CONCHO

[Sheldon L. Hitchcock]
[HSE Coordinator]

August 22, 2018

Mike Bratcher
Oil Conservation Division, District 2
811 S First St.
Artesia, NM 88210

Shelly Tucker
Bureau of Land Management, CFO
620 E. Green Street
Carlsbad, NM 88220

Re: Closure Letter
Illustrated Man Fee Com #001H
API #: 30-015-41025
RP#: 2RP-4462
Unit Letter M Section 1, Township 25S, Range 28E
Eddy County, NM

Mr. Bratcher/Ms. Tucker,

COG Operating, LLC (COG) is pleased to submit for your consideration the following closure report for the Illustrated Man Fee Com #001H. This release occurred on October 27, 2017. Following the release an assessment of impacted soils was conducted. A remediation work plan was submitted to and subsequently approved by the New Mexico Oil Conservation Division (NMOCD) and Bureau of Land Management (BLM). A copy of the approved work plan is attached in Appendix V.

BACKGROUND

The Illustrated Man Fee Com #001H release is located in Unit Letter M, Section 1, Township 25 South and Range 28 East in Eddy County, New Mexico. More specifically the latitude and longitude for this release are 32.155226 North and -104.048531 West.

On October 27, 2017, a poly flowline approximately 0.3 miles north of the Illustrated Man Fee Com #1 location failed resulting in the release of approximately fifteen (15) barrels (bbls) of produced water into the pasture adjacent to the lease road. A vacuum truck was able to recover approximately one (1) bbl of produced water.

On November 31, 2017, a site assessment and soil sampling were conducted in order to define the impacted area. A site diagram is included in Appendix I. The analytical results from the soil sampling activities are summarized in the table below.

GROUNDWATER AND SITE RANKING

According to the New Mexico Office of the State Engineer (NMOSE) groundwater in the project vicinity is approximately forty (40) feet below ground surface (BGS) (Appendix II). No water well or surface water was observed within one-thousand (1,000) feet of the release site. Therefore the site ranking for this release is twenty (20) based on the following:

Depth to groundwater	<50-feet
Distance to surface water body	>1000-feet
Wellhead Protection Area	>1000-feet

Confirmation Soil Sampling Results

6/19/2018

Sample ID	Depth (feet)	Chloride (mg/kg)
T-2 Bttm	3’	<4.85
N. Sidewall	N/A	1010
S. Sidewall	N/A	6.29
E. Sidewall	N/A	<4.96
W. Sidewall	N/A	338

6/26/2018

Sample ID	Depth (feet)	Chloride (mg/kg)
N. Sidewall	N/A	76.9

REMEDIAL ACTIONS

- The impacted area in the vicinity of sample location T-1 was excavated to a depth of four (4) feet BGS.

- The impacted area in the vicinity of sample location T-2 was excavated to a depth of three (3) feet BGS.

- Confirmation soil samples were taken from the bottom of the excavation at sample location T-2 and from the sidewalls of the excavation in all four cardinal directions on June 19, 2018. Laboratory results from the northern portion of the excavation returned above NMOCD RRAL's. The excavation was extended to the north and resampled on June 26, 2018. Analytical results from this soil sampling event confirmed that all impacted soil above NMOCD RRAL's was successfully removed.

- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.

- A 20-mil liner was installed at the bottom of the excavation in the vicinity of sample location T-1 in order to encapsulate the remaining chloride impacts.

- The excavation was backfilled with clean "like" material, contoured to match the surrounding terrain and seeded with BLM #1 seed mixture.

CLOSURE REQUEST

COG Production, LLC respectfully requests that the New Mexico Oil Conservation Division and the Bureau of Land Management grant closure approval for the Illustrated Man Fee Com #001H incident that occurred on October 27, 2018.

Should you have any questions or concerns please do not hesitate to contact me.

Sincerely,

Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

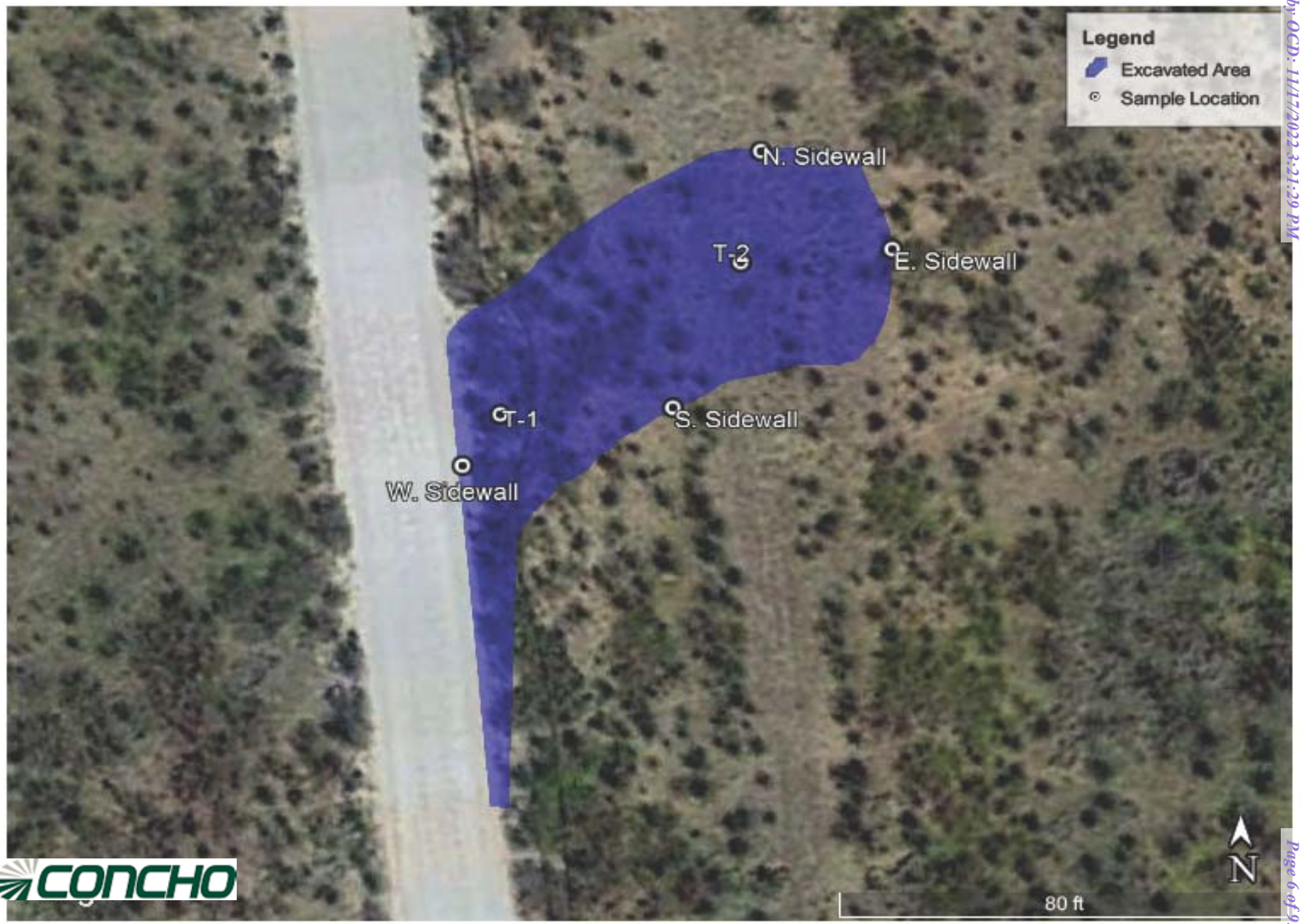
Enclosed:

Appendix I: Site Diagram
Appendix II: Groundwater Data
Appendix III: Initial C-141 (Copy)
Appendix IV: Final C-141
Appendix V: Work Plan (Copy)
Appendix VI: Analytical Reports and Chain-of-Custody Forms

APPENDIX I

October 27, 2017

Illustrated Man Fee Com #001H



CONCHO

APPENDIX II

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	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01880	C	ED	3	3	2	06	25S	29E	592161	3558605*	2429	85	40	45

Average Depth to Water: **40 feet**

Minimum Depth: **40 feet**

Maximum Depth: **40 feet**

Record Count: 1

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 589838 **Northing (Y):** 3557895 **Radius:** 2500

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

APPENDIX III

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 30 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 April 3, 2017

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

Release Notification and Corrective Action

NAB1730542511

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: **Illustrated Man Fee Com #001H**	Facility Type: **Tank Battery**

Surface Owner: ~~Fee~~ BLM	Mineral Owner: Fee	API No.: 30-015-41025

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	1	25S	28E					Eddy

Latitude: 32.155226 **Longitude:** -104.048531 NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 15bbls	Volume Recovered: 1bbl
Source of Release: Flowline	Date and Hour of Occurrence: 10/27/2017	Date and Hour of Discovery: 10/27/2017 9:00am
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.*

A poly flowline ruptured resulting in the release of approximately 15bbls of produced water. The damaged portion of the poly flowline was removed and the line was fused back together.

Describe Area Affected and Cleanup Action Taken.*

The release occurred on the poly flowline approximately 0.3mi north of the Illustrated Man Fee Com #1 location. The produced water flowed east into the pasture for approximately 90-feet. A vacuum truck was utilized to recover the freestanding fluids. Concho will have the spill area evaluated for any possible impact from the release and will present a remediation work plan to the NMOCD 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: Sheldon Hitchcock

Printed Name: Sheldon L. Hitchcock

Title: HSE Coordinator

E-mail Address: slhitchcock@concho.com

Date: 10/30/2017 Phone: 575-746-2010

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By Mike Bratcher

Approval Date: 10/31/17 Expiration Date: N/A

Conditions of Approval: See attached

Attached ☐ 2RP-4462

* Attach Additional Sheets If Necessary

APPENDIX IV

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 April 3, 2017

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

Release Notification and Corrective Action

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**: Illustrated Man Fee Com #001H**	Facility Type**: Tank Battery**

Surface Owner: BLM	Mineral Owner: Fee	API No.: 30-015-41025

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	1	25S	28E					Eddy

Latitude: 32.155226 **Longitude**: -104.048531 NAD83

NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 15bbls	Volume Recovered: 1bbl
Source of Release: Flowline	Date and Hour of Occurrence: 10/27/2017	Date and Hour of Discovery: 10/27/2017 9:00am
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.*

A poly flowline ruptured resulting in the release of approximately 15bbls of produced water. The damaged portion of the poly flowline was removed and the line was fused back together.

Describe Area Affected and Cleanup Action Taken.*

The release occurred on the poly flowline approximately 0.3mi north of the Illustrated Man Fee Com #1 location. The produced water flowed east into the pasture for approximately 90-feet. A vacuum truck was utilized to recover the freestanding fluids. A site assessment and soil sampling were conducted within the impacted area. Upon receipt of analytical results from the soil sampling event a remediation work plan was drafted and submitted to NMOCD and BLM. The remediation work plan was subsequently approved. The remediation was carried out in accordance with the approved work plan.

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: Sheldon Hitchcock	OIL CONSERVATION DIVISION Approved by Environmental Specialist: Brittany Hall	
Printed Name: Sheldon L. Hitchcock		
Title: HSE Coordinator	Approval Date: 11/17/2022	Expiration Date: N/A
E-mail Address: slhitchcock@concho.com	Conditions of Approval:	Attached ☐
Date: 8/22/2018 Phone: 575-746-2010	none	

* Attach Additional Sheets If Necessary

APPENDIX V

[Sheldon L. Hitchcock]
[HSE Coordinator]

March 5, 2018

Mike Bratcher
Oil Conservation Division, District 2
811 S First St.
Artesia, NM 88210

Shelly Tucker
Bureau of Land Management, CFO
620 E. Green Street
Carlsbad, NM 88220

Re: Work Plan
Illustrated Man Fee Com #001H
API #: 30-015-41025
RP#: 2RP-4462
Unit Letter M Section 1, Township 25S, Range 28E
Eddy County, NM

Mr. Bratcher/Ms. Tucker,

COG Operating, LLC (COG) is pleased to submit for your consideration the following remediation work plan for the Illustrated Man Fee Com #001H. This plan is in response to a produced water release that occurred on October 27, 2017. Subsequent to the release a C-141 initial report was approved by the New Mexico Oil Conservation Division (NMOCD) on October 31, 3017.

BACKGROUND

The Illustrated Man Fee Com #001H release is located in Unit Letter M, Section 1, Township 25 South and Range 28 East in Eddy County, New Mexico. More specifically the latitude and longitude for this release are 32.155226 North and -104.048531 West.

On October 27, 2017, a poly flowline approximately 0.3 miles north of the Illustrated Man Fee Com #1 location failed resulting in the release of approximately fifteen (15) barrels (bbls) of produced water into the pasture adjacent to the lease road. A vacuum truck was able to recover approximately one (1) bbl of produced water.

On November 31, 2017, a site assessment and soil sampling were conducted in order to define the impacted area. A site diagram is included in Appendix I. The analytical results from the soil sampling activities are summarized in the table below.

GROUNDWATER AND SITE RANKING

According to the New Mexico Office of the State Engineer (NMOSE) groundwater in the project vicinity is approximately forty (40) feet below ground surface (BGS) (Appendix II). No water well or surface water was observed within one-thousand (1,000) feet of the release site. Therefore the site ranking for this release is twenty (20) based on the following:

Depth to groundwater	<50-feet
Distance to surface water body	>1000-feet
Wellhead Protection Area	>1000-feet

Analytical Results

11/31/2017

Sample ID	Depth (feet)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	Total TPH (mg/kg)
T-1	0	<0.002	0.002	34000	640
T-1	1	<0.002	<0.002	12900	<15.0
T-1	2	<0.002	<0.002	12300	<15.0
T-1	3	--	--	12400	--
T-1	4	--	--	1880	--
T-1	5	--	--	150	--
T-1	6	--	--	780	--
T-1	8	--	--	1250	--
T-1	10	--	--	2880	--
T-1	12	--	--	319	--
T-2	0	<0.002	<0.002	13000	<15.0
T-2	1	<0.002	<0.002	9890	<15.0
T-2	2	<0.002	<0.002	5930	<15.0
T-2	3	--	--	11.2	--

(--) Analysis not requested

PROPOSED REMEDIAL ACTIONS

- The impacted area in the vicinity of sample location T-1 will be excavated to a depth of four (4) feet BGS.
- The impacted area in the vicinity of sample location T-2 will be excavated to a depth of three (3) feet BGS.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- A 20-mil liner will be installed at the bottom of the excavation in the vicinity of sample location T-1 in order to encapsulate the remaining chloride impacts.
- The excavation will be backfilled with clean "like" material, contoured to match the surrounding terrain and seeded with BLM #1 seed mixture.

Should you have any questions or concerns please do not hesitate to contact me.

Sincerely,

Sheldon Hitchcock

Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

Enclosed:

Appendix I: Site Diagram
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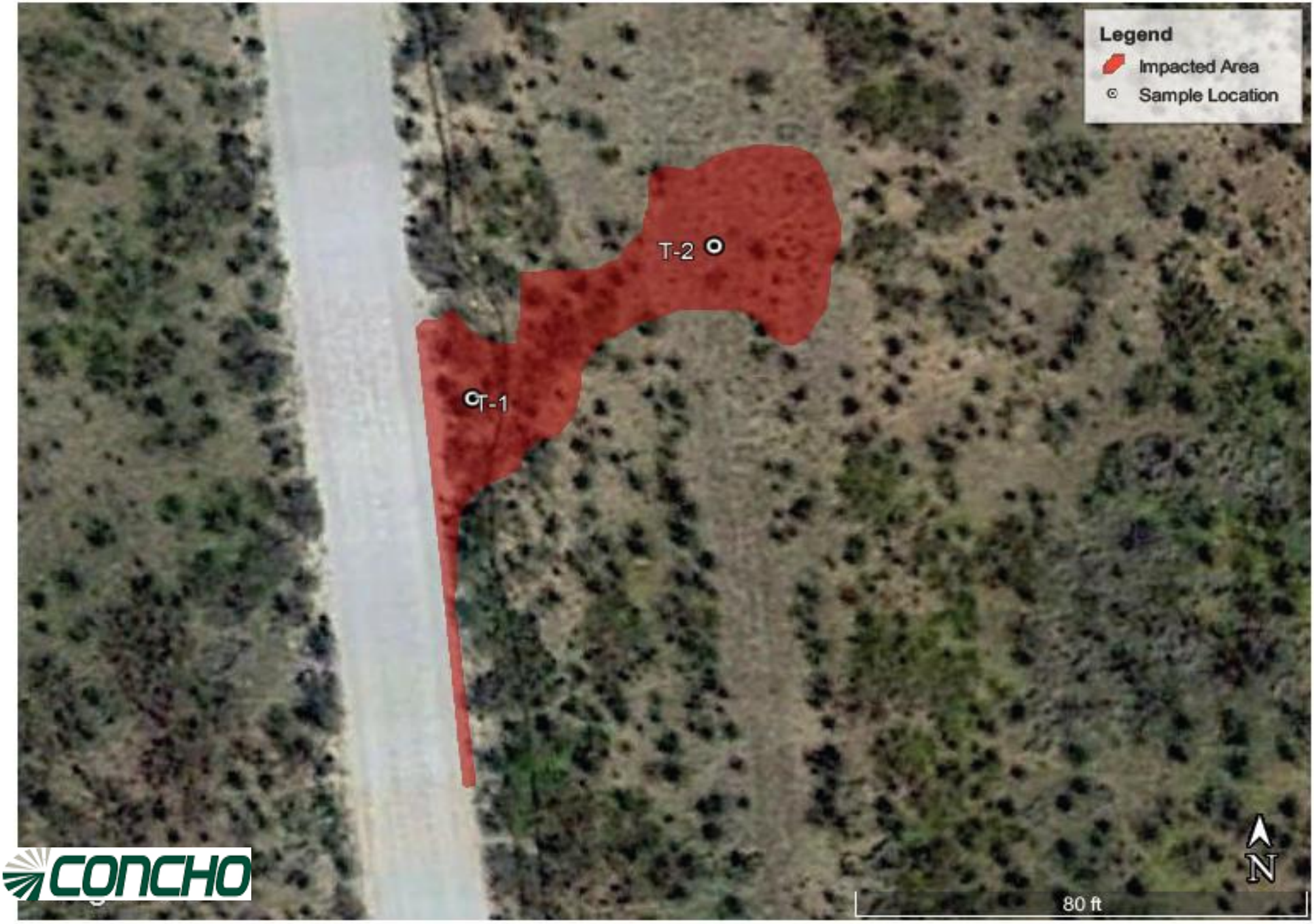
Appendix IV: Analytical Reports and Chain-of-Custody Forms

APPENDIX I

March 15, 3018

Illustrated Man Fee Com #001H



CONCHO

APPENDIX II

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	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01880	C	ED	3	3	2	06	25S	29E	592161	3558605*	2429	85	40	45

Average Depth to Water: **40 feet**

Minimum Depth: **40 feet**

Maximum Depth: **40 feet**

Record Count: 1

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 589838 **Northing (Y):** 3557895 **Radius:** 2500

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

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ARTESIA DISTRICT
OCT 30 2017
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State of New Mexico
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1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised April 3, 2017

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

Release Notification and Corrective Action

nAB1730542511

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: **Illustrated Man Fee Com #001H**	Facility Type: **Tank Battery**

Surface Owner: ~~Fee~~ BLM	Mineral Owner: Fee	API No.: 30-015-41025

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Type of Release: Produced Water	Volume of Release: 15bbls	Volume Recovered: 1bbl
Source of Release: Flowline	Date and Hour of Occurrence: 10/27/2017	Date and Hour of Discovery: 10/27/2017 9:00am
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
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Signature: Sheldon Hitchcock

Printed Name: Sheldon L. Hitchcock

Title: HSE Coordinator

E-mail Address: slhitchcock@concho.com

Date: 10/30/2017 Phone: 575-746-2010

OIL CONSERVATION DIVISION

Approved by Environmental Specialist: Signed By Mike Bratcher

Approval Date: 10/31/17 Expiration Date: N/A

Conditions of Approval: See attached

Attached ☐ 2RP-4462

* Attach Additional Sheets If Necessary

APPENDIX IV

Analytical Report 570437

for

COG Operating, LLC

Project Manager: Sheldon Hitchcock

Illustrated Man Fee Com #1H (10-27-17)

16-DEC-17

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)

16-DEC-17

Project Manager: **Sheldon Hitchcock**
COG Operating, LLC
600 W Illinois
Midland, TX 79701

Reference: XENCO Report No(s): **570437**
Illustrated Man Fee Com #1H (10-27-17)
Project Address: M-1-25S-28E

Sheldon Hitchcock:

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) 570437. 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. 570437 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,

Mike Kimmel
Client Services Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 570437

COG Operating, LLC, Midland, TX

Illustrated Man Fee Com #1H (10-27-17)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 0'	S	12-01-17 09:00	0	570437-001
T-1 1'	S	12-01-17 09:02	1	570437-002
T-1 2'	S	12-01-17 09:04	2	570437-003
T-1 3'	S	12-01-17 09:06	3	570437-004
T-1 4'	S	12-01-17 09:08	4	570437-005
T-1 5'	S	12-01-17 09:10	5	570437-006
T-1 6'	S	12-01-17 09:12	6	570437-007
T-1 8'	S	12-01-17 09:14	8	570437-008
T-1 10'	S	12-01-17 09:16	10	570437-009
T-1 12'	S	12-01-17 09:18	12	570437-010
T-2 0'	S	12-01-17 10:00	0	570437-011
T-2 1'	S	12-01-17 10:02	1	570437-012
T-2 2'	S	12-01-17 10:04	2	570437-013
T-2 3'	S	12-01-17 10:06	3	570437-014

Version: 1.%

CASE NARRATIVE

Client Name: COG Operating, LLC

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Project ID:
Work Order Number(s): *570437*

Report Date: *16-DEC-17*
Date Received: *12/07/2017*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3035740 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3035888 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Project Id:

Contact: Sheldon Hitchcock

Project Location: M-1-25S-28E

Date Received in Lab: Thu Dec-07-17 11:15 am

Report Date: 16-DEC-17

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	570437-001		570437-002		570437-003		570437-004		570437-005		570437-006	
	Field Id:	T-1 0'		T-1 1'		T-1 2'		T-1 3'		T-1 4'		T-1 5'	
	Depth:	0-		1-		2-		3-		4-		5-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-01-17 09:00		Dec-01-17 09:02		Dec-01-17 09:04		Dec-01-17 09:06		Dec-01-17 09:08		Dec-01-17 09:10	
BTEX by EPA 8021B	***Extracted:***	Dec-12-17 08:30		Dec-12-17 08:30		Dec-12-17 08:30							
	Analyzed:	Dec-12-17 14:01		Dec-12-17 14:20		Dec-12-17 14:39							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Toluene		0.00228	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399	<0.00399	0.00399						
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Total BTEX		0.00228	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Chloride by EPA 300	***Extracted:***	Dec-08-17 16:00		Dec-08-17 16:00		Dec-11-17 16:20		Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30	
	Analyzed:	Dec-09-17 03:23		Dec-09-17 03:28		Dec-11-17 18:25		Dec-11-17 11:42		Dec-11-17 11:48		Dec-11-17 11:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		34000	250	12900	98.2	12300	98.2	12400	99.4	1880	49.3	150	49.4
TPH by SW8015 Mod	***Extracted:***	Dec-14-17 15:00		Dec-14-17 15:00		Dec-14-17 15:00							
	Analyzed:	Dec-15-17 02:48		Dec-15-17 03:08		Dec-15-17 04:09							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0						
Diesel Range Organics (DRO)		533	15.0	<15.0	15.0	<15.0	15.0						
Oil Range Hydrocarbons (ORO)		107	15.0	<15.0	15.0	<15.0	15.0						
Total TPH		640	15.0	<15.0	15.0	<15.0	15.0						

Version: 1.%

Mike Kimmel
Client Services Manager

Final 1.000

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Project Id:
Contact: Sheldon Hitchcock
Project Location: M-1-25S-28E

Date Received in Lab: Thu Dec-07-17 11:15 am
Report Date: 16-DEC-17
Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	570437-007		570437-008		570437-009		570437-010		570437-011		570437-012	
	Field Id:	T-1 6'		T-1 8'		T-1 10'		T-1 12'		T-2 0'		T-2 1'	
	Depth:	6-		8-		10-		12-		0-		1-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-01-17 09:12		Dec-01-17 09:14		Dec-01-17 09:16		Dec-01-17 09:18		Dec-01-17 10:00		Dec-01-17 10:02	
BTEX by EPA 8021B	***Extracted:***									Dec-13-17 09:30		Dec-13-17 09:30	
	Analyzed:									Dec-13-17 16:02		Dec-13-17 16:21	
	Units/RL:									mg/kg	RL	mg/kg	RL
Benzene										<0.00200	0.00200	<0.00201	0.00201
Toluene										<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene										<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes										<0.00399	0.00399	<0.00402	0.00402
o-Xylene										<0.00200	0.00200	<0.00201	0.00201
Total Xylenes										<0.00200	0.00200	<0.00201	0.00201
Total BTEX										<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30	
	Analyzed:	Dec-11-17 11:59		Dec-11-17 12:17		Dec-11-17 12:23		Dec-11-17 12:29		Dec-11-17 12:35		Dec-11-17 12:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		780	49.7	1250	50.0	2880	49.8	319	24.6	13000	98.4	9890	99.4
TPH by SW8015 Mod	***Extracted:***									Dec-08-17 17:00		Dec-08-17 17:00	
	Analyzed:									Dec-09-17 04:23		Dec-09-17 04:43	
	Units/RL:									mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)										<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)										<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)										<15.0	15.0	<15.0	15.0
Total TPH										<15.0	15.0	<15.0	15.0

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Version: 1.%

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Project Id:

Contact: Sheldon Hitchcock

Project Location: M-1-25S-28E

Date Received in Lab: Thu Dec-07-17 11:15 am

Report Date: 16-DEC-17

Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	570437-013		570437-014			
	Field Id:	T-2 2'		T-2 3'			
	Depth:	2-		3-			
	Matrix:	SOIL		SOIL			
	Sampled:	Dec-01-17 10:04		Dec-01-17 10:06			
BTEX by EPA 8021B	***Extracted:***	Dec-13-17 09:30					
	Analyzed:	Dec-13-17 16:40					
	Units/RL:	mg/kg	RL				
Benzene		<0.00202	0.00202				
Toluene		<0.00202	0.00202				
Ethylbenzene		<0.00202	0.00202				
m,p-Xylenes		<0.00404	0.00404				
o-Xylene		<0.00202	0.00202				
Total Xylenes		<0.00202	0.00202				
Total BTEX		<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	Dec-11-17 10:30		Dec-11-17 10:30			
	Analyzed:	Dec-11-17 13:05		Dec-13-17 12:57			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		5930	99.6	11.2	4.98		
TPH by SW8015 Mod	***Extracted:***	Dec-08-17 17:00					
	Analyzed:	Dec-09-17 05:03					
	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		<15.0	15.0				

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Version: 1.%

Mike Kimmel
Client Services 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

+ NELAC certification not offered for this compound.

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

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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	

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035464 **Sample:** 570437-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 04:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	99.9	84	70-135	
o-Terphenyl	43.5	50.0	87	70-135	

Lab Batch #: 3035464 **Sample:** 570437-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 04:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.3	99.9	87	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 3035464 **Sample:** 570437-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 05:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.6	99.8	85	70-135	
o-Terphenyl	43.4	49.9	87	70-135	

Lab Batch #: 3035740 **Sample:** 570437-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 14:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 3035740 **Sample:** 570437-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 14:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035740 **Sample:** 570437-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 14:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 3035888 **Sample:** 570437-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 16:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 3035888 **Sample:** 570437-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 16:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 3035888 **Sample:** 570437-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 16:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 3035998 **Sample:** 570437-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 02:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	99.7	96	70-135	
o-Terphenyl	46.1	49.9	92	70-135	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035998 **Sample:** 570437-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 03:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.0	99.8	95	70-135	
o-Terphenyl	49.4	49.9	99	70-135	

Lab Batch #: 3035998 **Sample:** 570437-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 04:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	99.9	99	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

Lab Batch #: 3035464 **Sample:** 7635722-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/08/17 22:41

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	100	88	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 3035740 **Sample:** 7635895-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/12/17 09:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 3035888 **Sample:** 7635967-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/13/17 09:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0252	0.0300	84	80-120	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035998 **Sample:** 7636029-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/15/17 01:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

Lab Batch #: 3035464 **Sample:** 7635722-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/08/17 23:01

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.9	100	89	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 3035740 **Sample:** 7635895-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/12/17 07:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0250	0.0300	83	80-120	

Lab Batch #: 3035888 **Sample:** 7635967-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/13/17 07:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 3035998 **Sample:** 7636029-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/15/17 02:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035464 **Sample:** 7635722-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/08/17 23:21

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 3035740 **Sample:** 7635895-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/12/17 08:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 3035888 **Sample:** 7635967-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/13/17 07:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 3035998 **Sample:** 7636029-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/15/17 02:27

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.3	100	92	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 3035464 **Sample:** 570434-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 01:04

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	99.8	90	70-135	
o-Terphenyl	48.3	49.9	97	70-135	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035740 **Sample:** 570435-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 08:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 3035888 **Sample:** 570779-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 08:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 3035998 **Sample:** 570437-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 03:28

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	99.7	94	70-135	
o-Terphenyl	49.0	49.9	98	70-135	

Lab Batch #: 3035464 **Sample:** 570434-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 01:26

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.4	99.8	79	70-135	
o-Terphenyl	41.7	49.9	84	70-135	

Lab Batch #: 3035740 **Sample:** 570435-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 08:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0337	0.0300	112	80-120	
4-Bromofluorobenzene	0.0344	0.0300	115	80-120	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035888 **Sample:** 570779-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 09:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 3035998 **Sample:** 570437-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 03:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

* 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.

Version: 1.%

BS / BSD Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order #: 570437 **Project ID:**

Analyst: ALJ **Date Prepared:** 12/12/2017 **Date Analyzed:** 12/12/2017

Lab Batch ID: 3035740 **Sample:** 7635895-1-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	<0.00201	0.100	0.107	107	0.0998	0.111	111	4	70-130	35	
Toluene	<0.00201	0.100	0.103	103	0.0998	0.106	106	3	70-130	35	
Ethylbenzene	<0.00201	0.100	0.105	105	0.0998	0.108	108	3	71-129	35	
m,p-Xylenes	<0.00402	0.201	0.200	100	0.200	0.208	104	4	70-135	35	
o-Xylene	<0.00201	0.100	0.0992	99	0.0998	0.102	102	3	71-133	35	

Analyst: ALJ **Date Prepared:** 12/13/2017 **Date Analyzed:** 12/13/2017

Lab Batch ID: 3035888 **Sample:** 7635967-1-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	<0.00201	0.100	0.115	115	0.100	0.108	108	6	70-130	35	
Toluene	<0.00201	0.100	0.110	110	0.100	0.103	103	7	70-130	35	
Ethylbenzene	<0.00201	0.100	0.113	113	0.100	0.105	105	7	71-129	35	
m,p-Xylenes	<0.00402	0.201	0.218	108	0.200	0.203	102	7	70-135	35	
o-Xylene	<0.00201	0.100	0.107	107	0.100	0.0990	99	8	71-133	35	

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

Version: 1.%

BS / BSD Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order #: 570437 **Project ID:**

Analyst: MNV **Date Prepared:** 12/08/2017 **Date Analyzed:** 12/09/2017

Lab Batch ID: 3035752 **Sample:** 7635709-1-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	<5.00	250	255	102	250	259	104	2	90-110	20	

Analyst: OJS **Date Prepared:** 12/11/2017 **Date Analyzed:** 12/11/2017

Lab Batch ID: 3035758 **Sample:** 7635746-1-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	<5.00	250	252	101	250	255	102	1	90-110	20	

Analyst: OJS **Date Prepared:** 12/11/2017 **Date Analyzed:** 12/11/2017

Lab Batch ID: 3035612 **Sample:** 7635780-1-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	<5.00	250	251	100	250	255	102	2	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

Version: 1.%

BS / BSD Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order #: 570437 **Project ID:**

Analyst: ARM **Date Prepared:** 12/08/2017 **Date Analyzed:** 12/08/2017

Lab Batch ID: 3035464 **Sample:** 7635722-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	922	92	1000	928	93	1	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	994	99	1000	1010	101	2	70-135	35	

Analyst: ARM **Date Prepared:** 12/14/2017 **Date Analyzed:** 12/15/2017

Lab Batch ID: 3035998 **Sample:** 7636029-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	961	96	1000	893	89	7	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	1100	110	1000	965	97	13	70-135	35	

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

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order # : 570437 **Project ID:**

Lab Batch ID: 3035740 **QC- Sample ID:** 570435-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/12/2017 **Date Prepared:** 12/12/2017 **Analyst:** ALJ

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	<0.00200	0.100	0.0959	96	0.0996	0.102	102	6	70-130	35	
Toluene	<0.00200	0.100	0.0885	89	0.0996	0.0889	89	0	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0849	85	0.0996	0.0827	83	3	71-129	35	
m,p-Xylenes	<0.00401	0.200	0.163	82	0.199	0.159	80	2	70-135	35	
o-Xylene	<0.00200	0.100	0.0811	81	0.0996	0.0798	80	2	71-133	35	

Lab Batch ID: 3035888 **QC- Sample ID:** 570779-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/13/2017 **Date Prepared:** 12/13/2017 **Analyst:** ALJ

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	<0.00200	0.0998	0.0861	86	0.100	0.0950	95	10	70-130	35	
Toluene	<0.00200	0.0998	0.0788	79	0.100	0.0870	87	10	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0760	76	0.100	0.0832	83	9	71-129	35	
m,p-Xylenes	<0.00399	0.200	0.145	73	0.200	0.159	80	9	70-135	35	
o-Xylene	<0.00200	0.0998	0.0716	72	0.100	0.0794	79	10	71-133	35	

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: Illustrated Man Fee Com #1H (10-27-17)

Work Order # : 570437 **Project ID:**

Lab Batch ID: 3035612 **QC- Sample ID:** 570438-015 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/11/2017 **Date Prepared:** 12/11/2017 **Analyst:** OJS

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	5.89	247	265	105	247	263	104	1	90-110	20	

Lab Batch ID: 3035612 **QC- Sample ID:** 570722-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/11/2017 **Date Prepared:** 12/11/2017 **Analyst:** OJS

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	71.9	247	331	105	247	327	103	1	90-110	20	

Lab Batch ID: 3035752 **QC- Sample ID:** 570433-012 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/09/2017 **Date Prepared:** 12/08/2017 **Analyst:** MNV

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	672	248	886	86	248	902	93	2	90-110	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: Illustrated Man Fee Com #1H (10-27-17)

Work Order # : 570437 **Project ID:**

Lab Batch ID: 3035752 **QC- Sample ID:** 570434-008 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/09/2017 **Date Prepared:** 12/08/2017 **Analyst:** MNV

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	132	248	372	97	248	375	98	1	90-110	20	

Lab Batch ID: 3035758 **QC- Sample ID:** 570438-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/11/2017 **Date Prepared:** 12/11/2017 **Analyst:** OJS

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	706	249	915	84	249	914	84	0	90-110	20	X

Lab Batch ID: 3035758 **QC- Sample ID:** 570438-010 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/11/2017 **Date Prepared:** 12/11/2017 **Analyst:** OJS

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	227	245	474	101	245	477	102	1	90-110	20	

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: Illustrated Man Fee Com #1H (10-27-17)

Work Order # : 570437 **Project ID:**

Lab Batch ID: 3035464 **QC- Sample ID:** 570434-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/09/2017 **Date Prepared:** 12/08/2017 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	998	997	100	998	869	87	14	70-135	35	
Diesel Range Organics (DRO)	<15.0	998	1080	108	998	940	94	14	70-135	35	

Lab Batch ID: 3035998 **QC- Sample ID:** 570437-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/15/2017 **Date Prepared:** 12/14/2017 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	997	983	99	999	1020	102	4	70-135	35	
Diesel Range Organics (DRO)	<15.0	997	973	98	999	1040	104	7	70-135	35	

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.

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CHAIN OF CUSTODY

Page 1 Of 2

Xenco Quote #

Xenco Job # 570437

Client / Reporting Information

Company Name / Branch: COG Operating, LLC

Company Address: 2407 Pecos Ave. Artesia NM 88210

Email: slhitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com

Project Contact: Sheldon Hitchcock

Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Illustrated Man Fee Com #1H (10-27-17)

Project Location: M-1-25S-28E

Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701

PO Number:

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 EXTENDED	BTEX	CHLORIDES	Field Comments
1	T-1 0'	0	11/31	9:00 A	S	1								X	X	X	X	
2	T-1 1'	1	11/31	9:02 A	S	1								X	X	X	X	
3	T-1 2'	2	11/31	9:04 A	S	1								X	X	X	X	
4	T-1 3'	3	11/31	9:06 A	S	1								X			X	
5	T-1 4'	4	11/31	9:08 A	S	1								X			X	
6	T-1 5'	5	11/31	9:10 A	S	1								X			X	
7	T-1 6'	6	11/31	9:12 A	S	1								X			X	
8	T-1 8'	8	11/31	9:14 A	S	1								X			X	
9	T-1 10'	10	11/31	9:16 A	S	1								X			X	
10	T-1 12'	12	11/31	9:18 A	S	1								X			X	

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: Stop Cl- if > 600 mg/kg

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE P

	Relinquished by Sampler:	Date Time:	Received By:
1	Sheldon Neel	12 6 7 10 22 5	1
	Relinquished by:	Date Time:	Received By:
3			3
	Relinquished by:	Date Time:	Received By:
5			5

Temp: 2.3°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.1°C

: Tracking #

ceived By:

ceived By: 9/7 11:15

4	4
Custody Seal #	Preserved where applicable

On Ice: X

Cooler Temp.: 5.6

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.

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

CHAIN OF CUSTODY

Page 2 Of 2

Xenco Quote #

Xenco Job # 570437

Client / Reporting Information

Company Name / Branch: COG Operating, LLC
Company Address: 2407 Pecos Ave. Artesia NM 88210
Email: slhitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Illustrated Man Fee Com #1H (10-27-17)
Project Location: M-1-25S-28E
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

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 EXTENDED	BTEX	CHLORIDES	Field Comments
1	T-2 0'	0	11/31/17	10:00	S	1								X	X	X	X	
2	T-2 1'	1		10:02	S	1								X	X	X	X	
3	T-2 2'	2		10:04	S	1								X	X	X	X	
4	T-2 3'	3		10:06	S	1								X			X	
5					S	1												
6					S	1												
7					S	1												
8					S	1												
9					S	1												
10					S	1												

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:

Temp: 2.3°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.1°C

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	Sheldon Hitchcock	12.6.17 0925		2		9/7 11:15
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: X

Cooler Temp. 5.6 Thermo. Corr. Factor

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)

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www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 2

Xenco Quote #

Xenco Job # 570437

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Company Address: 2407 Pecos Ave. Artesia NM 88210

Email: slhitchcock@concho.com Phone No: 575-703-6475

dneel2@concho.com; cgray@concho.com; rhaskell@concho.com

Project Contact: Sheldon Hitchcock

Samplers's Name: Sheldon Hitchcock

Project Information

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Project Location: M-1-25S-28E

Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701

PO Number:

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 EXTENDED	BTEX	CHLORIDES	Field Comments
1	T-1 0'	0	11/31	9:00 A	S	1								X	X	X	X	
2	T-1 1'	1	11/31	9:02 A	S	1								X	X	X	X	
3	T-1 2'	2	11/31	9:04 A	S	1								X	X	X	X	
4	T-1 3'	3	11/31	9:06 A	S	1								X	X	X	X	
5	T-1 4'	4	11/31	9:08 A	S	1								X			X	
6	T-1 5'	5	11/31	9:10 A	S	1								X			X	
7	T-1 6'	6	11/31	9:12 A	S	1								X			X	
8	T-1 8'	8	11/31	9:14 A	S	1								X			X	
9	T-1 10'	10	11/31	9:16 A	S	1								X			X	
10	T-1 12'	12	11/31	9:18 A	S	1								X			X	

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

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- [ ] 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:

Stop Cl- if ≤ 600 mg/kg

Temp: 2.3°C IR ID:R-8

CF:(0-6: -0.2°C)
(6-23: +0.2°C)

Corrected Temp: 2.1°C

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE P

	Relinquished by Sampler:	Date Time:	Received By:
1	Sheldon Hitchcock	12 6 7 0925	1
2	Relinquished by:	Date Time:	Received By:
3			3
4	Relinquished by:	Date Time:	Received By:
5			5

: Tracking #

ceived By:

ceived By:

12/7 11:15

Custody Seal #	Preserved where applicable	On Ice	Cooler Temp.	Thermo. Corr. Factor
		X	5.6	

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
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Stafford,Texas (281-240-4200)
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CHAIN OF CUSTODY

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Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

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Project Location: M-1-25S-28E
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

Analytical Information

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 EXTENDED	BTEX	CHLORIDES	Field Comments
1	T-2 0'	0	11/31/17	10:00	S	1								/	/	/	/	
2	T-2 1'	1		10:02	S	1								/	/	/	/	
3	T-2 2'	2		10:04	S	1								/	/	/	/	
4	T-2 3'	3		10:06	S	1								/			/	
5					S	1											/	
6					S	1												
7					S	1												
8					S	1												
9					S	1												
10					S	1												

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

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
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- [ ] 7 Day TAT
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- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

Temp: 2.3°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.1°C

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	Sheldon Hitchcock	12.6.17 0925				
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: X

Cooler Temp. 5.6 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: COG Operating, LLC

Date/ Time Received: 12/07/2017 11:15:00 AM

Work Order #: 570437

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)?	2.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#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: 12/07/2017

Checklist reviewed by: Mike Kimmel Date: 12/13/2017

APPENDIX VI

Analytical Report 570437

for

COG Operating, LLC

Project Manager: Sheldon Hitchcock

Illustrated Man Fee Com #1H (10-27-17)

16-DEC-17

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)

16-DEC-17

Project Manager: **Sheldon Hitchcock**
COG Operating, LLC
600 W Illinois
Midland, TX 79701

Reference: XENCO Report No(s): **570437**
Illustrated Man Fee Com #1H (10-27-17)
Project Address: M-1-25S-28E

Sheldon Hitchcock:

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) 570437. 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. 570437 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,

Mike Kimmel
Client Services Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 570437

COG Operating, LLC, Midland, TX

Illustrated Man Fee Com #1H (10-27-17)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-1 0'	S	12-01-17 09:00	0	570437-001
T-1 1'	S	12-01-17 09:02	1	570437-002
T-1 2'	S	12-01-17 09:04	2	570437-003
T-1 3'	S	12-01-17 09:06	3	570437-004
T-1 4'	S	12-01-17 09:08	4	570437-005
T-1 5'	S	12-01-17 09:10	5	570437-006
T-1 6'	S	12-01-17 09:12	6	570437-007
T-1 8'	S	12-01-17 09:14	8	570437-008
T-1 10'	S	12-01-17 09:16	10	570437-009
T-1 12'	S	12-01-17 09:18	12	570437-010
T-2 0'	S	12-01-17 10:00	0	570437-011
T-2 1'	S	12-01-17 10:02	1	570437-012
T-2 2'	S	12-01-17 10:04	2	570437-013
T-2 3'	S	12-01-17 10:06	3	570437-014

Version: 1.%

CASE NARRATIVE

Client Name: COG Operating, LLC

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Project ID:
Work Order Number(s): *570437*

Report Date: *16-DEC-17*
Date Received: *12/07/2017*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3035740 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3035888 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Project Id:

Contact: Sheldon Hitchcock

Project Location: M-1-25S-28E

Date Received in Lab: Thu Dec-07-17 11:15 am

Report Date: 16-DEC-17

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	570437-001		570437-002		570437-003		570437-004		570437-005		570437-006	
	Field Id:	T-1 0'		T-1 1'		T-1 2'		T-1 3'		T-1 4'		T-1 5'	
	Depth:	0-		1-		2-		3-		4-		5-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-01-17 09:00		Dec-01-17 09:02		Dec-01-17 09:04		Dec-01-17 09:06		Dec-01-17 09:08		Dec-01-17 09:10	
BTEX by EPA 8021B	***Extracted:***	Dec-12-17 08:30		Dec-12-17 08:30		Dec-12-17 08:30							
	Analyzed:	Dec-12-17 14:01		Dec-12-17 14:20		Dec-12-17 14:39							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Toluene		0.00228	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
m,p-Xylenes		<0.00401	0.00401	<0.00399	0.00399	<0.00399	0.00399						
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Total BTEX		0.00228	0.00200	<0.00200	0.00200	<0.00200	0.00200						
Chloride by EPA 300	***Extracted:***	Dec-08-17 16:00		Dec-08-17 16:00		Dec-11-17 16:20		Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30	
	Analyzed:	Dec-09-17 03:23		Dec-09-17 03:28		Dec-11-17 18:25		Dec-11-17 11:42		Dec-11-17 11:48		Dec-11-17 11:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		34000	250	12900	98.2	12300	98.2	12400	99.4	1880	49.3	150	49.4
TPH by SW8015 Mod	***Extracted:***	Dec-14-17 15:00		Dec-14-17 15:00		Dec-14-17 15:00							
	Analyzed:	Dec-15-17 02:48		Dec-15-17 03:08		Dec-15-17 04:09							
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL						
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0						
Diesel Range Organics (DRO)		533	15.0	<15.0	15.0	<15.0	15.0						
Oil Range Hydrocarbons (ORO)		107	15.0	<15.0	15.0	<15.0	15.0						
Total TPH		640	15.0	<15.0	15.0	<15.0	15.0						

Version: 1.%

Mike Kimmel
Client Services Manager

Final 1.000

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Project Id:

Contact: Sheldon Hitchcock

Project Location: M-1-25S-28E

Date Received in Lab: Thu Dec-07-17 11:15 am

Report Date: 16-DEC-17

Project Manager: Kelsey Brooks

Analysis Requested													
	Lab Id:	570437-007		570437-008		570437-009		570437-010		570437-011		570437-012	
	Field Id:	T-1 6'		T-1 8'		T-1 10'		T-1 12'		T-2 0'		T-2 1'	
	Depth:	6-		8-		10-		12-		0-		1-	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-01-17 09:12		Dec-01-17 09:14		Dec-01-17 09:16		Dec-01-17 09:18		Dec-01-17 10:00		Dec-01-17 10:02	
BTEX by EPA 8021B	***Extracted:***									Dec-13-17 09:30		Dec-13-17 09:30	
	Analyzed:									Dec-13-17 16:02		Dec-13-17 16:21	
	Units/RL:									mg/kg	RL	mg/kg	RL
Benzene										<0.00200	0.00200	<0.00201	0.00201
Toluene										<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene										<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes										<0.00399	0.00399	<0.00402	0.00402
o-Xylene										<0.00200	0.00200	<0.00201	0.00201
Total Xylenes										<0.00200	0.00200	<0.00201	0.00201
Total BTEX										<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30		Dec-11-17 10:30	
	Analyzed:	Dec-11-17 11:59		Dec-11-17 12:17		Dec-11-17 12:23		Dec-11-17 12:29		Dec-11-17 12:35		Dec-11-17 12:41	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		780	49.7	1250	50.0	2880	49.8	319	24.6	13000	98.4	9890	99.4
TPH by SW8015 Mod	***Extracted:***									Dec-08-17 17:00		Dec-08-17 17:00	
	Analyzed:									Dec-09-17 04:23		Dec-09-17 04:43	
	Units/RL:									mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)										<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)										<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)										<15.0	15.0	<15.0	15.0
Total TPH										<15.0	15.0	<15.0	15.0

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Mike Kimmel
Client Services Manager

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Project Id:

Contact: Sheldon Hitchcock

Project Location: M-1-25S-28E

Date Received in Lab: Thu Dec-07-17 11:15 am

Report Date: 16-DEC-17

Project Manager: Kelsey Brooks

Analysis Requested							
	Lab Id:	570437-013		570437-014			
	Field Id:	T-2 2'		T-2 3'			
	Depth:	2-		3-			
	Matrix:	SOIL		SOIL			
	Sampled:	Dec-01-17 10:04		Dec-01-17 10:06			
BTEX by EPA 8021B	***Extracted:***	Dec-13-17 09:30					
	Analyzed:	Dec-13-17 16:40					
	Units/RL:	mg/kg	RL				
Benzene		<0.00202	0.00202				
Toluene		<0.00202	0.00202				
Ethylbenzene		<0.00202	0.00202				
m,p-Xylenes		<0.00404	0.00404				
o-Xylene		<0.00202	0.00202				
Total Xylenes		<0.00202	0.00202				
Total BTEX		<0.00202	0.00202				
Chloride by EPA 300	***Extracted:***	Dec-11-17 10:30		Dec-11-17 10:30			
	Analyzed:	Dec-11-17 13:05		Dec-13-17 12:57			
	Units/RL:	mg/kg	RL	mg/kg	RL		
Chloride		5930	99.6	11.2	4.98		
TPH by SW8015 Mod	***Extracted:***	Dec-08-17 17:00					
	Analyzed:	Dec-09-17 05:03					
	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		<15.0	15.0				

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Version: 1.%

Mike Kimmel
Client Services 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

+ NELAC certification not offered for this compound.

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

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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	

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035464 **Sample:** 570437-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 04:23

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.2	99.9	84	70-135	
o-Terphenyl	43.5	50.0	87	70-135	

Lab Batch #: 3035464 **Sample:** 570437-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 04:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.3	99.9	87	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 3035464 **Sample:** 570437-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 05:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.6	99.8	85	70-135	
o-Terphenyl	43.4	49.9	87	70-135	

Lab Batch #: 3035740 **Sample:** 570437-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 14:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0269	0.0300	90	80-120	

Lab Batch #: 3035740 **Sample:** 570437-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 14:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0270	0.0300	90	80-120	
4-Bromofluorobenzene	0.0276	0.0300	92	80-120	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035740 **Sample:** 570437-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 14:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0285	0.0300	95	80-120	

Lab Batch #: 3035888 **Sample:** 570437-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 16:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0267	0.0300	89	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 3035888 **Sample:** 570437-012 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 16:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0291	0.0300	97	80-120	

Lab Batch #: 3035888 **Sample:** 570437-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 16:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0271	0.0300	90	80-120	

Lab Batch #: 3035998 **Sample:** 570437-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 02:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	96.1	99.7	96	70-135	
o-Terphenyl	46.1	49.9	92	70-135	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035998 **Sample:** 570437-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 03:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.0	99.8	95	70-135	
o-Terphenyl	49.4	49.9	99	70-135	

Lab Batch #: 3035998 **Sample:** 570437-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 04:09

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.5	99.9	99	70-135	
o-Terphenyl	49.4	50.0	99	70-135	

Lab Batch #: 3035464 **Sample:** 7635722-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/08/17 22:41

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	100	88	70-135	
o-Terphenyl	47.8	50.0	96	70-135	

Lab Batch #: 3035740 **Sample:** 7635895-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/12/17 09:36

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0281	0.0300	94	80-120	

Lab Batch #: 3035888 **Sample:** 7635967-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/13/17 09:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0275	0.0300	92	80-120	
4-Bromofluorobenzene	0.0252	0.0300	84	80-120	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035998 **Sample:** 7636029-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/15/17 01:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	52.5	50.0	105	70-135	

Lab Batch #: 3035464 **Sample:** 7635722-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/08/17 23:01

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.9	100	89	70-135	
o-Terphenyl	46.8	50.0	94	70-135	

Lab Batch #: 3035740 **Sample:** 7635895-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/12/17 07:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0251	0.0300	84	80-120	
4-Bromofluorobenzene	0.0250	0.0300	83	80-120	

Lab Batch #: 3035888 **Sample:** 7635967-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/13/17 07:30

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0278	0.0300	93	80-120	
4-Bromofluorobenzene	0.0299	0.0300	100	80-120	

Lab Batch #: 3035998 **Sample:** 7636029-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/15/17 02:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	55.1	50.0	110	70-135	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035464 **Sample:** 7635722-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/08/17 23:21

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.5	100	94	70-135	
o-Terphenyl	49.8	50.0	100	70-135	

Lab Batch #: 3035740 **Sample:** 7635895-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/12/17 08:01

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 3035888 **Sample:** 7635967-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/13/17 07:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0277	0.0300	92	80-120	
4-Bromofluorobenzene	0.0338	0.0300	113	80-120	

Lab Batch #: 3035998 **Sample:** 7636029-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 12/15/17 02:27

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.3	100	92	70-135	
o-Terphenyl	47.6	50.0	95	70-135	

Lab Batch #: 3035464 **Sample:** 570434-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 01:04

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.5	99.8	90	70-135	
o-Terphenyl	48.3	49.9	97	70-135	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035740 **Sample:** 570435-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 08:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	80-120	
4-Bromofluorobenzene	0.0324	0.0300	108	80-120	

Lab Batch #: 3035888 **Sample:** 570779-005 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 08:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	80-120	
4-Bromofluorobenzene	0.0296	0.0300	99	80-120	

Lab Batch #: 3035998 **Sample:** 570437-002 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 03:28

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	93.9	99.7	94	70-135	
o-Terphenyl	49.0	49.9	98	70-135	

Lab Batch #: 3035464 **Sample:** 570434-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/09/17 01:26

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.4	99.8	79	70-135	
o-Terphenyl	41.7	49.9	84	70-135	

Lab Batch #: 3035740 **Sample:** 570435-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/12/17 08:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0337	0.0300	112	80-120	
4-Bromofluorobenzene	0.0344	0.0300	115	80-120	

* 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.

Version: 1.%

Form 2 - Surrogate Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Orders : 570437,

Project ID:

Lab Batch #: 3035888 **Sample:** 570779-005 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/13/17 09:02

BTEX by EPA 8021B Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	80-120	
4-Bromofluorobenzene	0.0283	0.0300	94	80-120	

Lab Batch #: 3035998 **Sample:** 570437-002 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 12/15/17 03:48

TPH by SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	51.9	50.0	104	70-135	

* 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.

Version: 1.%

BS / BSD Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order #: 570437 **Project ID:**

Analyst: ALJ **Date Prepared:** 12/12/2017 **Date Analyzed:** 12/12/2017

Lab Batch ID: 3035740 **Sample:** 7635895-1-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	<0.00201	0.100	0.107	107	0.0998	0.111	111	4	70-130	35	
Toluene	<0.00201	0.100	0.103	103	0.0998	0.106	106	3	70-130	35	
Ethylbenzene	<0.00201	0.100	0.105	105	0.0998	0.108	108	3	71-129	35	
m,p-Xylenes	<0.00402	0.201	0.200	100	0.200	0.208	104	4	70-135	35	
o-Xylene	<0.00201	0.100	0.0992	99	0.0998	0.102	102	3	71-133	35	

Analyst: ALJ **Date Prepared:** 12/13/2017 **Date Analyzed:** 12/13/2017

Lab Batch ID: 3035888 **Sample:** 7635967-1-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	<0.00201	0.100	0.115	115	0.100	0.108	108	6	70-130	35	
Toluene	<0.00201	0.100	0.110	110	0.100	0.103	103	7	70-130	35	
Ethylbenzene	<0.00201	0.100	0.113	113	0.100	0.105	105	7	71-129	35	
m,p-Xylenes	<0.00402	0.201	0.218	108	0.200	0.203	102	7	70-135	35	
o-Xylene	<0.00201	0.100	0.107	107	0.100	0.0990	99	8	71-133	35	

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

Version: 1.%

BS / BSD Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order #: 570437 **Project ID:**

Analyst: MNV **Date Prepared:** 12/08/2017 **Date Analyzed:** 12/09/2017

Lab Batch ID: 3035752 **Sample:** 7635709-1-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	<5.00	250	255	102	250	259	104	2	90-110	20	

Analyst: OJS **Date Prepared:** 12/11/2017 **Date Analyzed:** 12/11/2017

Lab Batch ID: 3035758 **Sample:** 7635746-1-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	<5.00	250	252	101	250	255	102	1	90-110	20	

Analyst: OJS **Date Prepared:** 12/11/2017 **Date Analyzed:** 12/11/2017

Lab Batch ID: 3035612 **Sample:** 7635780-1-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	<5.00	250	251	100	250	255	102	2	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

Version: 1.%

BS / BSD Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order #: 570437 **Project ID:**

Analyst: ARM **Date Prepared:** 12/08/2017 **Date Analyzed:** 12/08/2017

Lab Batch ID: 3035464 **Sample:** 7635722-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	922	92	1000	928	93	1	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	994	99	1000	1010	101	2	70-135	35	

Analyst: ARM **Date Prepared:** 12/14/2017 **Date Analyzed:** 12/15/2017

Lab Batch ID: 3035998 **Sample:** 7636029-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	961	96	1000	893	89	7	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	1100	110	1000	965	97	13	70-135	35	

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

Version: 1.%

Form 3 - MS / MSD Recoveries

Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order # : 570437 **Project ID:**

Lab Batch ID: 3035740 **QC- Sample ID:** 570435-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/12/2017 **Date Prepared:** 12/12/2017 **Analyst:** ALJ

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	<0.00200	0.100	0.0959	96	0.0996	0.102	102	6	70-130	35	
Toluene	<0.00200	0.100	0.0885	89	0.0996	0.0889	89	0	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0849	85	0.0996	0.0827	83	3	71-129	35	
m,p-Xylenes	<0.00401	0.200	0.163	82	0.199	0.159	80	2	70-135	35	
o-Xylene	<0.00200	0.100	0.0811	81	0.0996	0.0798	80	2	71-133	35	

Lab Batch ID: 3035888 **QC- Sample ID:** 570779-005 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/13/2017 **Date Prepared:** 12/13/2017 **Analyst:** ALJ

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	<0.00200	0.0998	0.0861	86	0.100	0.0950	95	10	70-130	35	
Toluene	<0.00200	0.0998	0.0788	79	0.100	0.0870	87	10	70-130	35	
Ethylbenzene	<0.00200	0.0998	0.0760	76	0.100	0.0832	83	9	71-129	35	
m,p-Xylenes	<0.00399	0.200	0.145	73	0.200	0.159	80	9	70-135	35	
o-Xylene	<0.00200	0.0998	0.0716	72	0.100	0.0794	79	10	71-133	35	

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: Illustrated Man Fee Com #1H (10-27-17)

Work Order # : 570437 **Project ID:**

Lab Batch ID: 3035612 **QC- Sample ID:** 570438-015 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/11/2017 **Date Prepared:** 12/11/2017 **Analyst:** OJS

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	5.89	247	265	105	247	263	104	1	90-110	20	

Lab Batch ID: 3035612 **QC- Sample ID:** 570722-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/11/2017 **Date Prepared:** 12/11/2017 **Analyst:** OJS

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	71.9	247	331	105	247	327	103	1	90-110	20	

Lab Batch ID: 3035752 **QC- Sample ID:** 570433-012 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/09/2017 **Date Prepared:** 12/08/2017 **Analyst:** MNV

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	672	248	886	86	248	902	93	2	90-110	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: Illustrated Man Fee Com #1H (10-27-17)

Work Order # : 570437 **Project ID:**

Lab Batch ID: 3035752 **QC- Sample ID:** 570434-008 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/09/2017 **Date Prepared:** 12/08/2017 **Analyst:** MNV

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	132	248	372	97	248	375	98	1	90-110	20	

Lab Batch ID: 3035758 **QC- Sample ID:** 570438-003 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/11/2017 **Date Prepared:** 12/11/2017 **Analyst:** OJS

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	706	249	915	84	249	914	84	0	90-110	20	X

Lab Batch ID: 3035758 **QC- Sample ID:** 570438-010 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/11/2017 **Date Prepared:** 12/11/2017 **Analyst:** OJS

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	227	245	474	101	245	477	102	1	90-110	20	

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: Illustrated Man Fee Com #1H (10-27-17)

Work Order # : 570437 **Project ID:**

Lab Batch ID: 3035464 **QC- Sample ID:** 570434-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/09/2017 **Date Prepared:** 12/08/2017 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	998	997	100	998	869	87	14	70-135	35	
Diesel Range Organics (DRO)	<15.0	998	1080	108	998	940	94	14	70-135	35	

Lab Batch ID: 3035998 **QC- Sample ID:** 570437-002 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 12/15/2017 **Date Prepared:** 12/14/2017 **Analyst:** ARM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 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
Gasoline Range Hydrocarbons (GRO)	<15.0	997	983	99	999	1020	102	4	70-135	35	
Diesel Range Organics (DRO)	<15.0	997	973	98	999	1040	104	7	70-135	35	

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.

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Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Page 1 Of 2

Xenco Quote #

Xenco Job # 570437

Client / Reporting Information

Company Name / Branch: COG Operating, LLC
Company Address: 2407 Pecos Ave. Artesia NM 88210
Email: slhitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Illustrated Man Fee Com #1H (10-27-17)
Project Location: M-1-25S-28E
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

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 EXTENDED	BTEX	CHLORIDES	Field Comments
1	T-1 0'	0	11/31	9:00 A	S	1								X	X	X	X	
2	T-1 1'	1	11/31	9:02 A	S	1								X	X	X	X	
3	T-1 2'	2	11/31	9:04 A	S	1								X	X	X	X	
4	T-1 3'	3	11/31	9:06 A	S	1								X			X	
5	T-1 4'	4	11/31	9:08 A	S	1								X			X	
6	T-1 5'	5	11/31	9:10 A	S	1								X			X	
7	T-1 6'	6	11/31	9:12 A	S	1								X			X	
8	T-1 8'	8	11/31	9:14 A	S	1								X			X	
9	T-1 10'	10	11/31	9:16 A	S	1								X			X	
10	T-1 12'	12	11/31	9:18 A	S	1								X			X	

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: Stop Cl- if > 600 mg/kg

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE P

	Relinquished by Sampler:	Date Time:	Received By:
1	Sheldon Neel	12 6 710925	1
	Relinquished by:	Date Time:	Received By:
3			3
	Relinquished by:	Date Time:	Received By:
5			5

Temp: 2.3°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.1°C

: Tracking #

ceived By:

ceived By: 9/7 11:15

4	Custody Seal #	Preserved where applicable	On Ice	Cooler Temp.	Thermo. Corr. Factor
4			X	5.6	

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San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
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CHAIN OF CUSTODY

Page 2 Of 2

Xenco Quote #

Xenco Job # 570437

Client / Reporting Information

Company Name / Branch: COG Operating, LLC
Company Address: 2407 Pecos Ave. Artesia NM 88210
Email: slhitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Illustrated Man Fee Com #1H (10-27-17)
Project Location: M-1-25S-28E
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

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 EXTENDED	BTEX	CHLORIDES	Field Comments
1	T-2 0'	0	11/31/17	10:00	S	1								/	/	/	/	
2	T-2 1'	1		10:02	S	1								/	/	/	/	
3	T-2 2'	2		10:04	S	1								/	/	/	/	
4	T-2 3'	3		10:06	S	1								/			/	
5					S	1												
6					S	1												
7					S	1												
8					S	1												
9					S	1												
10					S	1												

Turnaround Time (Business days)

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- [ ] 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:

Temp: 2.3°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.1°C

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	Sheldon Hitchcock	12.6.17 0925		2		9/7 11:15
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: X

Cooler Temp. 5.6 Thermo. Corr. Factor

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Midland, Texas (432-704-5251)
Phoenix, Arizona (480-355-0900)
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CHAIN OF CUSTODY

Page 1 Of 2

Xenco Quote # | Xenco Job # 570437

Client / Reporting Information

Company Name / Branch: COG Operating, LLC
Company Address: 2407 Pecos Ave. Artesia NM 88210
Email: slhitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Illustrated Man Fee Com #1H (10-27-17)
Project Location: M-1-25S-28E
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

Analytical Information

Matrix Codes

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GW =Ground Water
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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	TPH EXTENDED	BTEX	CHLORIDES	Field Comments
1	T-1 0'	0	11/31	9:00 A	S	1								X	X	X	X	
2	T-1 1'	1	11/31	9:02 A	S	1								X	X	X	X	
3	T-1 2'	2	11/31	9:04 A	S	1								X	X	X	X	
4	T-1 3'	3	11/31	9:06 A	S	1								X	X	X	X	
5	T-1 4'	4	11/31	9:08 A	S	1								X			X	
6	T-1 5'	5	11/31	9:10 A	S	1								X			X	
7	T-1 6'	6	11/31	9:12 A	S	1								X			X	
8	T-1 8'	8	11/31	9:14 A	S	1								X			X	
9	T-1 10'	10	11/31	9:16 A	S	1								X			X	
10	T-1 12'	12	11/31	9:18 A	S	1								X			X	

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: Stop Cl⁻ if ≤ 600 mg/kg

Temp: 2.3°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.1°C

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE P

	Relinquished by Sampler:	Date Time:	Received By:
1	Sheldon Hitchcock	12 6 7 0925	1
2	Relinquished by:	Date Time:	Received By:
3			3
4	Relinquished by:	Date Time:	Received By:
5			5

: Tracking #

ceived By:

ceived By: 11-15

Custody Seal #	Preserved where applicable	On Ice	Cooler Temp.	Thermo. Corr. Factor
		X	5.6	

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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Phoenix, Arizona (480-355-0900)
www.xenco.com

CHAIN OF CUSTODY

Page 2 Of 2

Xenco Quote #

Xenco Job # 570437

Client / Reporting Information

Company Name / Branch: COG Operating, LLC
Company Address: 2407 Pecos Ave. Artesia NM 88210
Email: slhitchcock@concho.com Phone No: 575-703-6475
dneel2@concho.com; cgray@concho.com; rhaskell@concho.com
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Illustrated Man Fee Com #1H (10-27-17)
Project Location: M-1-25S-28E
Invoice To: COG Operating, LLC
Attn: Robert McNeill
600 W. Illnois Ave.
Midland Tx, 79701
PO Number:

Analytical Information

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 EXTENDED	BTEX	CHLORIDES
1	T-2 0'	0	11/31/17	10:00	S	1								/	/	/	/
2	T-2 1'	1		10:02	S	1								/	/	/	/
3	T-2 2'	2		10:04	S	1								/	/	/	/
4	T-2 3'	3		10:06	S	1								/	/	/	/
5					S	1								/			/
6					S	1											
7					S	1											
8					S	1											
9					S	1											
10					S	1											

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:

Temp: 2.3°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.1°C

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	Sheldon Hitchcock	12.6.17 0925		2		12/7 11:15
3	Relinquished by:	Date Time:	Received By:	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice: X

Cooler Temp. 5.6 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: COG Operating, LLC

Date/ Time Received: 12/07/2017 11:15:00 AM

Work Order #: 570437

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)?	2.1
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**No**
#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: 12/07/2017

Checklist reviewed by: Mike Kimmel Date: 12/13/2017

Certificate of Analysis Summary 589746

COG Operating LLC, Artesia, NM

Project Name: Illustrated Man Fee 6#

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy Co. NM

Date Received in Lab: Wed Jun-20-18 10:19 am

Report Date: 21-JUN-18

Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	589746-001		589746-002		589746-003		589746-004		589746-005	
	Field Id:	T-2 Bttm 3'		N.Sidewall		S.Sidewall		E.Sidewall		W. Sidewall	
	Depth:	3- ft									
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-19-18 13:20		Jun-19-18 13:30		Jun-19-18 13:35		Jun-19-18 13:40		Jun-19-18 13:45	
Chloride by EPA 300	***Extracted:***	Jun-20-18 15:45		Jun-20-18 15:45		Jun-20-18 15:45		Jun-20-18 15:45		Jun-20-18 15:45	
	Analyzed:	Jun-21-18 10:12		Jun-20-18 19:20		Jun-21-18 10:17		Jun-21-18 10:22		Jun-20-18 20:09	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.95	4.95	1010	49.9	6.29	5.00	<4.96	4.96	338	5.00

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 589746

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Illustrated Man Fee 6#

21-JUN-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-17-16), 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 (T104704400-18-15)
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)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

21-JUN-18

Project Manager: **Sheldon Hitchcock**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: XENCO Report No(s): **589746**
Illustrated Man Fee 6#
Project Address: Eddy Co. NM

Sheldon Hitchcock:

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) 589746. 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. 589746 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,

Jessica Kramer

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

Sample Cross Reference 589746

COG Operating LLC, Artesia, NM

Illustrated Man Fee 6#

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
T-2 Bttm 3'	S	06-19-18 13:20	3 ft	589746-001
N.Sidewall	S	06-19-18 13:30	N/A	589746-002
S.Sidewall	S	06-19-18 13:35	N/A	589746-003
E.Sidewall	S	06-19-18 13:40	N/A	589746-004
W. Sidewall	S	06-19-18 13:45	N/A	589746-005

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Illustrated Man Fee 6#

Project ID:
Work Order Number(s): *589746*

Report Date: *21-JUN-18*
Date Received: *06/20/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 589746

COG Operating LLC, Artesia, NM

Illustrated Man Fee 6#

Sample Id:	**T-2 Bttm 3'**	Matrix:	Soil	Date Received:	06.20.18 10.19
Lab Sample Id:	589746-001	Date Collected:	06.19.18 13.20	Sample Depth:	3 ft
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 15.45	Basis:	Wet Weight
Seq Number:	3054119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	06.21.18 10.12	U	1

Certificate of Analytical Results 589746

COG Operating LLC, Artesia, NM

Illustrated Man Fee 6#

Sample Id:	**N.Sidewall**	Matrix:	Soil	Date Received:	06.20.18 10.19
Lab Sample Id:	589746-002	Date Collected:	06.19.18 13.30		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 15.45	Basis:	Wet Weight
Seq Number:	3054119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1010**	49.9	mg/kg	06.20.18 19.20		10

Certificate of Analytical Results 589746

COG Operating LLC, Artesia, NM

Illustrated Man Fee 6#

Sample Id:	**S.Sidewall**	Matrix:	Soil	Date Received:	06.20.18 10.19
Lab Sample Id:	589746-003	Date Collected:	06.19.18 13.35		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 15.45	Basis:	Wet Weight
Seq Number:	3054119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.29**	5.00	mg/kg	06.21.18 10.17		1

Certificate of Analytical Results 589746

COG Operating LLC, Artesia, NM

Illustrated Man Fee 6#

Sample Id:	**E.Sidewall**	Matrix:	Soil	Date Received:	06.20.18 10.19
Lab Sample Id:	589746-004	Date Collected:	06.19.18 13.40		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 15.45	Basis:	Wet Weight
Seq Number:	3054119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	06.21.18 10.22	U	1

Certificate of Analytical Results 589746

COG Operating LLC, Artesia, NM

Illustrated Man Fee 6#

Sample Id:	**W. Sidewall**	Matrix:	Soil	Date Received:	06.20.18 10.19
Lab Sample Id:	589746-005	Date Collected:	06.19.18 13.45		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	06.20.18 15.45	Basis:	Wet Weight
Seq Number:	3054119				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**338**	5.00	mg/kg	06.20.18 20.09		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

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

QC Summary 589746

COG Operating LLC

Illustrated Man Fee 6#

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3054119 Matrix: Solid Date Prep: 06.20.18

MB Sample Id: 7657017-1-BLK LCS Sample Id: 7657017-1-BKS LCSD Sample Id: 7657017-1-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	263	105	252	101	90-110	4	20	mg/kg	06.20.18 18:42	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3054119 Matrix: Soil Date Prep: 06.20.18

Parent Sample Id: 589724-001 MS Sample Id: 589724-001 S MSD Sample Id: 589724-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.14	248	262	102	262	102	90-110	0	20	mg/kg	06.20.18 18:59	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3054119 Matrix: Soil Date Prep: 06.20.18

Parent Sample Id: 589746-005 MS Sample Id: 589746-005 S MSD Sample Id: 589746-005 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	338	250	567	92	573	94	90-110	1	20	mg/kg	06.20.18 20:14	

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

Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample) E = MSD/LCSD Result

CHAIN OF CUSTODY

Revision 2016.1

XENCO LABORATORIES

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Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

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Xenco Quote # | Xenco Job # 589744

Client / Reporting Information

Company Name / Branch: COG - Artesia
Company Address:
Email: shitchcock@concho.com
Phone No:
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Illustrated Man Fee 6H
Project Location: Eddy co. NM
Invoice To: Sheldon Hitchcock
PO Number:

Analytical Information

Chloride EPA 300

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	Field Comments
1	T-2 Bttm 3'	3'	6/19/18	1:20	S	1								X	
2	N. sidewall	N/A		1:30	S	1								X	
3	S. sidewall			1:35	S	1								X	
4	E. sidewall			1:40	S	1								X	
5	W. sidewall			1:45	S	1								X	
6															
7															
8															
9															
10															

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [X] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] 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
- [ ] Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracking # 771511816504

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	Sheldon Hitchcock	6/19/18 14:20			6/19/18 15:30	
3				4		
5				Custody Seal #	Preserved where applicable	On Ice: X — Cooler Temp: 4.2 — Thermo. Corr. Factor: 0.0

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 losses 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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Xenco Quote #:
Xenco Job #: 589746

Client / Reporting Information

Company Name / Branch: COG - Artesia
Company Address:
Email: shitchcock@concho.com
Phone No:
Project Contact: Sheldon Hitchcock
Samplers's Name: Sheldon Hitchcock

Project Information

Project Name/Number: Illustrated Man Fee 6H
Project Location: Eddy co. NM
Invoice To: Sheldon Hitchcock
PO Number:

Analytical Information: Chloride EPA 300

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	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chloride EPA 300	Field Comments
1	T-2 Bttm 3'	3'	6/19/18	1:20	S	1								/	/	
2	N. sidewall	N/A	|	1:30	S	1								/	/	
3	S. sidewall	|	|	1:35	S	1								/	/	
4	E. sidewall	|	|	1:40	S	1								/	/	
5	W. sidewall	|	|	1:45	S	1								/	/	
6																
7																
8																
9																
10																

Turnaround Time (Business days)
- [ ] Same Day TAT
- [x] Next Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 3 Day EMERGENCY
- [ ] 5 Day TAT
- [ ] 7 Day TAT
- [ ] Contract TAT

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

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

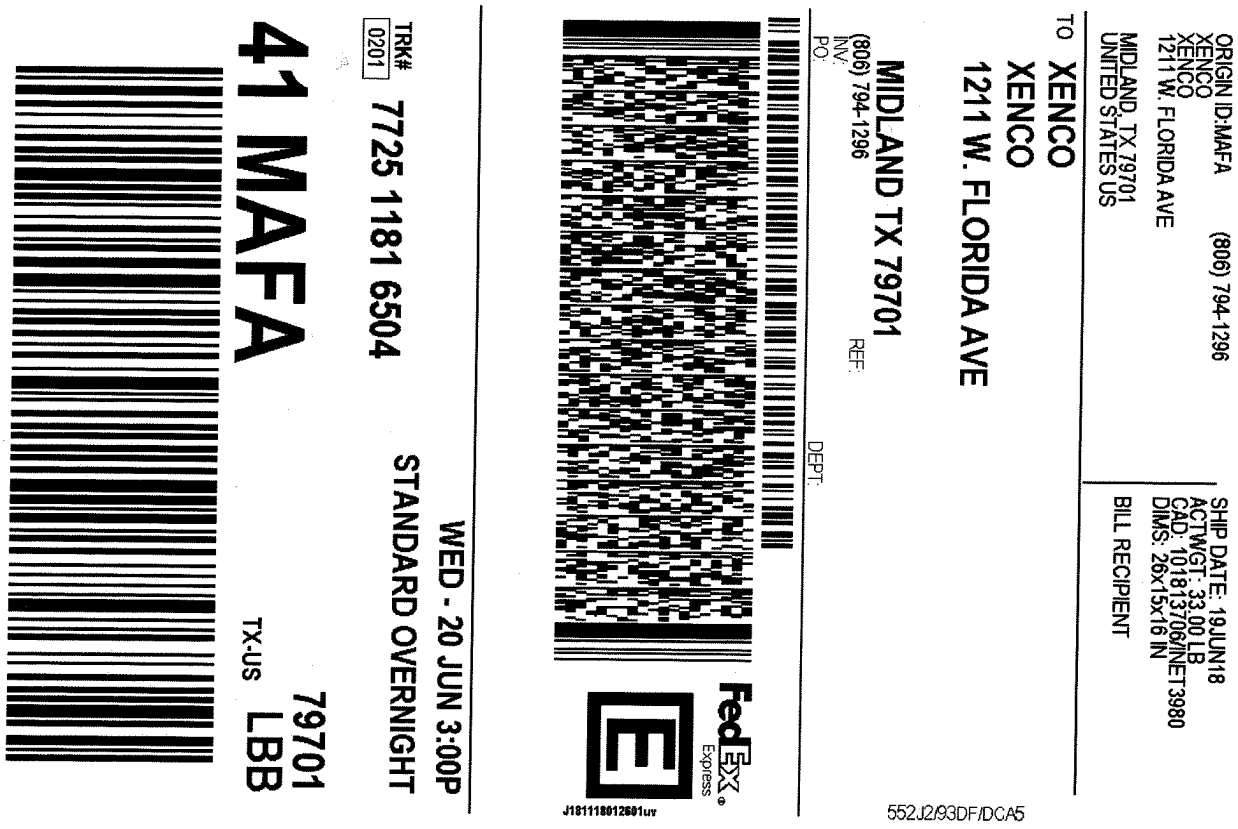
Notes:

FED-EX / UPS: Tracking # 7725118165041

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 Sheldon Hitchcock	6/19/18 14:20	1 [signature] 6/19/18 14:20	2 [signature]	6/19/18 15:30	2 [signature] 6/20/18 10:11
3		3	4		4
5		5	Custody Seal #	Preserved where applicable	On Ice: X; Cooler Temp: 4.2; Thermo. Corr. Factor: 0.0

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 losses 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.



After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 06/20/2018 10:19:31 AM

Work Order #: 589746

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)?	4.2
#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: Brianna Teel Date: 06/20/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 06/20/2018
Jessica Kramer

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 159869

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 159869
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	11/17/2022