

[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.

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701 | P 432.683.7443 | F 432.683.7441

### **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**

|--|

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

August 22, 2018

### **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.

August 22, 2018

### **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 gittom

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

## Illustrated Man Fee Com #001H

Receive



# APPENDIX II

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## 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)	(0	•				2=NE 3 st to larç	=SW 4=SE gest) (N/	) AD83 UTM in me	ters)	(	In feet)		
POD Number	POD Sub-	o	Q		200	Tura	Dura	х	Y	Distance	-	Depth Water		
C 01880	Code basin C	ED					29E	<b>^</b> 592161	3558605*	2429		40		<b>11</b> 45
			_	 						ge Depth to Minimum Maximum	Depth:	40	feet feet feet	_
Record Count: 1 Basin/County Search:														
County: Eddy	<u>-</u>													
UTMNAD83 Radius Se	earch (in meter	s):												

Easting (X): 589838

Northing (Y): 3557895

Radius: 2500

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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

# APPENDIX III

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	ARTESIA DISTRICT
istrict II Energy	State of New Mexico OCT 3 0 2017 Form C-1 Ainerals and Natural Resources Revised April 3, 2
1 S. First St., Artesia, NM 88210 istrict III 00 Rio Brazos Road. Aztec. NM 87410 Oi	Conservation Division 20 South St. Francis Dr. Santa Fe, NM 87505
Release Noti	ication and Corrective Action
NAB1730542511	OPERATOR Initial Report Final Re
Name of Company: COG Operating, LLC (OGRID# 2 Address: 600 West Illinois Avenue, Midland TX 7970	
acility Name: Illustrated Man Fee Com #001H	Facility Type: Tank Battery
urface Owner: Fee RLM Minera	Owner: Fee API No.: 30-015-41025
LO	CATION OF RELEASE
Jnit Letter         Section         Township         Range         Feet from the           M         1         25S         28E         1	
	226 Longitude: -104.048531 NAD83
ype of Release: Produced Water	Volume of Release: 15bbls         Volume Recovered: 1bbl
ource of Release: Flowline	Date and Hour of Occurrence:         Date and Hour of Discovery:           10/27/2017         10/27/2017 9:00am
Vas Immediate Notice Given?	Required If YES, To Whom?
y Whom? Vas a Watercourse Reached?	Date and Hour: If YES, Volume Impacting the Watercourse.
🔲 Yes 🖾 No	
Describe Cause of Problem and Remedial Action Taken.*	
Describe Cause of Problem and Remedial Action Taken.* A poly flowline ruptured resulting in the release of approximation he line was fused back together.	ly 15bbls of produced water. The damaged portion of the poly flowline was removed and
he line was fused back together. Describe Area Affected and Cleanup Action Taken.* The release occurred on the poly flowline approximately 0.3mi pasture for approximately 90-feet. A vacuum truck was utilized	ely 15bbls of produced water. The damaged portion of the poly flowline was removed and north of the Illustrated Man Fee Com #1 location. The produced water flowed east into the to recover the freestanding fluids. Concho will have the spill area evaluated for any work plan to the NMOCD prior to any significant remediation activities.
Describe Cause of Problem and Remedial Action Taken.* A poly flowline ruptured resulting in the release of approximation in the line was fused back together. Describe Area Affected and Cleanup Action Taken.* The release occurred on the poly flowline approximately 0.3min asture for approximately 90-feet. A vacuum truck was utilized cossible impact from the release and will present a remediation hereby certify that the information given above is true and co egulations all operators are required to report and/or file certain ublic health or the environment. The acceptance of a C-141 r hould their operations have failed to adequately investigate and	north of the Illustrated Man Fee Com #1 location. The produced water flowed east into th to recover the freestanding fluids. Concho will have the spill area evaluated for any work plan to the NMOCD prior to any significant remediation activities. Inplete to the best of my knowledge and understand that pursuant to NMOCD rules and to release notifications and perform corrective actions for releases which may endanger port by the NMOCD marked as "Final Report" does not relieve the operator of liability i remediate contamination that pose a threat to ground water, surface water, human health I report does not relieve the operator of responsibility for compliance with any other
Describe Cause of Problem and Remedial Action Taken.* A poly flowline ruptured resulting in the release of approximate the line was fused back together. Describe Area Affected and Cleanup Action Taken.* The release occurred on the poly flowline approximately 0.3min asture for approximately 90-feet. A vacuum truck was utilized ossible impact from the release and will present a remediation hereby certify that the information given above is true and co egulations all operators are required to report and/or file certai ublic health or the environment. The acceptance of a C-141 r hould their operations have failed to adequately investigate and r the environment. In addition, NMOCD acceptance of a C-1 certai, state, or local laws and/or regulations.	north of the Illustrated Man Fee Com #1 location. The produced water flowed east into th to recover the freestanding fluids. Concho will have the spill area evaluated for any work plan to the NMOCD prior to any significant remediation activities. Inplete to the best of my knowledge and understand that pursuant to NMOCD rules and to release notifications and perform corrective actions for releases which may endanger port by the NMOCD marked as "Final Report" does not relieve the operator of liability i remediate contamination that pose a threat to ground water, surface water, human health
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# APPENDIX IV

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised April 3, 2017

Page 12 of 95

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Sailla FE, INIVI 87505											
<b>Release Notification and Corrective Action</b>											
						<b>OPERA</b>	ГOR		Initial Report	$\boxtimes$	Final Report
				C (OGRID# 229	137)	Contact: Ro	bert McNeill		•		
				nd TX 79701			No.: <b>432-683-74</b>				
Facility Nar	me: Illustr	rated Man F	Fee Com	#001H		Facility Typ	e: Tank Batter	y			
Surface Ow	ner: BLM			Mineral C	Owner:	Fee		AP	I No.: 30-015	41025	
	LOCATION OF RELEASE										
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/West L	ine County		
М	1	258	28Ē							Edd	у
Latitude: 32.155226 Longitude: -104.048531 NAD83											
-				NAT	URE	OF RELI					
Type of Rele	ase: Produc	ed Water				Volume of	Release: 15bbls	Volu	me Recovered:	1bbl	
Source of Re	lease: Flow	line				Date and H	lour of Occurrenc	e: Date	and Hour of D	scoverv	·:
						10/27/2017			7/2017 9:00am		-
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the line was f						•	C		1 2		
Describe Are	Affaatad	and Cleanup	Action Tal	con *							
Describe Are	a Affected		ACTION 1 ar	len."							
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				tical results from equently approved							
allu DLIVI. 11	le remeulau	ion work plan	was subse	quentry approved	I. The le	mediation wa	s carried out in a		i tile approved	work pra	111.
I hereby certi	ify that the i	information g	iven above	is true and comp	lete to th	he best of my	knowledge and u	inderstand that	pursuant to NM	/IOCD 1	ules and
regulations a	ll operators	are required t	o report a	nd/or file certain r	elease n	otifications a	nd perform correct	ctive actions fo	or releases whic	h may e	ndanger
				ce of a C-141 repo							
				investigate and r stance of a C-141							
federal, state,					icpoit d		e the operator of	responsionity	ior compliance	witti aii	y ouler
,,							OIL CON	SERVATI	ON DIVISI	ON	
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Signature:	Sheld	on fito	m						KH	-	lall
						Approved by	Environmental S	pecialist:	1)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	`
Printed Name	e: Sheldon I	L. Hitchcock						1			
Title: HSE C	oordinator					Approval Dat	e: 11/17/2022	2 Expira	tion Date: N/	д	
E-mail Addre	ess: slhitchc	cock@concho	.com			Conditions of	Approval:		Attache	d 🗌	
Date: 8/22/20	018		Pł	none: 575-746-20	10	no	ne				

\* 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 Benzene Total Chloride Total BTEX (feet) (mg/kg)(mg/kg) TPH (mg/kg) (mg/kg) **T-1** 0.002 0 < 0.002 34000 640 **T-1** 12900 1 < 0.002 < 0.002 <15.0 2 **T-1** < 0.002 < 0.002 12300 <15.0 **T-1** 12400 3 \_\_\_ --\_\_\_ 4 **T-1** 1880 ------**T-1** 150 5 \_\_\_ \_\_\_ --**T-1** 6 780 -------**T-1** 8 1250 \_\_\_ \_\_\_ --**T-1** 2880 10 ------**T-1** 12 319 ------**T-2** < 0.002 < 0.002 0 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

Analy	ucai	N

March 5, 2018

#### **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 Jutan

Sheldon L. Hitchcock HSE Coordinator <u>slhitchcock@concho.com</u>

Enclosed:

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

## APPENDIX I

/larch 15, 3018

## Illustrated Man Fee Com #001H



Released to Imaging: 11/17/2022 3:23:26 PM

# APPENDIX II

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(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)							2=NE 3 st to larg	=SW 4=SE gest) (N/	) AD83 UTM in me	eters)	(	In feet)	
POD Number	POD Sub- Code basin Co		Q 64 1		-	Sec <sup>-</sup>	Tws	Rng	х	Y	Distance	-	-	Water Column
<u>C 01880</u>	C E	ED	3	3	2	06	25S	29E	592161	3558605* 🌍	2429	85	40	45
										Avera	ge Depth to	Water:	40	feet
											Minimum	Depth:	40	feet
											Maximum	Depth:	40	feet
Record Count: 1														
Basin/County Search	<u>::</u>													
County: Eddy														
UTMNAD83 Radius S	earch (in meters	s):												
Easting (X): 58983	38		Nor	thi	ng	(Y):	355	57895		Radius	2500			

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

3/5/18 8:25 AM

# APPENDIX III

Page 22 of 95

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i <u>strict  </u> \$25 N. French Dr., Hobbs, NM 88240 istrict <u>  </u>	Stat Energy Min		New Mex and Natura		OCT	<b>3 0</b> 20	17	Form C-141 Revised April 3, 2017
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00 Rio Brazos Road, Aztec, NM 87410 strict IV			St. Franc		REC	EIAE	Cordance v	riate District Office in with 19.15.29 NMAC
20 S. St. Francis Dr., Santa Fe, NM 87505			, NM 875					
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JAB1730542511	<u></u>		OPERAT		[	🛛 Initia	al Report	Final Repo
lame of Company: COG Operating, LI Address: 600 West Illinois Avenue, Mid				bert McNeill 10.: 432-683-74	43			
acility Name: Illustrated Man Fee Cor				e: Tank Batter				
urface Owner: For BLM	Mineral Ov	vner: F	<sup>-</sup> ee			API No	.: 30-015	41025
	LOCA	ΓION	OF REI	LEASE				
Jnit Letter Section Township Range M 1 25S 28E	Feet from the	North/	South Line	Feet from the	East/W	est Line	County	Eddy
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ype of Release: Produced Water	NAT			Release: 15bbls		Volume F	lecovered:	Івы
Source of Release: Flowline	Date and H 10/27/2017	ce: Date and Hour of Discovery: 10/27/2017 9:00am			scovery:			
Vas Immediate Notice Given?	🛛 No 🖾 Not Req	uired	If YES, To	Whom?	••••••			
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a poly flowline ruptured resulting in the relea- te line was fused back together. Describe Area Affected and Cleanup Action T the release occurred on the poly flowline appr asture for approximately 90-feet. A vacuum to ossible impact from the release and will press hereby certify that the information given about culations all operators are required to report ublic health or the environment. The accepta hould their operations have failed to adequate r the environment. In addition, NMOCD acc	se of approximately 1 aken.* roximately 0.3mi norr ruck was utilized to r ent a remediation wor ve is true and comple and/or file certain rel nce of a C-141 report ty investigate and rer eptance of a C-141 re	h of the ecover k plan te to th ease no by the nediate	e Illustrated I the freestand to the NMOG be best of my otifications and NMOCD me contaminati	Man Fee Com #1 ling fluids, Conch CD prior to any sign knowledge and un d perform correct arked as "Final Re on that pose a thre e the operator of r	location. o will ha gnificant nderstand tive actio sport" do sat to gro esponsib	The prod ve the spi remediati I that purs ns for rele es not reli und water ility for co	uced water Il area eval on activitio uant to NM eases which eve the ope s, surface w ompliance	flowed east into the uated for any s. fOCD rules and may endanger erator of liability ater, human health with any other
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# APPENDIX IV

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,

Mily K.

Mike Kimmel Client Services Manager

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Sample Id T-1 0' T-1 1' T-1 2' T-1 3' T-1 4' T-1 5' T-1 6' T-1 8' T-1 10' T-1 12' T-2 0' T-2 1' T-2 2' T-2 3'

### Sample Cross Reference 570437



### COG Operating, LLC, Midland, TX

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

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	12-01-17 09:00	0	570437-001
S	12-01-17 09:02	1	570437-002
S	12-01-17 09:04	2	570437-003
S	12-01-17 09:06	3	570437-004
S	12-01-17 09:08	4	570437-005
S	12-01-17 09:10	5	570437-006
S	12-01-17 09:12	6	570437-007
S	12-01-17 09:14	8	570437-008
S	12-01-17 09:16	10	570437-009
S	12-01-17 09:18	12	570437-010
S	12-01-17 10:00	0	570437-011
S	12-01-17 10:02	1	570437-012
S	12-01-17 10:04	2	570437-013
S	12-01-17 10:06	3	570437-014

Version: 1.%

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## 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.





Project Id:

Contact: Sheldon Hitchcock Project Location: M-1-25S-28E Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX Project Name: Illustrated Man Fee Com #1H (10-27-17)



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

	Lab Id:	570437-0	001	570437-0	002	570437-0	003	570437-0	04	570437-0	005	570437-0	006
Analysis Requested	Field Id:	T-1 0	,	T-1 1'		T-1 2'		T-1 3'		T-1 4'		T-1 5'	
Analysis Kequesied	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 (	)9:06	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 1	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 1	1:42	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						

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Sheldon Hitchcock

M-1-25S-28E

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX Project Name: Illustrated Man Fee Com #1H (10-27-17)



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

	Lab Id:	570437-0	007	570437-0	08	570437-0	09	570437-0	10	570437-	011	570437-0	012
Analysis Requested	Field Id:	T-1 6'		T-1 8'		T-1 10'		T-1 12		T-2 0	'	T-2 1	•
Analysis Kequestea	Depth:	6-		8-		10-	10-		12-		0-		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-01-17	09:12	Dec-01-17	09:14	Dec-01-17 (	)9:16	Dec-01-17 (	)9:18	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 1	0:30	Dec-11-17	0:30	Dec-11-17	10:30	Dec-11-17	10:30
	Analyzed:	Dec-11-17	11:59	Dec-11-17	12:17	Dec-11-17 1	2:23	Dec-11-17	2:29	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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Sheldon Hitchcock

M-1-25S-28E

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX Project Name: Illustrated Man Fee Com #1H (10-27-17)



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

	Lab Id:	570437-0	013	570437-0	14		
An alusia Degregated	Field Id:	T-2 2'		T-2 3'			
Analysis Requested	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	0:30		
	Analyzed:	Dec-11-17	13:05	Dec-13-17	2:57		
	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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# LABORATORIES

## **Flagging Criteria**



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- 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 LimitSDL Sample Detection LimitLOD Limit of DetectionPQL Practical Quantitation LimitMQL Method Quantitation LimitLOQ 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	



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

Lab Batch #:	: 3035464	Sample: 570437-011 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/09/17 04:23	SU	RROGATE R	ECOVERY S	STUDY	
	TPH	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctan	ie		84.2	99.9	84	70-135	
o-Terphenyl			43.5	50.0	87	70-135	
Lab Batch #:	3035464	Sample: 570437-012 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/09/17 04:43	SU	RROGATE R	ECOVERY S	STUDY	
	TPH	oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctan	ie.		87.3	99.9	87	70-135	
o-Terphenyl			45.3	50.0	91	70-135	
Lab Batch #:	3035464	Sample: 570437-013 / SMP	Batc			10 155	
Units:	mg/kg	Date Analyzed: 12/09/17 05:03		RROGATE R		STUDY	
TPH by SW8015 Mod			Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chlorooctan	ie		84.6	99.8	85	70-135	
o-Terphenyl			43.4	49.9	87	70-135	
Lab Batch #:	: 3035740	Sample: 570437-001 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/12/17 14:01	SU	RROGATE R	ECOVERY S	STUDY	
	втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
			0.0267	0.0300	89	80-120	
1,4-Difluorobe	enzene		0.0207		1 27		
1,4-Difluorobe 4-Bromofluoro			0.0269	0.0300	90	80-120	
4-Bromofluor	obenzene	Sample: 570437-002 / SMP		0.0300		80-120	
4-Bromofluore Lab Batch #:	obenzene	Sample: 570437-002 / SMP Date Analyzed: 12/12/17 14:20	0.0269 Batc	0.0300	: Soil		
-	obenzene 3035740 mg/kg BTEX	Date Analyzed: 12/12/17 14:20	0.0269 Batc	0.0300 h: 1 Matrix	: Soil ECOVERY S Recovery %R		Flags
4-Bromofluore Lab Batch #:	obenzene : 3035740 mg/kg BTEX	Date Analyzed: 12/12/17 14:20	0.0269 Batc SU Amount Found	0.0300 h: 1 Matrix JRROGATE R True Amount	: Soil ECOVERY S Recovery	STUDY Control Limits	Flags

\* 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



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

Work Ord Lab Batch #:	ers: 57043	7, Sample: 570437-003 / SMP	Project ID: Batch: 1 Matrix: Soil							
Units:	mg/kg	Date Analyzed: 12/12/17 14:39		JRROGATE R		STUDY				
	ВТЕХ	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R 80-120 80-120 5TUDY Control Limits %R 80-120 5TUDY Control Limits %R 80-120 80-120 80-120 80-120 5TUDY Control Limits %R 80-120 80-120 80-120	Flags			
		Analytes			[D]					
1,4-Difluorobe	enzene		0.0271	0.0300	90	80-120				
4-Bromofluor			0.0285	0.0300	95	80-120				
Lab Batch #:	: 3035888	Sample: 570437-011 / SMP	P Batch: 1 Matrix: Soil							
Units:	mg/kg	Date Analyzed: 12/13/17 16:02	SU	JRROGATE R	ECOVERY S	STUDY				
	втех	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flags			
1,4-Difluorobe	enzene	Anarytes	0.0267	0.0300	89	80-120				
4-Bromofluoro			0.0299	0.0300	100					
Lab Batch #:		Sample: 570437-012 / SMP	Bate			00 120				
Units:	mg/kg	Date Analyzed: 12/13/17 16:21	SURROGATE RECOVERY STUDY							
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Limits	Flags			
		Analytes			[D]					
1,4-Difluorobe			0.0273	0.0300	91	80-120				
4-Bromofluoro			0.0291	0.0300	97	80-120				
Lab Batch #:		Sample: 570437-013 / SMP	Bate	h: 1 Matrix	: Soil					
Units:	mg/kg	<b>Date Analyzed:</b> 12/13/17 16:40	SU	JRROGATE R	ECOVERY S	STUDY				
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flags			
1,4-Difluorobe	enzene		0.0260	0.0300	87	80-120				
4-Bromofluoro	obenzene		0.0271	0.0300	90	80-120				
Lab Batch #:	: 3035998	Sample: 570437-001 / SMP	Bate	h: 1 Matrix	: Soil	1	<u> </u>			
Units:	mg/kg	Date Analyzed: 12/15/17 02:48	SU	JRROGATE R	ECOVERY S	STUDY				
	TPHI	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]		Flags			
1 (11		Analytes	0.5.5							
1-Chlorooctan	ie		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



	#: 3035998	Sample: 570437-002 / SMP					
Units:	mg/kg	Date Analyzed: 12/15/17 03:08	SU	JRROGATE R	ECOVERY S	STUDY	
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chloroocta	ane		95.0	99.8	95	70-135	
o-Terphenyl	L.		49.4	49.9	99	70-135	
Lab Batch	#: 3035998	Sample: 570437-003 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/15/17 04:09	SU	JRROGATE R	ECOVERY S	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chloroocta			98.5	99.9		70-135	
o-Terphenyl			49.4	50.0	99		
	#: 3035464	<b>Sample:</b> 7635722-1-BLK / B					
Units:	mg/kg	<b>Date Analyzed:</b> 12/08/17 22:41				STUDY	
	TPH h	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chloroocta	ane		88.1	100	88	70-135	
o-Terphenyl	L.		47.8	50.0	96	70-135	
Lab Batch	#: 3035740	Sample: 7635895-1-BLK / B	LK Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/12/17 09:36	SU	JRROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found	True Amount	89570-13599970-135Matrix: SoilTE RECOVERY STUDYne unt 1Recovery %R [D]Control Limits %R99970-13509970-135Matrix: SolidTE RECOVERY STUDYTe RECOVERY STUDYne unt 1Recovery %R [D]Control Limits %R08870-13509670-135Matrix: SolidTE RECOVERY STUDYne unt 1Recovery %R [D]Control Limits %R09670-135Matrix: SolidTE RECOVERY STUDYne untRecovery %R [D]Control Limits %R009280-120009480-120Matrix: SolidTE RECOVERY STUDYTE RECOVERY STUDYne untRecovery %R1Recovery %R109280-120		Flag
		Analytes	[A]	[B]			
1,4-Difluoro		Analytes	[A]	0.0300	[D]	80-120	
1,4-Difluoro 4-Bromofluo	obenzene	Analytes			[ <b>D</b> ] 92		
4-Bromofluc	obenzene	Analytes Sample: 7635967-1-BLK / B	0.0277 0.0281	0.0300	[ <b>D</b> ] 92 94		
4-Bromofluc	orobenzene	-	0.0277 0.0281 LK Batc	0.0300 0.0300 h: 1 Matrix	[D] 92 94 :: Solid	80-120	
4-Bromofluc	obenzene orobenzene #: 3035888 mg/kg BTEX	Sample: 7635967-1-BLK / B. Date Analyzed: 12/13/17 09:59 X by EPA 8021B	0.0277 0.0281 LK Batc	0.0300 0.0300 h: 1 Matrix	[D]       92       94       :: Solid       ECOVERY S       Recovery %R	80-120 STUDY Control Limits	Flag
4-Bromofluc	obenzene orobenzene #: 3035888 mg/kg BTEX	Sample: 7635967-1-BLK / B Date Analyzed: 12/13/17 09:59	0.0277 0.0281 LK Batc SU Amount Found	0.0300 0.0300 h: 1 Matrix JRROGATE R True Amount [B]	[D]       92       94       Solid       ECOVERY S       Recovery %R       [D]	80-120 STUDY Control Limits %R	Flage

\* 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



T	···· /1-	Dete Analand: 10/15/17.01.40					
Units:	mg/kg	Date Analyzed: 12/15/17 01:48	SU	URROGATE R	ECOVERY S	STUDY	
	TPH	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]	Control Limits %R         70-135         70-135         STUDY         Limits %R         70-135         STUDY         Control Limits %R         70-135         80-120         80-120         STUDY         STUDY         80-120         80-120         80-120         80-120         80-120	
1-Chlorooctar	ne		100	100	100	70-135	
o-Terphenyl			52.5	50.0	105	70-135	
Lab Batch #	: 3035464	Sample: 7635722-1-BKS / I	BKS Bate	ch: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/08/17 23:01	SU	URROGATE R	ECOVERY S	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flage
1-Chlorooctar		Anaryus	88.9	100	89	70-135	
o-Terphenyl			46.8	50.0	94		
Lab Batch #	: 3035740	Sample: 7635895-1-BKS / I				10 100	
Units:	mg/kg	Date Analyzed: 12/12/17 07:42	SURROGATE RECOVERY STUDY				
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Limits	Flags
		Analytes	[**]		[D]		
1,4-Difluorob	enzene		0.0251	0.0300	84	80-120	
4-Bromofluor	obenzene		0.0250	0.0300	83	80-120	
Lab Batch #	: 3035888	Sample: 7635967-1-BKS / 1	BKS Bate	ch: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/13/17 07:30	SU	URROGATE R	ECOVERY S	STUDY	
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Limits	Flags
1,4-Difluorob	enzene	·	0.0278	0.0300	93	80-120	
4-Bromofluor	obenzene		0.0299	0.0300	100		
Lab Batch #		Sample: 7636029-1-BKS / I					
Units:	mg/kg	Date Analyzed: 12/15/17 02:08	SU	URROGATE R	ECOVERY	STUDY	
	TPH	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Limits	Flag
		Analytes			[D]		
1-Chlorooctar	ne		104	100	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



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

Lab Batch #:		Sample: 7635722-1-BSD / I			ix: Solid		
Units:	mg/kg	Date Analyzed: 12/08/17 23:21	SU	JRROGATE	RECOVERY S	STUDY	
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctan	e		93.5	100	94	70-135	
o-Terphenyl			49.8	50.0	100	70-135	
Lab Batch #:	3035740	Sample: 7635895-1-BSD / I	BSD Bate	h: 1 Matr	ix: Solid		
U <b>nits:</b>	mg/kg	Date Analyzed: 12/12/17 08:01	SU	JRROGATE	RECOVERY	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobe		Anaryus	0.0285	0.0300	95	80-120	
4-Bromofluoro			0.0285	0.0300	97	80-120	
Lab Batch #:		Sample: 7635967-1-BSD / I			ix: Solid	00-120	
Units:	mg/kg	Date Analyzed: 12/13/17 07:49			RECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes	[]		[D]	,	
1,4-Difluorobe	enzene		0.0277	0.0300	92	80-120	
4-Bromofluor	obenzene		0.0338	0.0300	113	80-120	
Lab Batch #:	3035998	Sample: 7636029-1-BSD / I	BSD Bate	h: 1 Matr	ix: Solid	·	
Units:	mg/kg	Date Analyzed: 12/15/17 02:27	SU	JRROGATE	RECOVERY	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctan		1 Hilly tes	92.3	100	92	70-135	
o-Terphenyl	-		47.6	50.0	95	70-135	
Lab Batch #:	3035464	Sample: 570434-004 S / MS			ix: Soil		
Units:	mg/kg	Date Analyzed: 12/09/17 01:04			RECOVERY S	STUDY	
		oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chlorooctan	e		89.5	99.8	90	70-135	
o-Terphenyl							

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B


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

	<b>ders :</b> 57043′ #: 3035740	7, <b>Sample:</b> 570435-002 S / MS	Batch	Project ID			
Units:	mg/kg	Date Analyzed: 12/12/17 08:20	SUF	ROGATE R	ECOVERY	STUDY	
		by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0305	0.0300	102	80-120	
4-Bromofluc	orobenzene		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	SUR	ROGATE R	ECOVERY S	STUDY	
		Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluoro		Analytes	0.0205	0.0200		00.120	
4-Bromofluc			0.0285	0.0300	95	80-120	
		Sample: 570427.002.S./MS	0.0296	0.0300	99	80-120	
	#: 3035998	Sample: 570437-002 S / MS	Batch				
Units:	mg/kg	Date Analyzed: 12/15/17 03:28	SUR	ROGATE R	ECOVERY S	STUDY	
		y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ane		93.9	99.7	94	70-135	
o-Terphenyl			49.0	49.9	98	70-135	
Lab Batch	#: 3035464	Sample: 570434-004 SD / MS	SD Batch:	1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/09/17 01:26	SUF	RROGATE R	ECOVERY S	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta			78.4	99.8	79	70-135	
o-Terphenyl			41.7	49.9	84	70-135	
	#: 3035740	Sample: 570435-002 SD / MS				10 155	
Units:	mg/kg	<b>Date Analyzed:</b> 12/12/17 08:39		ROGATE R		STUDY	
		by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0337	0.0300	112	80-120	
4-Bromofluo	orobenzene		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



	rders : 57043 n#: 3035888	7, Sample: 570779-005 SD / N	MSD Bate	Project ID: h: 1 Matrix			
Units:	mg/kg	Date Analyzed: 12/13/17 09:02	SU	JRROGATE R	ECOVERY S	STUDY	
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluo	robenzene	Analytes	0.0274	0.0300	91	80-120	
4-Bromofl	uorobenzene		0.0283	0.0300	94	80-120	
Lab Batch	n#: 3035998	Sample: 570437-002 SD / M	MSD Bate	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/15/17 03:48	SU	JRROGATE R	ECOVERY S	STUDY	
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analytes					
1-Chlorood	ctane		102	99.9	102	70-135	
o-Terphen	yl		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





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

Work Order #: 570437							Proj	ject ID:			
Analyst: ALJ	Da	ate Prepar	red: 12/12/201	7			Date A	nalyzed:	12/12/2017		
Lab Batch ID: 3035740 Sample: 7635895-1-	BKS	Batc	<b>h #:</b> 1					Matrix:	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
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	Da	ate Prepar	red: 12/13/201	7			Date A	nalyzed:	12/13/2017		
Lab Batch ID: 3035888 Sample: 7635967-1-	BKS	Batc	<b>h #:</b> 1					Matrix:	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / ]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
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





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

Work Order	: #: 570437							Pro	ject ID:			
Analyst:	MNV	D	ate Prepar	red: 12/08/201	17			Date A	nalyzed: 1	2/09/2017		
Lab Batch ID	<b>:</b> 3035752 <b>Sample:</b> 7635709-1-	BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K/BLANK	SPIKE / ]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Analy	Chloride by EPA 300 ytes	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	D	ate Prepar	ed: 12/11/201	17			Date A	nalyzed:	2/11/2017		
Lab Batch ID	: 3035758 Sample: 7635746-1-	BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K/BLANK	SPIKE / ]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
	Chloride by EPA 300	Blank Sample Result	Spike Added	Blank Spike	Blank Spike	Spike Added	Blank Spike	Blk. Spk Dup.	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analy	vtes	[A]	[B]	Result [C]	%R [D]	[E]	Duplicate Result [F]	%R [G]	70	70K	70KPD	
Analy	vtes	[A] <5.00	[ <b>B</b> ] 250			[E] 250	· ·		1	90-110	20	
	ojs	<5.00	250	[C]	[ <b>D</b> ]		Result [F]	[G] 102	1			
Chloride	OJS	<5.00 D	250 ate Prepar	[C] 252	[ <b>D</b> ]		Result [F]	[G] 102	1	90-110 2/11/2017		
Chloride Analyst:	OJS	<5.00 D	250 ate Prepar Batcl	[C] 252 ed: 12/11/201	[ <b>D</b> ] 101	250	Result [F]	[G] 102 Date A	1 nalyzed: 1 Matrix: S	90-110 2/11/2017 Solid	20	
Chloride Analyst: Lab Batch ID:	OJS : 3035612 Sample: 7635780-1- mg/kg Chloride by EPA 300	<5.00 D	250 ate Prepar Batcl	[C] 252 ed: 12/11/201 h #: 1	[ <b>D</b> ] 101	250	Result [F]	[G] 102 Date A	1 nalyzed: 1 Matrix: S	90-110 2/11/2017 Solid	20	Flag

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





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

Work Orde	er #: 570437								Proj	ject ID:			
Analyst:	ARM		D	ate Prepar	ed: 12/08/20	17			Date A	nalyzed:	12/08/2017		
Lab Batch I	<b>D:</b> 3035464	Sample: 7635722-1	-BKS	Batc	<b>h #:</b> 1					Matrix:	Solid		
Units:	mg/kg			BLAN	K /BLANK	SPIKE / 2	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
	TPH by SW8015	5 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Ana	lytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
Gasoline	e Range Hydrocarbons (GR	.0)	<15.0	1000	922	92	1000	928	93	1	70-135	35	
Diesel R	Range Organics (DRO)		<15.0	1000	994	99	1000	1010	101	2	70-135	35	
Analyst:	ARM		D	ate Prepar	red: 12/14/20	17	·		Date A	nalyzed:	12/15/2017		
Lab Batch I	<b>D:</b> 3035998	Sample: 7636029-1	-BKS	Bate	<b>h #:</b> 1					Matrix:	Solid		
Units:	mg/kg			BLAN	K /BLANK	SPIKE / 2	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
	TPH by SW8015	5 Mod	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
	lytes											<u> </u>	
	e Range Hydrocarbons (GR	.0)	<15.0	1000	961	96	1000	893	89	7	70-135	35	
Diesel R	Range Organics (DRO)		<15.0	1000	1100	110	1000	965	97	13	70-135	35	

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





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

<b>Work Order # :</b> 570437						Project II	):				
Lab Batch ID: 3035740	QC- Sample ID:	570435	-002 S	Ba	tch #:	1 Matrix	k: Soil				
<b>Date Analyzed:</b> 12/12/2017	Date Prepared:	12/12/2	017	Ar	alyst: A	ALJ					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]	[0]	[D]	[E]	itesuit [1]	[G]	/0			
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	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
<b>Date Analyzed:</b> 12/13/2017	Date Prepared:	12/13/2	017	Ar	alyst: A	ALJ					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	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  $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD =  $200^{\circ}|(C-F)/(C+F)|$  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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### Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order # :	570437						Project II	):				
Lab Batch ID:	3035612	QC- Sample ID:	570438	-015 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/11/2017	Date Prepared:	12/11/2	017	An	alyst: (	OJS					
<b>Reporting Units:</b>	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]		[D]	[E]	Kesun [F]	[G]	70	70K	70KI D	
Chloride		5.89	247	265	105	247	263	104	1	90-110	20	
Lab Batch ID:	3035612	QC- Sample ID:	570722	-002 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/11/2017	Date Prepared:	12/11/2	017	An	alyst: (	OJS					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[C]	<sup>7</sup> 0K [D]	E]	Kesun [F]	56K [G]	70	70K	70KPD	
Chloride		71.9	247	331	105	247	327	103	1	90-110	20	
Lab Batch ID:	3035752	QC- Sample ID:	570433	-012 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	12/09/2017	Date Prepared:	12/08/2	017	An	alyst: N	MNV					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
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.

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

Work Order # :	570437						Project II	):				
Lab Batch ID:	3035752	QC- Sample ID:	570434	-008 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	12/09/2017	Date Prepared:	12/08/2	017	Ar	alyst: N	ANV					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[C]	50K [D]	[E]	Kesun [F]	%K [G]	70	70K	70KFD	
Chloride		132	248	372	97	248	375	98	1	90-110	20	
Lab Batch ID:	3035758	QC- Sample ID:	570438	-003 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/11/2017	Date Prepared:	12/11/2	017	Ar	alyst: (	OJS					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[0]	[D]	[E]	Kesut [F]	[G]	/0		/oki D	
Chloride		706	249	915	84	249	914	84	0	90-110	20	Х
Lab Batch ID:	3035758	QC- Sample ID:	570438	-010 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	12/11/2017	Date Prepared:	12/11/2	017	Ar	alyst: (	DJS					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
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

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

Work Order # :	570437						Project II	):				
Lab Batch ID:	3035464	QC- Sample ID:	570434	-004 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	12/09/2017	Date Prepared:	12/08/2	017	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
T	PH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	-	RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Gasoline Range H	ydrocarbons (GRO)	<15.0	998	997	100	998	869	87	14	70-135	35	
Diesel Range Orga	anics (DRO)	<15.0	998	1080	108	998	940	94	14	70-135	35	
Lab Batch ID:	3035998	QC- Sample ID:	570437	-002 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	12/15/2017	Date Prepared:	12/14/2	017	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
T	PH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Gasoline Range H	ydrocarbons (GRO)	<15.0	997	983	99	999	1020	102	4	70-135	35	
Diesel Range Orga	anics (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

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Phoenix, Arizona (480-355-0900)

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order losses or expenses incurred by the Client If such loses are due to circumstances beyond the control of Xencc will be enforced unless previously negotiated under a fully executed client contract.	5	Relinguished by:	reminumined by:	Min	Relinquished by Sampler: SAMPLE CUSTODY MUST BE DOCUMENTE	TAT Starts Day received by Lab, if received by 5:00 pm	3 Day EMERGENCY	2 Day EMERGENCY	Next Day EMERGENCY	Same Day TAT 5 Day TAT	Turnaround Time ( Business days)	10 7-112"	97-110'	8 1-18	7 9-161	67-15	5 1-1 41	4 5-1 3'	37-121	2 7-1 1'	17-10'		No. Field ID / Point of Collection
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mation	vwww.xenco.com ject Information lilustrated Man Fee Com #1H (10-27-17)	Analytical Information     Kenco Job #     STOUR3T       Analytical Information     Matrix Codes       Second
Imail:       Sillic_ICCCR(WCORCHO.com)       Phone No: 575-703-6475       Invoice To: CC         dheel/2@concho.com;       Att       Att         Project contact:       Sheldon Hitchcock       60         Samplers's Name:       Sheldon Hitchcock       Mit	COG Operating, LLC Attn: Robert McNeill 600 W. Illnois Ave. Midland Tx, 79701 DED	
No. Field ID / Point of Collection Sample Death		TEX HLORIDES A = Air A = Air
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Turnaround Time ( Business days)	Data Deliverable Information	Notes:
Same Day TAT	Level II Std QC Level IV (Full Data Pkg /raw data)	Stop (1- it & Contraling
ICY	Level III Std QC+ Forms TRRP Level IV	
3 Day EMERGENCY	TRRP Checklist	
TAT Starts Day received by Lab, if received by 5:00 pm	CE:(0-6: -0.2°C)	ור, ה-ט Tracking #
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		WWW	www.xenco.com	com	Xen	Xenco Quote #	Xenco Job #	<b>ドリリロス</b>	
						Analytica	Analytical Information		Matric Dodos
Client / Reporting Information		Pr	Project Information						Matrix Codes
COG Operating, LLC		Project Name/Number:	Illustrated Man Fee Com #1H (10-27-17)	n #1H (10-27-17)					W = Water
Company Address: 2407 Pecos Ave. Artesia NM 88210		Project Location: M-1-25S-28E							S = Soil/Sed/Solid GW =Ground Water
Email: <u>shlichcock@concho.com</u> Phone No: 575.703- dneel2@concho.com; cgray@concho.com; rhaskell@concho.com	Phone No: 575-703-6475 ell@concho.com	Invoice To: COG O Attn: Rc	COG Operating, LLC Attn: Robert McNeill						DW = Drinking Water P = Product SW = Surface water
Project Contact: Sheldon Hitchcock			600 W. Illnois Ave. Midland Tx, 79701		)				OW =Ocean/Sea Water
Samplers's Name: Sheldon Hitchcock		PO Number:			IDE	8			O = Oil
		Collection		Number of preserved bottles		IDES			WW= Waste Water A = Air
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Next Day EMERGENCY		Le	Level III Std QC+ Forms	TRRP Level IV	evel IV				8
2 Day EMERGENCY	TAT	Le	Level 3 (CLP Forms)	UST / RG -411	G -411		$(6-23 \cdot 10^{-20})$		
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TAT Starts Day received by Lab, if received by 5:00 pm	oy 5:00 pm					F	FED-EX / UPS: Tracking *	2-1	C
er:	USTODY MUST BE D	OCUMENTED BELOW E	ACH TIME SAMPLES CH	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIE	LUDING COURIER DEI	R DELIVERY			
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Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontactors. It assigns standard terms and constitute a variable of the form of the	constitutes a valid pur	chase order from client cc	ompany to Xenco, its affilia	tes and subcontractors. It a	assigns standard terms a	nd conditions of service	Xenco will be liable only for t	0.0	

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Dallas Texas (214-902-0300)

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## CHAIN OF CUSTODY Page 1 of 2

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San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

Importing Information         Project Information         Project Information           anch: LLC         Project Name/Number:         Illustrate A           Sala NM 88210         Project Information:         Project Location:           Conncho.com         Phone No: 575-703-6475         Invoice To:         COG Operating, LI           com; cgray@concho.com; rhaskell@concho.com         Midland, Texas (432-704-525)         Project Location:         Illustrate A           com; cgray@concho.com; rhaskell@concho.com         Mivolee To:         COG Operating, LI         COG Operating, LI           com; cgray@concho.com; rhaskell@concho.com         Attn: Robert McNei         600 W. Illinois Ave.         600 W. Illinois Ave.           eldon Hitchcock         Date         Time         Matrix         b           Sample         Depth         Date         Time         Matrix         b           cideon         1         1/5/1         9:02.4         5         1         5         1           cideon         2         1/5/1         9:02.4         5         1         5         1         5         1
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12 11/51 9:184
Same Day TAT 5 Day TAT Data Deliverable Information
RGENCY
2 Day EMERGENCY       Contract TAT       Level 3 (CLP Forms)         3 Day EMERGENCY       TRRP Checklist
Relinquished by Sampler,     SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PI      Date Time:     Date Time:     Determined Building
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Midland, Texas (432-704-5251) San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

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 bast of samples and shall not assume any responsibility for any include to each project. Xenco unless previously negoliated under a fully executed client contract. Relinquished by Sampler: 10 dneel2@concho.com; cgray@concho.com; rhaskell@concho.com Relinquished by: 6 G No. Samplers's Name: Sheldon Hitchcock Project Contact: Sheldon Hitchcock 4 ω 2407 Pecos Ave. Artesia NM 88210 Company Address: COG Operating, LLC mail: shitchcock@concho.com Company Name / Branch: 3 Day EMERGENCY N TAT Starts Day received by Lab, if received by 5:00 pm 2 Day EMERGENCY Same Day TAT Next Day EMERGENCY 7-2 -T-2 Client / Reporting Information , 2 1 Turnaround Time (Business days) N 3 3 Field ID / Point of Collection Contract TAT 7 Day TAT SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY 5 Day TAT Phone No: 575-703-6475 Date Time: 12677 0925 Date Time: Date Time: 6 2 Depth Sample 0 21/1C/11 Collection PO Number Invoice To: M-1-25S-28E Project Name/Number: Project Location: Date Received By; 10:04 10:04 20:02 10:00 COG Operating, LLC Attn: Robert McNeill 600 W. Illnois Ave. **Received By:** 1 SIMU Midland Tx, 79701 Time **TRRP** Checklist Level 3 (CLP Forms) Level III Std QC+ Forms Level II Std QC **Project Information** Matrix Illustrated Man Fee Com #1H (10-27-17) S S S S S S S S S S Data Deliverable Information www.xenco.com # of bottles -\_ \_ -\_ --\_ \_ HCI NaOH/Zn Number of preser Acetate HNO3 Custody Seal # **Relinquished By:** Relinquished By: UST / RG -411 **TRRP Level IV** Level IV (Full Data Pkg /raw data) H2SO4 NaOH ved bottles NaHSO4 MEOH NONEC TPH EXTENDED Xenco Quote # Preserved where applicable BTEX Date Time: Date Time: CHLORIDES Analytical Information FED-EX / UPS: Tracking # Corrected Temp: Temp: CF:(0-6: -0.2°C) Notes: (6-23: +0.2°C) Received By: Received By: Xenco Job # Pr 2. 20 Vn lee 57043 S a Cooler Temp. IR ID:R-8 0 -ield Comments Thermo. Corr. Factor A = AirWW= Waste Water WI = Wipe SW = Surface water P = Product DW = Drinking Water OW =Ocean/Sea Water SL = Sludge GW =Ground Water W = Water 0 = 0ilS = Soil/Sed/Solid Matrix Codes Ó

9

8 7

### Received by OCD: 11/17/2022 3:21:29 PM

### Final 1.000

Received by OCD: 11/17/2022 3:21:29 PM



### **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 Chee	cklist 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?	Νο
#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?	Νο
#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)?	Νο
#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:

Date: 12/07/2017

Checklist reviewed by: Mike Kimmel

Date: 12/13/2017

### APPENDIX VI

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,

Mily K.

Mike Kimmel Client Services Manager

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Sample Id T-1 0' T-1 1' T-1 2' T-1 3' T-1 4' T-1 5' T-1 6' T-1 8' T-1 10' T-1 12' T-2 0' T-2 1' T-2 2' T-2 3'

### Sample Cross Reference 570437



### COG Operating, LLC, Midland, TX

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

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	12-01-17 09:00	0	570437-001
S	12-01-17 09:02	1	570437-002
S	12-01-17 09:04	2	570437-003
S	12-01-17 09:06	3	570437-004
S	12-01-17 09:08	4	570437-005
S	12-01-17 09:10	5	570437-006
S	12-01-17 09:12	6	570437-007
S	12-01-17 09:14	8	570437-008
S	12-01-17 09:16	10	570437-009
S	12-01-17 09:18	12	570437-010
S	12-01-17 10:00	0	570437-011
S	12-01-17 10:02	1	570437-012
S	12-01-17 10:04	2	570437-013
S	12-01-17 10:06	3	570437-014

Version: 1.%

Released to Imaging: 11/17/2022 3:23:26 PM



### 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.





Project Id:

Contact: Sheldon Hitchcock Project Location: M-1-25S-28E Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX Project Name: Illustrated Man Fee Com #1H (10-27-17)



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

	Lab Id:	570437-0	001	570437-0	002	570437-0	003	570437-0	04	570437-0	005	570437-0	06
Are shuris De su ested	Field Id:	T-1 0	,	T-1 1		T-1 2'		T-1 3'		T-1 4'		T-1 5'	
Analysis Requested	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 (	9:06	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 1	0:30	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 1	1:42	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				ĺ		
	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						

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Sheldon Hitchcock

M-1-25S-28E

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX Project Name: Illustrated Man Fee Com #1H (10-27-17)



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

	1												
	Lab Id:	570437-0	007	570437-0	08	570437-0	09	570437-0	10	570437-	011	570437-0	012
Analysis Requested	Field Id:	T-1 6'		T-1 8'		T-1 10'		T-1 12		T-2 0	,	T-2 1	,
Analysis Requesieu	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 (	)9:16	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 1	0:30	Dec-11-17	10:30	Dec-11-17 10:30		Dec-11-17 10:30	
	Analyzed:	Dec-11-17	11:59	Dec-11-17	2:17	Dec-11-17 1	2:23	Dec-11-17	2:29	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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Sheldon Hitchcock

M-1-25S-28E

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysis Summary 570437

COG Operating, LLC, Midland, TX

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



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

	Lab Id:	570437-013	570437-014		
	Field Id:	T-2 2'	T-2 3'		
Analysis Requested					
	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			
Fotal 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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### LABORATORIES

### **Flagging Criteria**



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- 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 LimitSDL Sample Detection LimitLOD Limit of DetectionPQL Practical Quantitation LimitMQL Method Quantitation LimitLOQ 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	



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

Work Ord Lab Batch #	<b>lers :</b> 57043 <b>:</b> 3035464	7, <b>Sample:</b> 570437-011 / SMP	Batc	Project ID: h: 1 Matrix						
Units:	mg/kg	Date Analyzed: 12/09/17 04:23	SU	JRROGATE R	ECOVERY S	STUDY				
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chloroocta	ne		84.2	99.9	84	70-135				
o-Terphenyl			43.5	50.0	87	70-135				
Lab Batch #	<b>:</b> 3035464	Sample: 570437-012 / SMP	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 12/09/17 04:43	SU	<b>RROGATE R</b>	ECOVERY S	STUDY				
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chloroocta	ne		87.3	99.9	87	70-135				
o-Terphenyl			45.3	50.0	91	70-135				
Lab Batch #	<b>:</b> 3035464	Sample: 570437-013 / SMP	Batc			10 155				
Units:	mg/kg	Date Analyzed: 12/09/17 05:03		JRROGATE R	ECOVERY S	STUDY				
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chloroocta	ne		84.6	99.8	85	70-135				
o-Terphenyl			43.4	49.9	87	70-135				
Lab Batch #		Sample: 570437-001 / SMP	Batc							
Units:	mg/kg	Date Analyzed: 12/12/17 14:01	SURROGATE RECOVERY STUDY							
	ВТЕУ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorol	benzene	-	0.0267	0.0300	89	80-120				
4-Bromofluo	robenzene		0.0269	0.0300	90	80-120				
	<b>:</b> 3035740	Sample: 570437-002 / SMP	Batc		: Soil	1				
Lab Batch #			<b>GT</b>		ECOVERYS	STUDY				
	mg/kg	Units:         mg/kg         Date Analyzed: 12/12/17 14:20           BTEX by EPA 8021B			LOOTLINI					
		X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
Lab Batch # Units: 1.4-Difluorob	BTEX	-	Amount Found	True Amount	Recovery %R	Limits	Flags			

\* 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



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

Work Ord Lab Batch #:		7, Sample: 570437-003 / SMP	Batcl	Project ID			
Units:	mg/kg	Date Analyzed: 12/12/17 14:39		RROGATE R		STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorobe			0.0271	0.0300	90	80-120	
4-Bromofluoro			0.0285	0.0300	95	80-120	
Lab Batch #:		Sample: 570437-011 / SMP	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/13/17 16:02	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobe	enzene	Analytes	0.0267	0.0300	89	80-120	
4-Bromofluoro			0.0299	0.0300	100	80-120	
Lab Batch #:		Sample: 570437-012 / SMP	Batcl			00 120	
Units:	mg/kg	Date Analyzed: 12/13/17 16:21		RROGATE R		STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorobe	enzene		0.0273	0.0300	91	80-120	
4-Bromofluor	obenzene		0.0291	0.0300	97	80-120	
Lab Batch #:	3035888	Sample: 570437-013 / SMP	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/13/17 16:40	SU	RROGATE R	ECOVERY S	STUDY	
	втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobe	enzene		0.0260	0.0300	87	80-120	
4-Bromofluoro	obenzene		0.0271	0.0300	90	80-120	
Lab Batch #:		Sample: 570437-001 / SMP	Batcl				
Units:	mg/kg	Date Analyzed: 12/15/17 02:48	SU	RROGATE R	ECOVERY S	STUDY	
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctan	e		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



Lab Batch #:		Sample: 570437-002 / SMP	Bato				
Units:	mg/kg	Date Analyzed: 12/15/17 03:08	SU	JRROGATE F	RECOVERY S	STUDY	
	TPH I	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chlorooctane	e		95.0	99.8	95	70-135	
o-Terphenyl			49.4	49.9	99	70-135	
Lab Batch #:	3035998	Sample: 570437-003 / SMP	Bato	ch: 1 Matrix	<b>k:</b> Soil		
Units:	mg/kg	Date Analyzed: 12/15/17 04:09	SU	URROGATE F	RECOVERY	STUDY	
	TPH b	oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chlorooctane	<u>,</u>	Anarytes	98.5	99.9	99	70-135	
o-Terphenyl			49.4	50.0	99	70-135	
Lab Batch #:	3035464	Sample: 7635722-1-BLK / B			<b>x:</b> Solid		
Units:	mg/kg	Date Analyzed: 12/08/17 22:41		JRROGATE F		STUDY	
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
	Analytes				[D]		
1-Chlorooctane	e		88.1	100	88	70-135	
o-Terphenyl			47.8	50.0	96	70-135	
Lab Batch #:	3035740	Sample: 7635895-1-BLK / B	LK Bate	ch: 1 Matrix	<b>x:</b> Solid		
Units:	mg/kg	Date Analyzed: 12/12/17 09:36	SU	URROGATE F	RECOVERY S	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorobe	nzene		0.0277	0.0300	92	80-120	
4-Bromofluoro	benzene		0.0281	0.0300	94	80-120	
Lab Batch #:		Sample: 7635967-1-BLK / B	LK Bate	h: 1 Matrix	<b>k:</b> Solid	I	
Units:	mg/kg	Date Analyzed: 12/13/17 09:59	SU	URROGATE F	RECOVERY	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1,4-Difluorobe	nzene		0.0275	0.0300	92	80-120	
	benzene						

\* 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



Tanita.	m a /l	Data Analyzada 10/15/17 01:40								
J <b>nits:</b>	mg/kg	Date Analyzed: 12/15/17 01:48	SU	JRROGATE R	ECOVERY S	STUDY				
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chloroocta	ane		100	100	100	70-135				
o-Terphenyl			52.5	50.0	105	70-135				
Lab Batch #	#: 3035464	Sample: 7635722-1-BKS / I	BKS Bate	ch: 1 Matrix	: Solid	·				
U <b>nits:</b>	mg/kg	Date Analyzed: 12/08/17 23:01	SU	JRROGATE R	ECOVERY S	STUDY				
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage			
1-Chloroocta	ane	Anarytes	88.9	100	89	70-135				
o-Terphenyl			46.8	50.0	94	70-135				
1 2	#: 3035740	Sample: 7635895-1-BKS / H				10 155				
Units:	mg/kg	Date Analyzed: 12/12/17 07:42		JRROGATE R		STUDY				
	втеу	X by EPA 8021B	Amount Found	True Amount	Recovery	Control Limits	Flags			
Analytes			[A]	[B]	%R [D]	%R	Tug			
1,4-Difluoro	benzene		0.0251	0.0300	84	80-120				
4-Bromofluc	orobenzene		0.0250	0.0300	83	80-120				
Lab Batch #	#: 3035888	Sample: 7635967-1-BKS / H	BKS Bate	h: 1 Matrix	: Solid					
Units:	mg/kg	Date Analyzed: 12/13/17 07:30	SURROGATE RECOVERY STUDY							
	втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1.4-Difluoro	benzene	Analytes	0.0278	0.0300	93	80-120				
4-Bromofluc			0.0278	0.0300	100	80-120				
	#: 3035998	Sample: 7636029-1-BKS / H				00-120				
Units:	mg/kg	Date Analyzed: 12/15/17 02:08		JRROGATE R		STUDY				
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag			
		Analytes	[- <b>-</b> ]	[~]	[D]					
1-Chloroocta	ane		104	100	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



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

TT	л	D.4. A					
Units:	mg/kg	Date Analyzed: 12/08/17 23:21	SU	RROGATE R	ECOVERY S	STUDY	
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1-Chloroocta	ine		93.5	100	94	70-135	
o-Terphenyl			49.8	50.0	100	70-135	
Lab Batch #	#: 3035740	Sample: 7635895-1-BSD / 1	BSD Batcl	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/12/17 08:01	SU	RROGATE R	ECOVERY S	STUDY	
		K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorol		Anaryus	0.0285	0.0300	95	80-120	
4-Bromofluo			0.0283	0.0300	97	80-120	
Lab Batch #		Sample: 7635967-1-BSD / 1				00 120	
Units:	mg/kg	Date Analyzed: 12/13/17 07:49		RROGATE R		STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1,4-Difluorol	benzene		0.0277	0.0300	92	80-120	
4-Bromofluo	robenzene		0.0338	0.0300	113	80-120	
Lab Batch #	<b>#:</b> 3035998	Sample: 7636029-1-BSD / 1	BSD Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 12/15/17 02:27	SU	RROGATE R	ECOVERY S	STUDY	
	TPH I	by SW8015 Mod	Amount Found	True Amount	Recovery %R	Control Limits %R	Flags
		Analytes	[A]	[B]	[D]		
1-Chloroocta	ine	Analytes	[A] 92.3	[ <b>B</b> ]	[ <b>D</b> ] 92	70-135	
1-Chloroocta o-Terphenyl		Analytes				70-135 70-135	
o-Terphenyl		Analytes Sample: 570434-004 S / MS	92.3 47.6	100 50.0	92 95		
o-Terphenyl Lab Batch #		-	92.3 47.6 5 Batcl	100 50.0	92 95 • Soil	70-135	
	#: 3035464 mg/kg <b>TPH I</b>	Sample: 570434-004 S / MS Date Analyzed: 12/09/17 01:04 by SW8015 Mod	92.3 47.6 5 Batcl	100 50.0 h: 1 Matrix	92 95 Soil ECOVERY S Recovery %R	70-135	Flag
o-Terphenyl Lab Batch #	#: 3035464 mg/kg <b>TPH I</b>	Sample: 570434-004 S / MS Date Analyzed: 12/09/17 01:04	92.3 47.6 5 Batcl SU Amount Found	100 50.0 h: 1 Matrix RROGATE R True Amount	92 95 Soil ECOVERY S Recovery	70-135 STUDY Control Limits	Flag

\* 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



	<b>#:</b> 3035740	Sample: 570435-002 S / MS	Batc	h: 1 Matrix	: 5011		
U <b>nits:</b>	mg/kg	Date Analyzed: 12/12/17 08:20	SU	JRROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0305	0.0300	102	80-120	
4-Bromoflu	orobenzene		0.0324	0.0300	108	80-120	
Lab Batch	#: 3035888	Sample: 570779-005 S / MS	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/13/17 08:43	SU	JRROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1,4-Difluoro	benzene	Analytes	0.0285	0.0300	95	80-120	
4-Bromoflu			0.0285	0.0300	95	80-120	
	#: 3035998	Sample: 570437-002 S / MS	Batc			80-120	
Units:	mg/kg	<b>Date Analyzed:</b> 12/15/17 03:28		JRROGATE R		STUDY	
		by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes	[A]	[0]	[D]	70K	
1-Chlorooct	ane		93.9	99.7	94	70-135	
o-Terpheny	1		49.0	49.9	98	70-135	
Lab Batch	<b>#:</b> 3035464	Sample: 570434-004 SD / M	SD Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/09/17 01:26	SU	JRROGATE R	ECOVERY S	STUDY	
	TPH I	oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chlorooct	ane		78.4	99.8	79	70-135	
o-Terphenyl			41.7	49.9	84	70-135	
	#: 3035740	Sample: 570435-002 SD / M					
		D.4. A. L. 12/12/17 08:20	SI	JRROGATE R	ECOVERY S	STUDY	
Lab Batch	mg/kg	Date Analyzed: 12/12/17 08:39	be				
		X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
Lab Batch	BTEX		Amount Found	Amount	•	Limits	Flag

\* 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



	orders : 57043 h #: 3035888	37, Sample: 570779-005 SD / 1	MSD Bate	Project ID: h: 1 Matrix:			
Units:	mg/kg	Date Analyzed: 12/13/17 09:02	SU	RROGATE R	ECOVERY	STUDY	
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluo	robenzene	•	0.0274	0.0300	91	80-120	
4-Bromofl	uorobenzene		0.0283	0.0300	94	80-120	
Lab Batcl	h #: 3035998	Sample: 570437-002 SD / M	MSD Bate	h: 1 Matrix:	Soil		
Units:	mg/kg	Date Analyzed: 12/15/17 03:48	SU	RROGATE R	ECOVERY	STUDY	
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroo	ctane	J	102	99.9	102	70-135	
o-Terphen	yl		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





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

Work Order #: 570437							Proj	ject ID:			
Analyst: ALJ	D	ate Prepar	red: 12/12/201	17			Date A	nalyzed:	12/12/2017		
Lab Batch ID: 3035740 Sample: 7635895-1	-BKS	Batcl	<b>h #:</b> 1					Matrix:	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / ]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
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	D	ate Prepar	red: 12/13/201	17			Date A	nalyzed:	12/13/2017		
Lab Batch ID: 3035888 Sample: 7635967-1	-BKS	Batcl	<b>h #:</b> 1					Matrix:	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
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





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

Work Order	#: 570437							Proj	ject ID:			
Analyst:	MNV	D	ate Prepar	ed: 12/08/20	17			Date A	nalyzed:	12/09/2017		
Lab Batch ID:	<b>:</b> 3035752 <b>Sample:</b> 7635	5709-1-BKS	Batch	<b>#:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K /BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Analy	Chloride by EPA 300	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	D	ate Prepar	ed: 12/11/20	17			Date A	nalyzed:	12/11/2017		
Lab Batch ID:	<b>:</b> 3035758 <b>Sample:</b> 7635	5746-1-BKS	Batch	<b>#:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K /BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
	Chloride by EPA 300	Blank	Spike	Blank	Blank	Spike	Blank	Blk. Spk	RPD	Control Limits	Control	
Analy	·	Sample Result [A]	Added [B]	Spike Result [C]	Spike %R [D]	Added [E]	Spike Duplicate Result [F]	Dup. %R [G]	%	%R	Limits %RPD	Flag
Analy	·	[A]	[B]	Result [C]	%R [D]	[E]	Duplicate Result [F]	%R [G]	%	%R	%RPD	Flag
Chloride	rtes	[A] <5.00	[ <b>B</b> ] 250	Result [C] 252	%R [D] 101		Duplicate	%R [G] 102	<b>%</b> 1	% <b>R</b> 90-110		Flag
Chloride Analyst:	ojs	[A] <5.00 D	[ <b>B</b> ] 250 ate Prepare	Result [C] 252 ed: 12/11/20	%R [D] 101	[E]	Duplicate Result [F]	%R [G] 102	% 1 nalyzed:	%R 90-110 12/11/2017	%RPD	Flag
Chloride	ojs	[A] <5.00 D	[B] 250 ate Prepare Batch	Result [C] 252 ed: 12/11/20 n#: 1	% <b>R</b> [ <b>D</b> ] 101	[E] 250	Duplicate Result [F]	%R [G] 102 Date A	% 1 nalyzed: 5 Matrix: 5	%R 90-110 12/11/2017 Solid	% <b>RPD</b> 20	
Chloride Analyst: Lab Batch ID:	OJS : 3035612 Sample: 7635 mg/kg Chloride by EPA 300	[A] <5.00 D	[B] 250 ate Prepare Batch	Result [C] 252 ed: 12/11/20 n#: 1	% <b>R</b> [ <b>D</b> ] 101	[E] 250	Duplicate Result [F] 255	%R [G] 102 Date A	% 1 nalyzed: 5 Matrix: 5	%R 90-110 12/11/2017 Solid	% <b>RPD</b> 20	Flag

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





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

Work Ord	ler #: 570437								Pro	ject ID:			
Analyst:	ARM		D	ate Prepar	red: 12/08/20	17			Date A	nalyzed:	12/08/2017		
Lab Batch I	<b>ID:</b> 3035464	Sample: 7635722-1	-BKS	Bate	<b>h #:</b> 1					Matrix:	Solid		
Units:	mg/kg			BLAN	K/BLANK	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	<b>D</b> Y	
	TPH by SW8015	Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Ana	alytes			[ <b>B</b> ]	[C]	[D]	[E]	Result [F]	[G]				
Gasolin	ne Range Hydrocarbons (GR	C)	<15.0	1000	922	92	1000	928	93	1	70-135	35	
Diesel F	Range Organics (DRO)		<15.0	1000	994	99	1000	1010	101	2	70-135	35	
Analyst:	ARM		D	ate Prepar	red: 12/14/20	17			Date A	nalyzed:	12/15/2017	•	
Lab Batch I	ID: 3035998	Sample: 7636029-1	-BKS	Bate	<b>h #:</b> 1					Matrix:	Solid		
Units:	mg/kg			BLAN	K /BLANK	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	<b>D</b> Y	
	TPH by SW8015	Mod	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
	alytes												ļ
	he Range Hydrocarbons (GR	O)	<15.0	1000	961	96	1000	893	89	7	70-135	35	
Diesel F	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





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

<b>Work Order # :</b> 570437						Project II	):				
Lab Batch ID: 3035740	QC- Sample ID:	570435	-002 S	Ba	tch #:	1 Matrix	k: Soil				
<b>Date Analyzed:</b> 12/12/2017	Date Prepared:	12/12/2	017	Ar	alyst: A	ALJ					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]	[0]	[D]	[E]	itesuit [1]	[G]	/0			
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	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
<b>Date Analyzed:</b> 12/13/2017	Date Prepared:	12/13/2	017	Ar	alyst: A	ALJ					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	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  $[D] = 100^{\circ}(C-A)/B$ Relative Percent Difference RPD =  $200^{\circ}[(C-F)/(C+F)]$  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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### Project Name: Illustrated Man Fee Com #1H (10-27-17)

Work Order # :	570437						Project II	):					
Lab Batch ID:	3035612	QC- Sample ID:	570438	-015 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil					
Date Analyzed:	12/11/2017	Date Prepared:	12/11/2	017	An	alyst: (	OJS						
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY			
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	Analytes	[A]	[B]		70K [D]	[E]	Kesun [F]	[G]	70	70K	70KF D		
Chloride		5.89	247	265	105	247	263	104	1	90-110	20		
Lab Batch ID:	3035612	QC- Sample ID:	570722	-002 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil					
Date Analyzed:	12/11/2017	Date Prepared:	12/11/2	017	An	alyst: (	OJS						
<b>Reporting Units:</b>	mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag	
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD		
Chloride		71.9	247	331	105	247	327	103	1	90-110	20		
Lab Batch ID:	3035752	QC- Sample ID:	570433	-012 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil					
Date Analyzed:	12/09/2017	Date Prepared:	12/08/2	017	An	alyst: N	MNV						
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY			
	Chloride by EPA 300	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag	
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD		
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.

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

Work Order # :	570437						Project II	<b>)</b> :					
Lab Batch ID:	3035752	QC- Sample ID:	570434	-008 S	Ba	tch #:	1 Matrix	k: Soil					
Date Analyzed:	12/09/2017	Date Prepared:	12/08/2	2017	An	alyst: N	MNV						
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY			
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag	
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD		
Chloride		132	248	372	97	248	375	98	1	90-110	20		
Lab Batch ID:	3035758	QC- Sample ID:	570438	-003 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil					
Date Analyzed:	12/11/2017	Date Prepared:	12/11/2	2017	An	alyst: (	OJS						
<b>Reporting Units:</b>	mg/kg	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY											
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample %R	Spike	Duplicate Spiked Sample	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
	Analytes	[A]	Added [B]	[C]	%K [D]	Added [E]	Result [F]	%K [G]	70	%0K	%KPD		
Chloride		706	249	915	84	249	914	84	0	90-110	20	Х	
Lab Batch ID:	3035758	QC- Sample ID:	570438	-010 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil		·	•	-	
Date Analyzed:	12/11/2017	Date Prepared:	12/11/2	2017	An	alyst: (	OJS						
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY			
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag	
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD		
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.

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#### Form 3 - MS / MSD Recoveries



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

Work Order # :	570437						Project II	):				
Lab Batch ID:	3035464	QC- Sample ID:	570434	-004 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/09/2017	Date Prepared:	12/08/2	017	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
,	TPH by SW8015 Mod	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	-	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Gasoline Range	Hydrocarbons (GRO)	<15.0	998	997	100	998	869	87	14	70-135	35	
Diesel Range O	rganics (DRO)	<15.0	998	1080	108	998	940	94	14	70-135	35	
Lab Batch ID:	3035998	QC- Sample ID:	570437	-002 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	12/15/2017	Date Prepared:	12/14/2	017	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
,	TPH by SW8015 Mod	Parent Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Gasoline Range	Hydrocarbons (GRO)	<15.0	997	983	99	999	1020	102	4	70-135	35	
Diesel Range O	rganics (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

Phoenix, Arizona (480-355-0900)

Final 1.000

Client / Reporting Information					Analytical Information	tion	Matrix Codes
Company Name / Branch:	Proj	Project Name/Number:	er: Illustrated Man Fee Com #1H (10-27-17)	n #1H (10-97-17)			
Company Address:	Pro						W = Water
2407 Pecos Ave. Artesia NM 88210	M-1-	M-1-25S-28E					GW =Ground Water
Email: <u>shitchcock@concho.com</u> Phone No: 575-703-6475 dneel2@concho.com; cgray@concho.com; rhaskell@concho.com	6475	Invoice To: COG Operating, LLC	rating, LLC				P = Product
Project Contact: Sheldon Hitchcock		600 W. Illnois Ave. Midland Tx, 79701	nois Ave. (, 79701		)		SL = Sludge OW =Ocean/Sea Water
Samplers's Name: Sheldon Hitchcock	PON	PO Number:					WI = Wipe
	2	leation					WW= Waste Water
No. Field ID / Point of Collection	~	Collection					A = Air
	Sample	2	# of	IOH/Zn etate IO3 SO4 OH HSO4 OH	PH E TEX HLOI		
1/-/0/	3	Q'CO A	Matrix Dottles <u>T</u>	Ad Hr H2 Na Na ME	В	Fi	Field Comments
2 /-1 //			-	*	4		
3 7-1 21			+	*	x x t		
4 7-1 3'			~ ~		* *		
5 1/41	4 111		-	- 1	. +		
67:15,	5 11/31		ی ۲	r a	· +		
7 7-161	6 "/31	1 9:124	s 1		- 1		
8 /- 18	18/11 8	4 11:4 A	s 1		- 1		
9 7-1 10'	10 11/31		S 1	r 4	. 4		
10 7-1 12"	12 11/51	VA1:6 1	s 1	× >	* *		
i urriaround Time ( Business days)			Data Deliverable Information	-	Notes:		
		Level	Level II Std QC	Level IV (Full Data Pkg /raw data)	2	C1- 125 1	
ICY		Level	Level III Std QC+ Forms	TRRP Level IV			Callera Do
2 Day EMERGENCY Contract TAT		Level	Level 3 (CLP Forms)	UST / RG -411			
3 Day EMERGENCY			TRRP Checklist	Tomp: J Se.			
IAT Starts Day received by Lab, if received by 5:00 pm				CF:(0-6: -0.2°C)		: Tracking #	
Sampler	Date Time: 12670625	Date Time: 12 & Mora Received By Th				ceived By:	-I- K
Refinquished by:	Date Time:	Received By		Corrected Temp:	2.1°C	Ceived By:	115
Relinquished by:	Date Time:	3 Received By:		4 Custody Seal #			0 11.15
G		σı		5 Coler Imp. Themo. Corr. Factor		Un lee Cooler Temp.	Thermo. Corr. Factor

#### Received by OCD: 11/17/2022 3:21:29 PM

Released to Imaging: 11/17/2022 3:23:26 PM



Dallas Texas (214-902-0300)

Received by OCD: 11/17/2022 3:21:29 PM

очаптого, I ехаз (281-240-4200) Dallas Texas (214-902-0300)	San Ar	ntonio, Texas	San Antonio, Texas (210-509-3334)				Phoenix, Arizona (480-355-0900)	, Arizon	a (480-3	55-0900	-					
	MICIAI	miulanu, i exas (432-704-5251) MMM	-704-5251) www.xenco.com	co.com			Xenco Quote #	ote #			Xenco Job #	b #	R	0	112-	
								A	nalytical	Analytical Information	9 		1	(	1	Matrix Contae
Client / Reporting Information	1	<u>e</u> .	Project Information				_		_			-				Mathy Codes
COG Operating, LLC	Project N	Project Name/Number:	Illustrated Man Fee Com #1H (10-27-17)	Com #1H (10-27-	17)											W = Water
Company Address: 2407 Pecos Ave. Artesia NM 88210	Project Location: M-1-25S-28E	.ocation: 28E														S = Soil/Sed/Solid GW =Ground Water
Enail: <u>shlichcock@concho.com</u> Phone No: 575-703-6475 dneel2@concho.com; cgray@concho.com; rhaskell@concho.com	-6475 Invoice To:		COG Operating, LLC Attn: Robert McNeill													P = Product SW = Surface water
Project Contact: Sheldon Hitchcock		600 W. Illnois Ave. Midland Tx, 79701	nois Ave. x, 79701				)									SL = Sluge OW =Ocean/Sea Water
Samplers's Name: Sheldon Hitchcock	PO Number:	ber:					DED	6								O = Oil
	Collection	Ion		Number c	Number of preserved bottles	ottles	TEN	IDES								WW= Waste Water A = Air
	Sample Depth Date	Time	# of	CI aOH/Zn cetate NO3	2SO4 aOH aHSO4		PH E>	HLOR								
1 T-2 0'	118	10:00		N A	N	N	-	-			_				Fie	Field Comments
2 [-2]	-	20101	s 1			1	1	1	_			+				
3 7-2 2	2	h0:01	s 1			1	/	1			_					
4 1- 0 3	د -	10:0a	S 1			1		1								
G			s 1													
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6			s 1								_					
10 Turnaround Time ( Business 4			s 1				_		_		_					
runnaiounu nine ( Dusiness days)			Data Deliver	Data Deliverable Information						Notes:	1994	-	-			
Same Day TAT 5 Day TAT		Leve	Level II Std QC		Level IV (Full Data Pkg	-	raw data)			Tom		50	ε			
Next Day EMERGENCY		Leve	Level III Std QC+ Forms	ns	TRRP Level IV	N				CF:(n-A	0 7		$\sim$	R	IR ID:R-8	8
2 Day EMERGENCY		Leve	Level 3 (CLP Forms)	Π	UST / RG -411	11				<u> </u>	6-23	(6-23: +0 2°C)	<u>ָ</u>			
3 Day EMERGENCY		TRRF	TRRP Checklist							Corri	ected	Corrected Temn.	ņ (		0	
TAT Starts Day received by Lab, if received by 5:00 pm	pm						-		FE	FED-EX / UPS: Tracking #	S: Iraci	# fillin	?	2.	-	(
Relinquished by Sampler:	Date Time: Received By: 24 Institute to the samples change possession, including courses	Received By:	H TIME SAMPLES	CHANGE POSSE	SSION, INCLUI		DELIVERY	- 1			D			•		
Relinquished by:	Date Time:	1 Received B	mt		Relinquished By:	l By:		Date Time: Date Time:	ime:		Received By:	By:	(	7	5	0 97.
Relinquished by:	Date Time:	3 Received By:			4 Custody Sea	#	Duon			4	4					011:15
5 Notice: Signature of this document and relinquishment of samples constitute	s a valid purchase orde	5 from client comp	pany to Xenco its at	filiates and subco	custody seal #	74	Pres	erved w	Preserved where applicable	licable		Onlice		S Temp.	emp.	Thermo. Corr. Factor
where substances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco liability will be invoice. Xenco will be liable only for the bost of samples and shall not assume any responsibility for any will be enforced unless previously negotiated under a fully executed client contract.	yond the control of Xen	co. A minimum ch	arge of \$75 will be a	applied to each pro	oject. Xenco's lia	pris standard ten bility will be limit	ns and con ed to the co	ost of sam	ples. Any	amples re	e liable or ceived by	It for the Xenco but	not analy	nples and zed will b	shall not invoiced	assume any responsibility for any 1 at \$5 per sample. These terms

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CHAIN OF CUSTODY

### Stafford, Texas (281-240-4200) Setting the Standard since 1990 XENCO

Dallas Texas (214-902-0300)

## CHAIN OF CUSTODY Page 1 Of 2

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San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

NVM VERSOURD         Project Information         Project Information         Number of preserved betrase         Analytical Information         Analytical Information           Project NumeNumber         Number of preserved betrase         Number of preserved betrase         Analytical Information         Analytical Information           Sample         Oppin         Number of preserved betrase         Number of preserved betrase         Oppin         Oppin         Number of preserved betrase         Oppin         Oppin         Number of preserved betrase         Oppin         Oppin         Oppin         Number of preserved betrase         Oppin         Oppin         Oppin         Oppin         Number of preserved betrase         Number		3 Relinquished by:	Relinquished by:	Relinquished by Sampler.	(	TAT Starts Day received by Lab, if received by 5:00 nm	3 Day EMERGENCY		ICY		Turnarounu Titte ( Dusiness days)	10 7 - 1 / 2 . Turnary and Time / B.		8 7 - 1 0	7 7 - 1 6 1		5 7-1 41	4 7-1 3	3712		1/-/ 0'		No. Field ID / Point of Collection		Samplers's Name: Sheldon Uiteboool	Project Contact: Sheldon Hitchcock	rmai: <u>sinicricock@concho.com</u> dneel2@concho.com; rhaskell@concho.com	2407 Pecos Ave. Artesia NM 88210	COG Operating, LLC Company Address:	Company Name / Branch:	Client / Reporting Information		[0000-200-1-1-2) and -
Reco Quale         Reco Quale         Reco Quale         Record Topologies         Record Topologies <threcord th="" topologies<="">         Record Topologi</threcord>	Date lime:		1 - B - I	Date Time:	PLE CUSTODY MUST RE DO	ved by 5:00 nm		ntract TAT	ау ТАТ	Оау ТАТ												Sample Depth					6475						
Name and product         Name of pressure of p	Received By:	Received By:	_	Received BY	TIMENTED BEI OW FACILITIE		TRRP Che	Level 3 (C	Level III S	Level II St		4:18A	9:164	4:14A	9:124	9:10 4	¥ 80:6	4.06A	4:04A	9:02 A	9:00 4	Time	Collection			600 W. Illnois Midland Tx 7c		M-1-25S-28E		18			Midland, Texas (432-704-5251)
Knico Quad         Knico Las         Struct College           (1)         Matrix College         Matrix College         Matrix College           (1)         Matrix College         Structure         Structure           (2)         Matrix College         Structure         Structure			ler	The SAMPLES CHANGE PI			ecklist	(LP Forms)	td QC+ Forms		Data Deliverable Information		-	1	-		_	-	-	-	7	bottles HCI NaOH/Zr Acetate	Number		9701	Ave.	ng, LLC IcNeill	×	rated man Fee Com #1H (10-27	Iformation		www.xenco.com	 1-50511
Kanco Quole #     Xanco Lobe     Kanco Lobe     Kanco Cole       Analytical Information     Marix Codes       Analytical Information     Marix Codes       W = Water     Statistical Information     Statistical Information       W = Water     Information	Custody Seal #		Corrected Tem	(6-23: +0.2	$\left \right\rangle$	X		UST / RG -411	TRRP Level IV	Level IV (Full Data Pkg		× /	r 4	-	+		-	*	+		r	H2SO4 NaOH NaHSO4 MEOH	10001						7-17)				
Xence Job #     STOURST       cal Information     Matrix Codes       matrix codes     Matrix Codes       Matrix codes     W = Water S = Soil/Sed/Solid GW = Ground Wate DPINKing Wa P = Producting Wa P	Preserved where	- ? - ?	n 1 / 0 0	°C		ſ					1	1 4	- +	- 1				1	r 1 7 1	r 1	r i	TPH E BTEX	EXTEN		ED						Analyti	Xenco Quote #	
STOUBT       Matrix Codes       W = Water       S = Soll/Sed/Solid       GW = Burnking Wa       DW = Drokling Wa       P = Product       SW = Surface wat       SL = Sludge       O = Oil       WI = Wije       O = Oil       WI = Wije       O = Oil       WW= Waste Wate       A = Air       A = Air       IF S & & Matrix       IF S & & Matrix <tr< td=""><td>tpplicable Or</td><td>-</td><td>ceived by.</td><td>Caived By:</td><td>: Tracking #</td><td></td><td></td><td></td><td></td><td>ctop /1-</td><td>Notes:</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>cal Information</td><td>Xenco Job #</td><td></td></tr<>	tpplicable Or	-	ceived by.	Caived By:	: Tracking #					ctop /1-	Notes:																				cal Information	Xenco Job #	
Matrix Codes W = Water S = Soil/Sed/Solid GW = Ground Water SL = Sludge O = Oil WW= Waste Water A = Air Field Comments Field Comments Field Comments	Cooler Temp.		t	f a																												57043	
5. D Vate	Thermo. Corr. Factor	H H	1/0/0 ~						Galler 00	a trade											Field Comments		WW= Waste Water A = Air	0 = 0I	WI = Wipe	SL = Sludge OW =Ocean/Sea Water	P = Product SW = Surface water	S = Soil/Sed/Solid GW =Ground Water	W = Water		Matrix Codes	2	

#### Received by OCD: 11/17/2022 3:21:29 PM

### Stafford, Texas (281-240-4200) Setting the Standard since 1990 **MATORIES**

# CHAIN OF CUSTODY

San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

Relinguished hy:		Relinquished by:		TAT Starts Day received by Lab. if received by 5:00 nm	3 Day EMERGENCY	2 Day EMERGENCY	Next Day EMERGENCY	Same Day TAT 5 Day TAT	Turnaround Time ( Business days)	10	9	8	7	σ	G	4 1-2 3	3 1-6 2		1-00	T-2 2	No. Field ID / Point of Collection	Samplers's Name: Sheldon Hitchcock	rroject contact: Sheldon Hitchcock	icho.com; rhask	2407 Pecos Ave. Artesia NM 88210 Email: shiphonck@accode	COG Operating, LLC Company Address:	Client / Reporting Information			Dallas Texas (214-902-0300)
Date Time:	Date lime:	Date Time: 126 M BAY	CUSTODY MUST BE DOCUMENT	1 hv 5-00 pm		ct TAT	AT	ТАТ								6	6	-	LINCIN Q	Sample Depth Date	Collection	Mullipel	DO Nimet	Phone No: 575-703-6475 Invoice To: ell@concho.com	M-1-25S-28E	Project N				Midlan
Received By: 5	Receiveđ By: 3	Received By	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COLIDED			Level 3 (CLP Forms)	Level III Std QC+ Forms	Level II Std QC	Data Deliverable Information	S 1	S 1	S 1	S 1	S 1	S 1	10:04 s 1	1 s h0; e1	1 s 2010	10:00 S 1	Time Matrix bottles <u>H</u> ZaOH/Za		11.	1	<ul> <li>COG Operating, LLC Attn: Robert McNeill</li> <li>600 W. Illnois Ave</li> </ul>	.ocation: 28E	Project Name/Number: Illustrated Man Fee Com #1H (10-27-17)	Project Information		www.xenco.com	Midland, Texas (432-704-5251)
Custody Seal #	Relinquished By:	Relinquished By:	E POSSESSION INCLUDING COMPLET		031769-411		TRRP Level IV	Level IV (Full Data Pkg /raw data)	ormation							/				Acetate HNO3 H2SO4 NaOH NaHSO4 MEOH	umber of preserved bottles					H (10-27-17)				
Preserved where applicable	Date Time:	Date Time:	FED	Corr																TPH E BTEX CHLOP			D				Analytical Information		Xenco Quote #	
5     Custody Seal #     Preserved where applicable     On ice     Cooler Temp.     Thermo. Corr. Factor       Notice: Notice: Signature of this document and relinquistment of sematic constant.     5     Image: Cooler Temp.     Thermo. Corr. Factor	Received By:	Received By:	FED-EX / UPS: Iracking *	Corrected Temp:	(6-23: +0.2°C)		7.300																					5-5	Xenco Job # 5700	JU)
mp. Thermo. Corr. Factor	101	101		0			IR ID:R-8														WW= Waste Water A = Air	O = OII	OW =Ocean/Sea Water	P = Product SW = Surface water SL = Sludge	S = Soil/Sed/Solid GW =Ground Water DW = Drinking Water	W = Water	Matrix Codes		127	

#### Received by OCD: 11/17/2022 3:21:29 PM

Received by OCD: 11/17/2022 3:21:29 PM



#### **XENCO Laboratories**



Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating, LLC Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 12/07/2017 11:15:00 AM Temperature Measuring device used : R8 Work Order #: 570437 Sample Receipt Checklist

#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:

Date: 12/07/2017

Comments

Checklist reviewed by: Muckie Mike Kimmel

Date: 12/13/2017



Sheldon Hitchcock

Eddy Co. NM

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysis Summary 589746

COG Operating LLC, Artesia, NM Project Name: Illustrated Man Fee 6#



Date Received in Lab:Wed Jun-20-18 10:19 amReport Date:21-JUN-18Project Manager:Jessica Kramer

	Lab Id:	589746-0	01	589746-0	02	589746-0	003	589746-0	04	589746-0	05	
Analysis Requested	Field Id:	T-2 Bttm	3'	N.Sidewa	all	S.Sidewa	all	E.Sidewa	11	W. Sidew	all	
Analysis Kequeslea	Depth:	3- ft										
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Jun-19-18 1	3:20	Jun-19-18 1	3:30	Jun-19-18 1	13:35	Jun-19-18 1	3:40	Jun-19-18	3:45	
Chloride by EPA 300	Extracted:	Jun-20-18 1	5:45	Jun-20-18 1	5:45	Jun-20-18 1	5:45	Jun-20-18 1	5:45	Jun-20-18 1	5:45	
	Analyzed:	Jun-21-18 1	0:12	Jun-20-18 1	9:20	Jun-21-18 1	0:17	Jun-21-18 1	0:22	Jun-20-18 2	0:09	
	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	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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

lession beamer

Jessica Kramer Project Assistant

#### 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

SULP ACCREDING

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,

fession knomer

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

Page 3 of 16



#### Sample Cross Reference 589746



#### COG Operating LLC, Artesia, NM

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



Client Name: COG Operating LLC Project Name: Illustrated Man Fee 6#

Project ID: Work Order Number(s): 589746 Report Date:21-JUN-18Date Received:06/20/2018

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None





#### COG Operating LLC, Artesia, NM

Illustrated Man Fee 6#

Sample Id:         T-2 Bttm 3'           Lab Sample Id:         589746-001		Matrix: Date Collect	Soil ed: 06.19.18 13.20		Date Received Sample Depth	d:06.20.18 10.1 n: 3 ft	9
Analytical Method: Chloride by EPA 3 Tech: SCM Analyst: SCM Seq Number: 3054119	300	Date Prep:	06.20.18 15.45		Prep Method: % Moisture: Basis:	E300P Wet Weight	
Parameter	Cas Number	Result ]	RL	Units	Analysis D	ate Flag	Dil

<4.95

Chloride

16887-00-6

4.95

06.21.18 10.12

U

1

mg/kg

Released to Imaging: 11/17/2022 3:23:26 PM





#### COG Operating LLC, Artesia, NM

Sample Id: Lab Sample Id	<b>N.Sidewall</b> d: 589746-002		Matrix: Date Colle	Soil cted: 06.19.18 13.30	]	Date Received:06	5.20.18 10.1	.9
Analytical Me	ethod: Chloride by EPA	300			]	Prep Method: E	300P	
Tech:	SCM				(	% Moisture:		
Analyst:	SCM		Date Prep:	06.20.18 15.45	]	Basis: W	et 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





#### COG Operating LLC, Artesia, NM

Sample Id: Lab Sample I	<b>S.Sidewall</b> d: 589746-003		Matrix: Date Colle	Soil cted: 06.19.18 13.35		Date Received:06.	20.18 10.1	9
Analytical Me	ethod: Chloride by EPA	. 300				Prep Method: E30	)0P	
Tech:	SCM					% Moisture:		
Analyst:	SCM		Date Prep:	06.20.18 15.45		Basis: We	t 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





#### COG Operating LLC, Artesia, NM

Sample Id: Lab Sample Id	<b>E.Sidewall</b> d: 589746-004		Matrix: Date Colle	Soil cted: 06.19.18 13.40		Date Received:06.	20.18 10.1	9
Analytical Me	ethod: Chloride by EPA	300				Prep Method: E30	00P	
Tech:	SCM					% Moisture:		
Analyst:	SCM		Date Prep:	06.20.18 15.45		Basis: We	t 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





#### COG Operating LLC, Artesia, NM

Sample Id: Lab Sample I	<b>W. Sidewall</b> d: 589746-005		Matrix: Date Colle	Soil cted: 06.19.18 13.45		Date Received:06.	20.18 10.1	9
Analytical Me	ethod: Chloride by EPA	. 300				Prep Method: E30	)0P	
Tech:	SCM					% Moisture:		
Analyst:	SCM		Date Prep:	06.20.18 15.45		Basis: We	t 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**



Page 89 of 95

- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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





#### **COG Operating LLC**

Illustrated Man Fee 6#

Analytical Method:	Chloride by EPA 3	00						Pı	rep Method	1: E30	0P	
Seq Number:	3054119			Matrix:	Solid				Date Prep	p: 06.2	20.18	
MB Sample Id:	7657017-1-BLK		LCS Sar	nple Id:	7657017-1	-BKS		LCS	D Sample	Id: 765	7017-1-BSD	
Parameter	MB	Spike	LCS	LCS	LCSD	LCSD	Limits	%RPD	RPD Limit	Units	Analysis	Flag
	Result	Amount	Result	%Rec	Result	%Rec					Date	8

Analytical Method:	Chloride by EPA 30	)0						Pro	ep Metho	d: E30	0P	
Seq Number:	3054119			Matrix:	Soil				Date Pre	p: 06.2	0.18	
Parent Sample Id:	589724-001		MS Sar	nple Id:	589724-00	01 S		MSE	O Sample	Id: 589	724-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD I	RPD Limit	t 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 30	)0						Р	rep Meth	od: E30	OP	
Seq Number:	3054119			Matrix:	Soil				Date Pr	ep: 06.2	0.18	
Parent Sample Id:	589746-005		MS Sar	nple Id:	589746-00	)5 S		MS	D Sample	e Id: 5897	746-005 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it 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 Relative Percent Difference LCS/LCSD Recovery Log Difference [D] = 100\*(C-A) / B RPD = 200\* | (C-E) / (C+E) | [D] = 100 \* (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample) LCS = Laboratory Control Sample A = Parent Result C = MS/LCS Result E = MSD/LCSD Result MS = Matrix Spike B = Spike Added D = MSD/LCSD % Rec

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Page 12 of 16

Notice: Signature of th 'or any losses or expen- rample. These terms v	Relinquished by: 5	ω	Relinquished by:	Relinquished by Sam		TAT Starts D	3 Day EMERGENCY	2 Day ÉMERGENCY	Next Day EMERGENCY	Same Day TAT	Turnarou	5 το α	7 6	5 V. 5	•		- 7-2	No.		samplers s value:		Shitch a	Email:	Company Address:	Company Name / Branch:	Client / Repo		-	Stafford, TX (281) 240-4200 Dallas, TX (214) 902-0300	g
Notice: Signature of this document and relinquishment of samples constitutes a vidi purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and c for any losses or expenses incurrent by the Client if such tosses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will sample. These terms will be enforced unless previously neoplated under a fully executed client contract.				sampler:		TAT Starts Day received by Lab, if received by 5:00 pm	IGENCY	RENCY	MERGENCY	AT	Turnaround Time (Business days)			side way side way	Sidewall	deval	B++m 3	Field ID / Point of Collection		5 holdon	Sheldon	shitch all couche, com			Branch: COG	Client / Reporting Information			40-4200 -0300	
Jishment of samples c ent if such losses are a previously negotiated i				)	SAMPLE	Lab, if received		Contract TAT	7 Day TAT	5 Day TAT	ays)							f Collection		a Hitch coll	Hitchcou	(he, Com	Phone No:		-Artesia				El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296	
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valid purcha nstances be executed cli	Date Time:		Date Time:	Date Time:	MUST BE DO	) pm	-										5 10 20	Sample Depth		\ 			=		0 0	T T			3443 4-1296	
se order fron yond the cor lent contract				4.5	OCUMENTE												6/R/12	Date	Collection		O Numbe	Ś	Invoice To:	rioject Location:	roject Nar			-		
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LABORATORIES

Revision 2016.1

Page L of	

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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 of y for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client it such tosses 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 \$2 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.	. It assigns standard terms and conditions of se ach project. Xenco's liability will be limited to th	any to Xenco, its affiliates and subcontractors A minimum charge of \$75 will be applied to e	hase order from client compa beyond the control of Xenco. I client contract.	ishment of samples constitutes a valid pure ant if such losses are due to circumstances reviously negotiated under a fully executed	Notice: Signature of this document and relinqu for any losses or expenses incurred by the Cile sample. These terms will be enforced unless p
	Custody Seal # Preserved where applicable	<i>.</i>	ie: Received By:	Date Time:	Relinquished by: 5
		<b>\$</b>			3
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				ab if reactions by E-00 mm	TAT Starte Day monitod by I
		Level II Report with TRRP checklist	Leve		3 Day EMERGENCY
	UST / RG -411	Level 3 (CLP Forms) UST /	Leve	Contract TAT	2 Day EMERGENCY
	TRRP Level IV	Level III Std QC+ Forms TRRP	Leve	7 Day TAT	Next Day EMERGENCY
	Level IV (Full Data Pkg /raw data)	Level II Std QC	Leve	5 Day TAT	Same Day TAT
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		5 1	1.92		3 St Side Wall
		) 5	06:1	N/A-	2 N. Sidewah
Heid Comments	z z z Z	Z A H H		3	1 T-2 B++m 3
1	aHSO4 HEOH ONE	ACI ACI AOH/Zr cetate NO3 2SO4	Data		
	Lari	Number of preserved bottles	Collection	of Collection	No. Field ID / Point of Collection
	de			on Hitch could	samplers's Name: 5 holdon
WW = Waste Water A = Air	, E	on tirono	PO Number:	₽ E	reldon
	PP		1 12	(he, lohn	oul Con
SW = Surface Water	+ 3		Invoice To:	Phone No:	Email:
DW = Drinking Water P = Product	00		נו		-
S = Scill/Sed/Solid GW = Ground Water		"I ) ust noted man fee GH	Project Name/Number:	Artesia	Company Name / Branch: COG
		Project Information	Projec		Client / Reporting Information
Analytical Information Matrix Codes	Analytic				
VN AG # 400 MV	Xenco Quote #	www.xenco.com			
Service Center- Amarillo, TX (806)678-4514 LA (832) 712-8143 Service Center- Hobbs, NM (575) 392-7550	Proenx, A2 (480) 355-0900 Service Center - Baton Rouge, LA (832) 712-8143	san Antonio, TX (210) 509-3334	San A	Lubbock, TX (806) 794-1296	Dallas, TX (214) 902-0300
	Dhooniv A7 /ARNI 355-0000	Midland. TX (432) 704-5440	Midla	El Paso, TX (915) 585-3443	Stafford, TX (281) 240-4200

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Final 1.000

Setting the Standard since 1990

ABORATORIES



#### 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 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.

#### Received by OCD: 11/17/2022 3:21:29 PM



Client: COG Operating LLC

#### **XENCO** Laboratories



#### Prelogin/Nonconformance Report- Sample Log-In

4.2

Yes

Yes

N/A

N/A

N/A

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 06/20/2018 10:19:31 AM Temperature Measuring device used : R8 Work Order #: 589746 Sample Receipt Checklist #1 \*Temperature of cooler(s)? #2 \*Shipping container in good condition? #3 \*Samples received on ice? #4 \*Custody Seals intact on shipping container/ cooler? #5 Custody Seals intact on sample bottles? #6\*Custody Seals Signed and dated?

	11/4
#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: Bianna Teel

Date: 06/20/2018

Checklist reviewed by: festion thamer

Jessica Kramer

Date: 06/20/2018

Comments

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

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

#### CONDITIONS

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

CONDITIONS

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Action 159869