-		10:25		1															X	X	X		
7	East SW Comp	-		10:30		1															X	X	X		
8																					X	X	X		
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:

jlowry@trcsolutions.com
zconder@trcsolutions.com
bcooper@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	10/3/18 4:50	1 Brenda Ward	2		2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice: ✓

Cooler Temp. 2.8 Thermo. Corr. Factor IR-3

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.

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

601349

Xenco Quote #

Xenco Job # 601349

Client / Reporting Information

Company Name / Branch: TRC Environmental Corporation
Company Address: 10 Desta Dr. Suite 150E, Midland, TX 79705
Email: jlowry@trcsolutions.com
Phone No: 432-466-4450
Project Contact: Joel Lowry
Samplers's Name: Joel Lowry

Project Information

Project Name/Number: Black Line
Project Location: Eddy Co, NM
Invoice To: COG operating c/o Becky Haskell
Invoice:

Analytical Information

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Preserved: HCl	Preserved: NaOH/Zn Acetate	Preserved: HNO3	Preserved: H2SO4	Preserved: NaOH	Preserved: NaHSO4	Preserved: MEOH	Preserved: NONE	TPH TX1005	Chloride E 300	NORM	RCI	TCLP Benzene	TCLP RCRA 8 Metals	Chloride	TPH 8015 M Ext (NM)	BTEX 8021B
1	PT-1 @ 3.5'	3.5ft	10-2-18	10:35	S	1															X	X	X
2	North Wall	-		10:40		1															X	X	X
3	South Wall	-		10:45		1															X	X	X
4	West Wall	-		10:50		1															X	X	X
5	East Wall	-		10:55		1															X	X	X
6																							
7																							
8																							
9																							
10																							

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

Field Comments

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:

jlowry@trcsolutions.com
zconder@trcsolutions.com
bcooper@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		10/3/18 16:30	Brenda Ward	2		2
3			3	4		4
5			5	Custody Seal #	Preserved where applicable	On Ice: 4 Cooler Temp: 28 Thermo. Corr. Factor: IR3

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: 10/03/2018 04:50:00 PM

Work Order #: 601349

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

Temperature Measuring device used : IR-3

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.8
#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)?	**N/A**
#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: Brenda Ward Date: 10/04/2018
Brenda Ward

Checklist reviewed by: Kelsey Brooks Date: 10/05/2018
Kelsey Brooks

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 20, 2018

ZACH CONDER

TRC

10 DESTA DR. SUITE 150 E

MIDLAND, TX 79705

RE: MYOX BLACKLINE

Enclosed are the results of analyses for samples received by the laboratory on 11/19/18 14:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

TRC
ZACH CONDER
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received:	11/19/2018	Sampling Date:	11/19/2018
Reported:	11/20/2018	Sampling Type:	Soil
Project Name:	MYOX BLACKLINE	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: EAST FLOOR COMP 1B@ 3' (H803366-01)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	11/20/2018	ND	400	100	400	3.92	

Sample ID: EAST FLOOR COMP 2B@ 3' (H803366-02)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/20/2018	ND	400	100	400	3.92	

Sample ID: SOUTH WALL @ 1.5' (H803366-03)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	11/20/2018	ND	400	100	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

RUSH

Company Name:	TRC Solutions
Project Manager:	~~Joel Lowry~~ ZACK CONDER
Address:	10 Desta Drive Suite 150E
City:	Midland
State:	TX
Zip:	79705
Phone #:	~~432-466-4450~~ 234-5984
Fax #:	
Project #:	
Project Owner:	COG
Project Name:	MYOX BLACKLINE
Project Location:	EDDY CO, NM
Sampler Name:	BECKY GRIFFIN

BILL TO

P.O. #:	
Company:	CONCHO
Attn:	BECKY HASKELL
Address:	
City:	
State:	
Zip:	
Phone #:	
Fax #:	

ANALYSIS REQUEST

CL -

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	
H803316															
1	EAST FLOOR COMP1-0@3'	C	1			S					1		11-19-18	8:00	X
2	EAST FLOOR COMP2-0@3'	C	1			S					1		"	8:10	X
3	SOUTH WALL @ 1½'	C	1			S					1		"	8:20	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 11/19/18	Received By:	
Becky Griffin	Time: 2:00	Jodi Henson	
Relinquished By:	Date:	Received By:	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: 2.9°C / #97

Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No

CHECKED BY: (Initials)

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:
REMARKS:
ZCONDER@TRCSOLUTIONS.COM
BCOOPER@TRCSOLUTIONS.COM
BGRIFFIN@TRCSOLUTIONS.COM
RHASKELL@CONCHO.COM

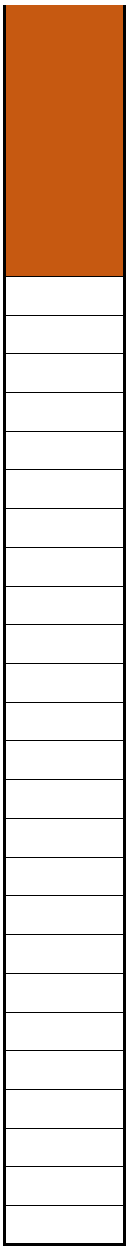
† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Site Name: **Myox 32 Fee #002H** **Date:** **10/2/2018**

Soil Profile

Description

Red/Brown Sandy Clay



ft. bgs

0
1
2
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15
16

Photo 1 - View of affected area prior to remediation activities, facing West.

Photo 2 - View of affected area prior to remediation activities, facing East.

Photo 3 - View of affected area prior to remediation activities, facing South.

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 Department

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

Form C-141
Revised August 24, 2018
Submit to appropriate OCD District office

Incident ID	NMAP1825442403
District RP	2RP-4953
Facility ID	N/A
Application ID	pMAP1824722161

Release Notification

Responsible Party

Responsible Party	COG Operating, LLC	OGRID	229137
Contact Name	Robert McNeill	Contact Telephone	(432) 683-7443
Contact email	RMcNeill@conhco.com	Incident # *(assigned by OCD)*	
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.093593 Longitude -104.110361

(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Myox 32 Fee #002H	Site Type	Flowline
Date Release Discovered	August 23, 2018	API# *(if applicable)*	30-015-41521

Unit Letter	Section	Township	Range	County
N	29	25S	28E	Eddy

Surface Owner: ☒ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 50	Volume Recovered (bbls) 45
	Is the concentration of total dissolved solids (TDS) in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release

The release was caused by a 3rd party hitting our trunk line. The damaged line is being replaced. The release was in the pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will evaluate the site to determine if we may commence remediation immediately or 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

State of New Mexico
Oil Conservation Division

Incident ID	NMAP1825442403
District RP	2RP-4953
Facility ID	N/A
Application ID	pMAP1824722161

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The volume released was greater than 25 barrels.

If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

Immediate notice was given by Sheldon Hitchcock via e-mail August 23, 2018 at 7:28pm to Maria Pruett and Mike Bratcher.

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

- ☒ The source of the release has been stopped.
- ☒ The impacted area has been secured to protect human health and the environment.
- ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
- ☒ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

Printed Name: DeAnn Grant Title: HSE Administrative Assistant

Signature: DeAnn Grant Date: 8/28/2018

email: agrant@concho.com Telephone: (432) 253-4513

OCD Only

Received by: Date: 09/04/18