

September 5, 2018

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

Ryan Mann New Mexico State Land Office 2827 N. Dal Paso Suite 117 Hobbs, NM 88240

Re: Closure Letter Bullseye 22 State Com #001H API #: 30-015-40162 RP#: 2RP-4575 Unit Letter D Section 22, Township 24S, Range 27E Eddy County, NM

Mr. Bratcher/Mr. Mann,

COG Operating, LLC (COG) is pleased to submit for your consideration the following closure report for the Bullseye 22 State Com #001H. This release occurred on January 13, 2018. Following the release, remedial activities were conducted utilizing field chloride titrations and visual observations to guide the extent of the excavation.

BACKGROUND

The Bullseye 22 State Com #001H release is located in Unit Letter D, Section 22, Township 24 South and Range 27 East in Eddy County, New Mexico. More specifically the latitude and longitude for this release are 32.2091255 North and -104.1840591 West.

On January 13, 2018, a packing failure on a slip type flange at the wellhead resulted in the release of approximately ten (10) barrels (bbls) of produced water and nine (9) bbls of oil. A vacuum truck was dispatched to recover freestanding fluids. Approximately five (5) bbls of produced water and five (5) bbls of oil were recovered.

Remediation activities were conducted in accordance with NMOCD guidelines. Field chloride titrations and visual observations were utilized to guide the extent of the excavation. Confirmation soil samples were taken from the bottom and sidewalls of the excavation to ensure that all soil above NMOCD Recommended Remedial Action Levels (RRAL's) was successfully removed. A site diagram of the excavated area is presented in Appendix I.

GROUNDWATER AND SITE RANKING

According to the New Mexico Office of the State Engineer (NMOSE) groundwater in the project vicinity is approximately seventy (70) 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 ten (10) based on the following:

Depth to groundwater	50-100-feet
Distance to surface water body	>1000-feet
Wellhead Protection Area	>1000-feet

CONFIRMATION SOIL SAMPLING RESULTS

July 3, 2018

Sample ID	Depth (feet)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	Total TPH (mg/kg)	SOIL STATUS
BTTM-1	2	< 0.002	< 0.002	2400	61.2	EX-SITU
BTTM-2	2	< 0.002	< 0.002	161	<14.9	IN-SITU
N.SIDEWALL	N/A	< 0.002	< 0.002	429	<14.9	IN-SITU
S.SIDEWALL	N/A	< 0.002	< 0.002	28.7	<15.0	IN-SITU
E.SIDEWALL	N/A	< 0.002	< 0.002	215	<15.0	IN-SITU
W.SIDEWALL	N/A	< 0.002	< 0.002	1730	<15.0	EX-SITU

July 17, 2013

Sample ID	Depth (feet)	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	Total TPH (mg/kg)	SOIL STATUS
BTTM-1	3			497		IN-SITU
W.SIDEWALL	N/A			453		IN-SITU

(--) Analysis not requested

REMEDIAL ACTIONS

- The impacted area was excavated to a depth of two (2) feet BGS. On July 3, 2018, confirmation soil samples were taken from the bottom and sidewalls of the excavation. Upon receipt of analytical results from the confirmation soil sampling event it was determined that the soil in the bottom of the excavation in the vicinity of sample location BTTM-1 and the West sidewall of the excavation remained above the NMOCD RRAL for chloride.
- The impacted area in the vicinity of sample location BTTM-1 was excavated to a depth of three (3) feet BGS.
- The West sidewall was advanced further west utilizing chloride titrations to guide the excavation.
- On July 17, 2018, confirmation soil samples were taken from the bottom of the excavation at sample location BTTM-1 and from the West sidewall.
- Upon receipt of analytical results from the July 17, 2018 confirmation soil sampling event it was determined that all of the impacted soil above NMOCD RRAL's was successfully removed. The excavation was backfilled with caliche and contoured to match the surrounding location.

CLOSURE REQUEST

COG Operating, LLC respectfully requests that the New Mexico Oil Conservation Division and the New Mexico State Land Office grant closure approval for the Bullseye 22 State Com #001H incident that occurred on January 13, 2018.

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

Sincerely,

Sheldon Jutan

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: Analytical Reports and Chain-of-Custody Forms

APPENDIX I

Bullseye 22 State Com #001H



APPENDIX II



New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)	(R=POD has been replaced, O=orphaned, C=the file is closed)	(quarters are 1=N (quarters are sma	NW 2=NE 3- allest to larg	=SW 4=SE) est) (NAD	83 UTM in met	ers)	(1	n feet)	
POD Number	POD Sub- Code basin Cou	Q Q Q Inty 64 16 4 Sec T	ws Rng	х	Y	Distance	Depth Well	Depth Water	Water Column
C 01452	C E	D 22 2	24S 27E	577435 3	8563175* 🌍	881	95	70	25
					Averag	e Depth to	Water:	70	feet
						Minimum	Depth:	70	feet
						Maximum	Depth:	70	feet
Record Count: 1									
Basin/County Search	<u>h:</u>								
County: Eddy									
UTMNAD83 Radius	Search (in meters)	<u>:</u>							
Easting (X): 5768	11	Northing (Y):	3563797		Radius:	1000			

*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

NM OIL CONSERVATION ARTESIA DISTRICT

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 811 S. First St., Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

1

State of New Mexico **Energy Minerals and Natural Resources** JAN 1 5 2018

Form C-141 Revised April 3, 2017

REGEIVED to appropriate District Office in accordance with 19.15.29 NMAC.

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

Release Notification and Corrective Action

NAB 1801 852910		OPERATOR	\boxtimes	Initial Report		Final Report
Name of Company: COG Production LLC (OGRID#	Contact: Robert McNeill				
2291377 217955	<u> </u>					
Address: 600 West Illinois Avenue, Midland TX 79701		Telephone No.: 432-683-7443				
Facility Name: Bullseye 22 State Com #001H	l	Facility Type: Well				
Surface Owner: State	Mineral Owne	r: State		.PI No. 30-01 <u>5-4</u>	0162	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	22	245	27E	330	<u>N</u>	990	<u>w</u>	Eddy

Latitude: 32.2091255 Longitude: -104.1840591 **NAD83**

NATURE OF RELEASE

Type of Release: Produced water and oil	Volume of Release: 9 BBLS Oil	Volume Recovered: 5 BBLS oil
	10 BBLS Produced Water	5 BBLS Produced Water
Source of Release: Wellhead	Date and Hour of Occurrence:	Date and Hour of Discovery:
	1-13-2018 8:00am	1-13-2018 8:00am
Was Immediate Notice Given?	If VES. To Whom?	1
Yes No X Not Required		
By Whom?	Date and Hour:	
Was a Watercourse Reached?	If YES, Volume Impacting the Wa	lercourse.
If a Watersound Imported Describe Fully 4		······································
Tha watercourse was impacted, Describe Funy.*		
Describe Cause of Problem and Remedial Action Taken.*		
Wellhcad has a slip type of flange, the packing on this flange failed causi	ing gas and fluids to be released. Welll	head flange was replaced.
Describe Area Affected and Cleanup Action Taken.* This release remain	red on location.	_
A vacuum truck was dispatched to recover all freestanding fluids. Concerning and we will greater a remediation work plan to the NMOCD for	the will have the spill area evaluated for	or any possible impact from the
release and we will present a remediation work plan to the NMOCD for	r approval prior to any significant remo	idiation activities.
1 hereby certify that the information given above is true and complete to	the best of my knowledge and understa	and that pursuant to NMOCD rules and
regulations all operators are required to report and/or file certain release in which banks are the equivalent. The accordance of a C 141 second built	notifications and perform corrective ac	tions for releases which may endanger
should their operations have failed to adequately investigate and remedia	the contamination that nose a threat to s	goes not reneve the operator of hadding
or the environment. In addition, NMOCD acceptance of a C-141 report	does not relieve the operator of respon	sibility for compliance with any other
federal, state, or local laws and/or regulations.	- · ·	
	OIL CONSERV	VATION DIVISION
Signature (all a
	Alle Dissources	
Printed Name: Christopher Gray	Approved by Environmental Special	St.
Title: HSE Coordinator	Approval Date: 1/18/18	Expiration Date: NIA
E-mail Address: cgray@concho.com	Conditions of Approval:	Attached
	SOULDIA	hod 200-11595
Date: 1/15/2018 Phone: 575-746-2010	VEU WINU	UKA ANT-90N

* Attach Additional Sheets If Necessary

APPENDIX IV

Form C-141 Revised April 3, 2017

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.

	,			Sa	anta Fo	e, NM 8/5	05					
Release Notification and Corrective Action												
OPERATOR Initial Report X Final									Final Report			
Name of Co	ompany: C	OG Operat	ing, LL(C (OGRID# 229	0137)	Contact: Ro	bert McNeill			*		
Address: 600 West Illinois Avenue, Midland TX 79701						Telephone 1	No.: 432-683-7 4	143				
Facility Name: Bullseve State Com #001H Facility T							e: Tank Batter	rv				
Surface Ow	mer: State			Mineral (Owner:	State			API No	.: 30-015-4	40162	
LOCATION OF RELEASE												
Unit Letter	Section	Township	Range	Feet from the	North	/South Line	Feet from the	East/We	est Line	County		
D	22	24S	27E	330		Ν	990	V	V		Edd	ły
Latitude: 32.2091255 Longitude: -104.1840591 NAD83												
				NA	TURE	OF REL	EASE					
Type of Rele	ase: Oil and	l Produced W	ater			Volume of	Release:		Volume R	Recovered:		
G (D	1					9bbls Oil a	and 10bbls PW		5bbls oil a	and 5bbls P	W	
Source of Re	lease: Well	head				Date and F	four of Occurrence	ce:	Date and Hour of Discovery:			y:
Was Immadi	ata Natioa (Timen 9				I/15/2018 I/15/2018 8.00dill						
was mineur	ale notice (Yes 🛛	🛾 No 🖾 Not R	equired	II 1E5, IC) whom?					
By Whom?						Date and H	Hour:					
Was a Water	course Read	ched?				If YES, V	olume Impacting	the Water	course.			
			Yes 🗵] No								
If a Waterco	irse was Im	nacted Descr	ibe Fully	*								
in a materies		pueted, Deser	ice i uny.									
Describe Cau	use of Probl	em and Reme	dial Actio	n Taken.*								
The packing	on a slip sty	yle flange at tl	ie wellhea	id failed resulting	in the re	elease of fluid	onto the well pac	d. The pac	king was	replaced.		
	A CC / 1	1.01	A .: TD .	1 4								
Describe Are	a Affected	and Cleanup	Action Ta	ken.*								
All of the flu	id remained	l on the well r	ad A vac	num truck was ut	ilized to	recover all fr	eestanding fluids	Remedia	tion of the	e affected a		s conducted
utilizing field	1 screenings	to guide exca	vation ac	tivities. Soil same	oles were	e taken from t	he bottom and sid	lewalls of	the excav	vation to con	ica wa ifirm a	all impacted
soil above N	MOCD RR.	AL's was suce	cessfully r	emoved. Upon re	ceipt of	acceptable an	alytical results the	e excavati	on was ba	ackfilled an	d cont	oured to
match the sur	rrounding lo	ocation.	,	· · · · · · · · · · · · · · · · · · ·	r	· r · · · · · · ·	,					
I hereby certi	ify that the	information g	iven abov	e is true and comp	plete to t	he best of my	knowledge and u	inderstand	that purs	suant to NM	OCD	rules and
regulations a	ll operators	are required t	o report a	nd/or file certain	release n	otifications a	nd perform correc	ctive action	ns for rele	eases which	may e	endanger
public health	or the envi	ronment. The	acceptan	ce of a C-141 rep	ort by th	e NMOCD n	arked as "Final R	leport" doe	es not reli	ieve the ope	rator o	of liability
should their o	operations h	have failed to a	adequately	y investigate and i	remediat	e contaminat	ion that pose a thr	eat to grou	und water	r, surface wa	ater, h	uman health
or the enviro	nment. In a	iaaition, INMC	JUD accep	prance of a C-141	report d	loes not reliev	e the operator of	responsibi	may for co	omphance v	vith ar	iy other

federal, state, or local laws and/or regulations.

OIL CONSERVATION DIVISION

Signature: Sheldon Jutan Printed Name: Sheldon L. Hitchcock	- Approved by Environmental Special	ist:	
Title: HSE Coordinator	Approval Date:	Expiration D	Date:
E-mail Address: slhitchcock@concho.com	Conditions of Approval:		Attached
Date: 9/5/2018 Phone: 575-746-2010			

* Attach Additional Sheets If Necessary

APPENDIX V



Project Id:

Contact:

Sheldon Hitchcock Eddy Co. NM **Project Location:**



COG Operating LLC, Artesia, NM Project Name: Bullseye 22 St.Con #1H



Date Received in Lab: Fri Jul-06-18 10:16 am Report Date: 09-JUL-18 Project Manager: Jessica Kramer

	Lab Id:	591381-0	001	591381-0	002	591381-003		591381-	004	591381-	005	591381-006	
Anghaig Daguagtad	Field Id:	Bttm-1	2'	Bttm-2	2'	N. sidev	vall	S. Sidev	vall	E.Sidew	all	W.Sidev	vall
Analysis Kequesiea	Depth:	1- ft		2- ft									
	Matrix:	SOIL	,	SOIL		SOIL		SOIL		SOIL		SOIL	<u>ـ</u>
	Sampled:	Jul-03-18 (08:00	Jul-03-18 (08:05	Jul-03-18	08:10	Jul-03-18	08:15	Jul-03-18 (08:20	Jul-03-18 (08:25
BTEX by EPA 8021B	Extracted:	Jul-06-18 1	16:00	Jul-06-18 1	6:00	Jul-06-18	16:00	Jul-06-18	16:30	Jul-06-18	16:00	Jul-06-18	16:00
	Analyzed:	Jul-06-18 2	23:51	Jul-07-18 0	0:09	Jul-07-18 (01:01	Jul-07-18	12:29	Jul-07-18 (01:37	Jul-07-18 (01:54
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Toluene		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Ethylbenzene		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
m,p-Xylenes		< 0.00402	0.00402	< 0.00403	0.00403	< 0.00404	0.00404	< 0.00403	0.00403	< 0.00399	0.00399	< 0.00401	0.00401
o-Xylene		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Total Xylenes		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Total BTEX		< 0.00201	0.00201	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00202	0.00202	< 0.00200	0.00200	< 0.00200	0.00200
Chloride by EPA 300	Extracted:	Jul-06-18 1	12:30	Jul-06-18 12:30		Jul-06-18	Jul-06-18 12:30 Jul-06-18 12:30		12:30	Jul-06-18 12:30		Jul-06-18 12:30	
	Analyzed:	Jul-06-18 2	22:54	Jul-06-18 2	3:10	Jul-06-182	23:16	Jul-06-18	23:21	Jul-06-182	23:27	Jul-06-18 23:32	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2400	100	161	5.00	429	4.97	28.7	4.97	215	4.99	1730	50.0
TPH By SW8015 Mod	Extracted:	Jul-06-18 1	14:00	Jul-06-18 1	4:00	Jul-06-18	14:00	Jul-06-18	14:00	Jul-06-18	14:00	Jul-06-18	14:00
	Analyzed:	Jul-07-18 (03:07	Jul-07-18 0	3:27	Jul-07-18 (03:46	Jul-07-18	04:06	Jul-07-18 ()4:26	Jul-07-18 ()4:46
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		61.2	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		61.2	15.0	<14.9	14.9	<14.9	14.9	<15.0	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.

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

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Jessica Kramer Project Assistant

Analytical Report 591381

for COG Operating LLC

Project Manager: Sheldon Hitchcock

Bullseye 22 St.Con #1H

09-JUL-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)





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

Reference: XENCO Report No(s): **591381 Bullseye 22 St.Con #1H** 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) 591381. 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. 591381 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 beamer

Jessica Kramer Project Assistant

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

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





Sample Id

Bttm-1 2'
Bttm-2 2'
N. sidewall
S. Sidewall
E.Sidewall
W.Sidewall

Sample Cross Reference 591381



COG Operating LLC, Artesia, NM

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	07-03-18 08:00	1 ft	591381-001
S	07-03-18 08:05	2 ft	591381-002
S	07-03-18 08:10	N/A	591381-003
S	07-03-18 08:15	N/A	591381-004
S	07-03-18 08:20	N/A	591381-005
S	07-03-18 08:25	N/A	591381-006



CASE NARRATIVE

Client Name: COG Operating LLC Project Name: Bullseye 22 St.Con #1H

Project ID: Work Order Number(s): 591381 Report Date:09-JUL-18Date Received:07/06/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3055682 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3055755 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.





COG Operating LLC, Artesia, NM

Sample Id:	Bttm-1 2'		Matrix:	Soil		Date Received	:07.06.18 10.1	6
Lab Sample I	d: 591381-001		Date Colle	ected: 07.03.18 08.00		Sample Depth	:1 ft	
Analytical Me	thod: Chloride by EPA	300				Prep Method:	E300P	
Tech:	SCM					% Moisture:		
Analyst:	SCM		Date Prepa	: 07.06.18 12.30		Basis:	Wet Weight	
Seq Number:	3055732							
Parameter		Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride		16887-00-6	2400	100	mg/kg	07.06.18 22.5	54	20

Analytical Method:TPH By SW801Tech:ARMAnalyst:ARMSeq Number:3055782	5 Mod	Date Pre	ep: 07.06.	18 14.00	F % E	rep Method: ۲۵ ۵ Moisture: Basis: W	K1005P et Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.07.18 03.07	U	1
Diesel Range Organics (DRO)	C10C28DRO	61.2	15.0		mg/kg	07.07.18 03.07		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	07.07.18 03.07	U	1
Total TPH	PHC635	61.2	15.0		mg/kg	07.07.18 03.07		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	94	%	70-135	07.07.18 03.07		
o-Terphenyl		84-15-1	99	%	70-135	07.07.18 03.07		





COG Operating LLC, Artesia, NM

Sample Id:	Bttm-1 2' 591381-001	Matrix:	Soil	Date Received	:07.06.18 10.16
Lab Sample Id:		Date Collected	: 07.03.18 08.00	Sample Depth:	:1 ft
Analytical Meth Tech: Analyst: Analyst: Seq Number: 3	nod: BTEX by EPA 8021B ALJ ALJ 3055682	Date Prep:	07.06.18 16.00	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	07.06.18 23.51	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	07.06.18 23.51	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	07.06.18 23.51	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	07.06.18 23.51	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	07.06.18 23.51	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	07.06.18 23.51	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	07.06.18 23.51	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	94	%	70-130	07.06.18 23.51		
4-Bromofluorobenzene		460-00-4	75	%	70-130	07.06.18 23.51		





COG Operating LLC, Artesia, NM

Sample Id: Lab Sample Id	Bttm-2 2' l: 591381-002		Matrix: Date Collecte	Soil ed: 07.03.18 08.05		Date Received Sample Depth	:07.06. :2 ft	18 10.16	
Analytical Mer Tech:	thod: Chloride by EPA 3 SCM	00				Prep Method: % Moisture:	E300P	,	
Analyst: Seq Number:	SCM 3055732		Date Prep:	07.06.18 12.30		Basis:	Wet W	Veight	
Parameter		Cas Number	Result]	8L	Units	Analysis Da	ite	Flag	Dil

Chloride	16887-00-6	161	5.00	mg/kg	07.06.18 23.10	1

Analytical Method: TPH By SW801	15 Mod				Р	rep Method: TX	1005P	
Tech: ARM					%	6 Moisture:		
Analyst: ARM		Date Pre	p: 07.06.	18 14.00	В	Basis: We	t Weight	
Seq Number: 3055782								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	07.07.18 03.27	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9		mg/kg	07.07.18 03.27	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9		mg/kg	07.07.18 03.27	U	1
Total TPH	PHC635	<14.9	14.9		mg/kg	07.07.18 03.27	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	07.07.18 03.27		
o-Terphenyl		84-15-1	102	%	70-135	07.07.18 03.27		





COG Operating LLC, Artesia, NM

Sample Id:	Bttm-2 2'	Matrix:	Soil	Date Received	:07.06.18 10.16
Lab Sample Id	: 591381-002	Date Collected	: 07.03.18 08.05	Sample Depth	:2 ft
Analytical Meth Tech: Analyst: Seq Number:	hod: BTEX by EPA 8021B ALJ ALJ 3055682	Date Prep:	07.06.18 16.00	Prep Method: % Moisture: Basis:	SW5030B Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	07.07.18 00.09	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	07.07.18 00.09	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	07.07.18 00.09	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	07.07.18 00.09	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	07.07.18 00.09	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	07.07.18 00.09	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	07.07.18 00.09	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	78	%	70-130	07.07.18 00.09		
4-Bromofluorobenzene		460-00-4	80	%	70-130	07.07.18 00.09		





COG Operating LLC, Artesia, NM

Sample Id: Lab Sample I	N. sidewall d: 591381-003		Matrix: Date Colle	Soil cted: 07.03.18 08.10]	Date Received:07.0)6.18 10.16	i
Analytical Me Tech: Analyst: Seq Number:	ethod: Chloride by EPA SCM SCM 3055732	300	Date Prep:	07.06.18 12.30		Prep Method: E30 % Moisture: Basis: Wet	0P t Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	429	4.97	mg/kg	07.06.18 23.16		1

Analytical Method: TPH By SW8013	5 Mod				Р	rep Method: TX	1005P	
Tech: ARM					%	Moisture:		
Analyst: ARM		Date Pre	p: 07.06	.18 14.00	В	asis: We	t Weight	
Seq Number: 3055782								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<14.9	14.9		mg/kg	07.07.18 03.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<14.9	14.9		mg/kg	07.07.18 03.46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<14.9	14.9		mg/kg	07.07.18 03.46	U	1
Total TPH	PHC635	<14.9	14.9		mg/kg	07.07.18 03.46	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	07.07.18 03.46		
o-Terphenyl		84-15-1	99	%	70-135	07.07.18 03.46		





COG Operating LLC, Artesia, NM

Sample Id:	N. sidewall	Matrix:	Soil	Date Received	:07.06.18 10.16
Lab Sample Id	: 591381-003	Date Collected	:07.03.18 08.10		
Analytical Met	hod: BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.06.18 16.00	Basis:	Wet Weight
Seq Number:	3055682				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	07.07.18 01.01	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	07.07.18 01.01	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	07.07.18 01.01	U	1
m,p-Xylenes	179601-23-1	< 0.00404	0.00404		mg/kg	07.07.18 01.01	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	07.07.18 01.01	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	07.07.18 01.01	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	07.07.18 01.01	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	85	%	70-130	07.07.18 01.01		
1,4-Difluorobenzene		540-36-3	86	%	70-130	07.07.18 01.01		





COG Operating LLC, Artesia, NM

Sample Id: Lab Sample I	S. Sidewall d: 591381-004		Matrix: Date Colle	Soil ected: 07.03.18 08.15]	Date Received:07.0	6.18 10.10	5
Analytical Me	ethod: Chloride by EPA	300]	Prep Method: E30	0P	
Tech:	SCM				(% Moisture:		
Analyst:	SCM		Date Prep:	07.06.18 12.30]	Basis: Wet	Weight	
Seq Number:	3055732							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	28.7	4.97	mg/kg	07.06.18 23.21		1

Analytical Method:TPH By SW801Tech:ARMAnalyst:ARMSeq Number:3055782	5 Mod	Date Pre	p: 07.06.	18 14.00	P % B	Prep Method: TX 6 Moisture: Basis: We	1005P t Weight	
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.07.18 04.06	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	07.07.18 04.06	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	07.07.18 04.06	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	07.07.18 04.06	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-135	07.07.18 04.06		
o-Terphenyl		84-15-1	101	%	70-135	07.07.18 04.06		





COG Operating LLC, Artesia, NM

Sample Id:	S. Sidewall	Matrix:	Soil	Date Received	:07.06.18 10.16
Lab Sample Id	: 591381-004	Date Collected	: 07.03.18 08.15		
Analytical Met	hod: BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.06.18 16.30	Basis:	Wet Weight
Seq Number:	3055755				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	07.07.18 12.29	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	07.07.18 12.29	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	07.07.18 12.29	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	07.07.18 12.29	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	07.07.18 12.29	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	07.07.18 12.29	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	07.07.18 12.29	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	96	%	70-130	07.07.18 12.29		
4-Bromofluorobenzene		460-00-4	83	%	70-130	07.07.18 12.29		





COG Operating LLC, Artesia, NM

Sample Id: Lab Sample I	E.Sidewall d: 591381-005		Matrix: Date Colle	Soil ected: 07.03.18 08.20]	Date Received:07	7.06.18 10.10	5
Analytical Me	ethod: Chloride by EPA	300]	Prep Method: E3 % Moisture:	300P	
Analyst:	SCM		Date Prep:	07.06.18 12.30]	Basis: W	et Weight	
Seq Number:	3055732							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	215	4.99	mg/kg	07.06.18 23.27		1

Analytical Method: TPH By SW801 Tech: ARM	5 Mod				P %	Prep Method: TX 6 Moisture:	1005P	
Analyst: ARM		Date Pre	p: 07.06	.18 14.00	В	Basis: We	t Weight	
Seq Number: 3055782								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.07.18 04.26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	07.07.18 04.26	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	07.07.18 04.26	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	07.07.18 04.26	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	07.07.18 04.26		
o-Terphenyl		84-15-1	97	%	70-135	07.07.18 04.26		





COG Operating LLC, Artesia, NM

Sample Id:	E.Sidewall	Matrix:	Soil	Date Received	:07.06.18 10.16
Lab Sample Id	: 591381-005	Date Collected	:07.03.18 08.20		
Analytical Met	hod: BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.06.18 16.00	Basis:	Wet Weight
Seq Number:	3055682				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	07.07.18 01.37	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	07.07.18 01.37	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	07.07.18 01.37	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	07.07.18 01.37	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	07.07.18 01.37	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	07.07.18 01.37	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	07.07.18 01.37	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	71	%	70-130	07.07.18 01.37		
1,4-Difluorobenzene		540-36-3	70	%	70-130	07.07.18 01.37		





COG Operating LLC, Artesia, NM

Sample Id: Lab Sample Id:	W.Sidewall 591381-006		Matrix: Date Colle	Soil cted: 07.03.18 08.25		Date Received	1:07.06.18 10.1	6
Analytical Methors Tech: S Analyst: S Seq Number: 3	od: Chloride by EPA 3 SCM SCM 8055732	800	Date Prep:	07.06.18 12.30		Prep Method: % Moisture: Basis:	E300P Wet Weight	
Parameter		Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil

Analytical Method: TPH By SW8015	5 Mod				Р	rep Method: TX	1005P	
Tech: ARM					%	Moisture:		
Analyst: ARM		Date Pre	p: 07.06	18 14.00	В	asis: We	t Weight	
Seq Number: 3055782								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	07.07.18 04.46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	07.07.18 04.46	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	07.07.18 04.46	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	07.07.18 04.46	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	95	%	70-135	07.07.18 04.46		
o-Terphenyl		84-15-1	100	%	70-135	07.07.18 04.46		





COG Operating LLC, Artesia, NM

Sample Id:	W.Sidewall	Matrix:	Soil	Date Received	:07.06.18 10.16
Lab Sample Id	: 591381-006	Date Collected	: 07.03.18 08.25		
Analytical Met	hod: BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	07.06.18 16.00	Basis:	Wet Weight
Seq Number:	3055682				

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	07.07.18 01.54	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	07.07.18 01.54	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	07.07.18 01.54	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	07.07.18 01.54	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	07.07.18 01.54	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	07.07.18 01.54	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	07.07.18 01.54	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	126	%	70-130	07.07.18 01.54		
4-Bromofluorobenzene		460-00-4	114	%	70-130	07.07.18 01.54		



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- RL Reporting Limit
- MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	nt Sample	BLK	Method Blank	
BKS/LCS	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



QC Summary 591381

COG Operating LLC

Bullseye 22 St.Con #1H

Analytical Method: Seq Number:	Chloride b 3055732	y EPA 30	00		Matrix:	Solid			P	rep Meth Date Pr	od: E30 ep: 07.0	0P 06.18	
MB Sample Id:	7657952-1	-BLK		LCS Sa	mple Id:	7657952-	1-BKS		LCS	D Sample	e Id: 765	7952-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride		<5.00	250	263	105	265	106	90-110	1	20	mg/kg	07.06.18 21:06	
Analytical Method:	Chloride b	y EPA 30	00			a			P	rep Meth	od: E30	0P	
Seq Number:	3055732 501021.00	o		MS Sa	Matrix:	S011 591031-0	08 5		MS	Date Pr	ep: 07.0	031-008 SD	
Parameter	591051-00	o Parent Result	Spike Amount	MS Sa MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride		86.3	248	353	108	356	109	90-110	1	20	mg/kg	07.06.18 21:22	
Analytical Method:	Chloride b	y EPA 30	00		Matrix	Soil			P	rep Meth	od: E30	0P 06 18	
Parent Sample Id:	591054-00	2		MS Sa	mple Id:	591054-0	02 S		MS	D Sample	e Id: 591	054-002 SD	
Parameter	0,100100	– Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Chloride		1220	248	1440	89	1440	89	90-110	0	20	mg/kg	07.06.18 22:38	Х
Analytical Method:	TPH By S	W8015 M	od						P	ren Meth	od TX1	005P	
Seq Number:	3055782				Matrix:	Solid				Date Pr	ep: 07.0)6.18	
MB Sample Id:	7657984-1	-BLK		LCS Sa	mple Id:	7657984-	1-BKS		LCS	D Sample	e Id: 765	7984-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ons (GRO)	<15.0	1000	976	98	992	99	70-135	2	20	mg/kg	07.06.18 20:38	
Diesel Range Organics ((DRO)	<15.0	1000	1010	101	1040	104	70-135	3	20	mg/kg	07.06.18 20:38	
Surrogate		MB %Rec	MB Flag	L %	CS Rec	LCS Flag	LCSE %Rec) LCSI : Flag	D Li	mits	Units	Analysis Date	

101

108

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

1-Chlorooctane

o-Terphenyl

[D] = 100*(C-A) / B RPD = 200* | (C-E) / (C+E) | [D] = 100 * (C) / [B] Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

$$\begin{split} LCS &= Laboratory \ Control \ Sample \\ A &= Parent \ Result \\ C &= MS/LCS \ Result \\ E &= MSD/LCSD \ Result \end{split}$$

114

110

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

07.06.18 20:38

07.06.18 20:38

116

104

70-135

70-135

%

%



COG Operating LLC

Bullseye 22 St.Con #1H

Analytical Method:	TPH By SW8015 Mod

Analytical Method: Seq Number:	TPH By SV 3055782	W8015 M	od		Matrix:	Soil			Р	rep Metho Date Pro	od: TX1 ep: 07.0	.005P 6.18	
Parent Sample Id:	591010-002	2		MS Sai	mple Id:	591010-0	02 S		MS	D Sample	e Id: 591	010-002 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbo	ns (GRO)	<15.0	997	977	98	1030	103	70-135	5	20	mg/kg	07.06.18 21:56	
Diesel Range Organics (I	DRO)	<15.0	997	1010	101	1060	106	70-135	5	20	mg/kg	07.06.18 21:56	
Surrogate				N %]	1S Rec	MS Flag	MSD %Rec	MSD Flag	L	imits	Units	Analysis Date	
1-Chlorooctane				1	11		118		70)-135	%	07.06.18 21:56	
o-Terphenyl				1	03		105		70)-135	%	07.06.18 21:56	

BTEX by EPA 8021	В						P	rep Meth	od: SW:	5030B	
3055682			Matrix:	Solid				Date Pr	ep: 07.0	06.18	
7657929-1-BLK		LCS Sar	nple Id:	7657929-	1-BKS		LCS	SD Sample	e Id: 765	7929-1-BSD	
MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
< 0.00200	0.100	0.0801	80	0.0852	84	70-130	6	35	mg/kg	07.06.18 19:39	
< 0.00200	0.100	0.0857	86	0.0884	88	70-130	3	35	mg/kg	07.06.18 19:39	
< 0.00200	0.100	0.0821	82	0.0859	85	70-130	5	35	mg/kg	07.06.18 19:39	
< 0.00401	0.200	0.174	87	0.180	90	70-130	3	35	mg/kg	07.06.18 19:39	
< 0.00200	0.100	0.0918	92	0.0852	84	70-130	7	35	mg/kg	07.06.18 19:39	
MB %Rec	MB Flag	L0 %]	CS 1 Rec 1	LCS Flag	LCSD %Rec) LCSE 2 Flag) L	imits	Units	Analysis Date	
76		8	32		109		7	0-130	%	07.06.18 19:39	
73		7	70		109		7	0-130	%	07.06.18 19:39	
	BTEX by EPA 8021 3055682 7657929-1-BLK MB Result <0.00200 <0.00200 <0.00200 <0.00401 <0.00200 MB %Rec 76 73	BTEX by EPA 8021B 3055682 7657929-1-BLK MB Spike <	BTEX by EPA 8021B 3055682 7657929-1-BLK LCS Sar MB Spike LCS <0.00200	BTEX by EPA 8021B Matrix: 3055682 Matrix: 7657929-1-BLK LCS S→□LCS MB Spike LCS LCS <0.00200	BTEX by EPA 8021B 3055682 Matrix: Solid 7657929-1-BLK LCS Samle IC MB Spike LCS LCS <0.00200	BTEX by EPA 8021B 3055682 Matrix: Solid 7657929-1-BLK LCS Sample Id: 7657929-1-BLK MB Spike LCS LCS Result LCSD Result LCSD %Result <0.00200	BTEX by EPA 8021B 3055682 Matrix: Solid 7657929-1-BLK LCS Sample Id 7657929-1-BKS MB Spike LCS LCS LCSD LC	BTEX by EPA 8021B P 3055682 Matrix: Solid 501 7657929-1-BLK LCS Sample Id: 7657929-1-BKS LCS MB %Result %Result	BTEX by EPA 8021B Prep Methods 3055682 Matrix: Solid Date Pr 7657929-1-BLK LCS Sample Id 7657929-1-BKS LCSS Tots Sample Id MB Spike LCS LCS LCSS LCSS <td>BTEX by EPA 8021B Prep Method: SW: 3055682 Matrix: Solid Date Prep: 07.0 7657929-1-BLK LCS Sample Id 7657929-1-BKS LCSD Sample Id 7657929-1-BKS 17678 355 76788 76788 76788 76788 76788 76788 76798 <t< td=""><td>BTEX by EPA 8021B Prep Method: SW5030B 3055682 Matrix: Solid Date Prep: $07.06.18$ 7657929-1-BLK LCS Sample L' SPIE LCSD Sample L' Analysis Date 0.00200 0.100 0.0801 80 0.0852 84 $70-130$ 6 35 MB Multicols Colspan="4">MB MB MB MB MB 0.00200 0.100 0.0857 86 0.0852 84 $70-130$ 6 35 mg/kg $07.06.18 19:39$ 0.00200 0.00821 82 0.0852 84 $70-130$ 6 0.00200 0.00200 0.0020 0.0174 87 0.180 $70-130$ $70.0.618 19:39$ $70.0.18$</td></t<></td>	BTEX by EPA 8021B Prep Method: SW: 3055682 Matrix: Solid Date Prep: 07.0 7657929-1-BLK LCS Sample Id 7657929-1-BKS LCSD Sample Id 7657929-1-BKS 17678 355 76788 76788 76788 76788 76788 76788 76798 <t< td=""><td>BTEX by EPA 8021B Prep Method: SW5030B 3055682 Matrix: Solid Date Prep: $07.06.18$ 7657929-1-BLK LCS Sample L' SPIE LCSD Sample L' Analysis Date 0.00200 0.100 0.0801 80 0.0852 84 $70-130$ 6 35 MB Multicols Colspan="4">MB MB MB MB MB 0.00200 0.100 0.0857 86 0.0852 84 $70-130$ 6 35 mg/kg $07.06.18 19:39$ 0.00200 0.00821 82 0.0852 84 $70-130$ 6 0.00200 0.00200 0.0020 0.0174 87 0.180 $70-130$ $70.0.618 19:39$ $70.0.18$</td></t<>	BTEX by EPA 8021B Prep Method: SW5030B 3055682 Matrix: Solid Date Prep: $07.06.18$ 7657929-1-BLK LCS Sample L' SPIE LCSD Sample L' Analysis Date 0.00200 0.100 0.0801 80 0.0852 84 $70-130$ 6 35 MB Multicols Colspan="4"> MB MB MB MB MB 0.00200 0.100 0.0857 86 0.0852 84 $70-130$ 6 35 mg/kg $07.06.18 19:39$ 0.00200 0.00821 82 0.0852 84 $70-130$ 6 0.00200 0.00200 0.0020 0.0174 87 0.180 $70-130$ $70.0.618 19:39$ $70.0.18$

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 8021 3055755 7657966-1-BLK	В	LCS Sar	Matrix: nple Id:	Solid 7657966-	1-BKS		F LCS	Prep Metho Date Pr SD Sample	od: SW3 ep: 07.0 e Id: 765	5030B 96.18 7966-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0944	94	0.0973	96	70-130	3	35	mg/kg	07.07.18 04:36	
Toluene	< 0.00200	0.100	0.0954	95	0.0986	98	70-130	3	35	mg/kg	07.07.18 04:36	
Ethylbenzene	< 0.00200	0.100	0.0919	92	0.0959	95	70-130	4	35	mg/kg	07.07.18 04:36	
m,p-Xylenes	< 0.00401	0.200	0.190	95	0.199	99	70-130	5	35	mg/kg	07.07.18 04:36	
o-Xylene	< 0.00200	0.100	0.0895	90	0.0947	94	70-130	6	35	mg/kg	07.07.18 04:36	
Surrogate	MB %Rec	MB Flag	L(%]	CS Rec	LCS Flag	LCSD %Rec	LCSE Flag) L	imits	Units	Analysis Date	
1,4-Difluorobenzene	102		8	39		98		7	0-130	%	07.07.18 04:36	
4-Bromofluorobenzene	89		1	29		106		7	0-130	%	07.07.18 04:36	

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

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



COG Operating LLC

BTEX by EPA 80	21B						Р	rep Meth	od: SW	5030B	
3055682			Matrix:	Soil				Date Pr	ep: 07.0)6.18	
591005-003		MS Sat	mple Id:	591005-0	03 S		MS	SD Sample	e Id: 591	005-003 SD	
Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
< 0.0020	0.101	0.0636	63	0.0673	67	70-130	6	35	mg/kg	07.06.18 20:15	Х
< 0.0020	1 0.101	0.0582	58	0.0653	65	70-130	11	35	mg/kg	07.06.18 20:15	Х
< 0.0020	1 0.101	0.0456	45	0.0479	48	70-130	5	35	mg/kg	07.06.18 20:15	Х
< 0.0040	2 0.201	0.0870	43	0.0987	49	70-130	13	35	mg/kg	07.06.18 20:15	Х
< 0.0020	1 0.101	0.0449	44	0.0459	46	70-130	2	35	mg/kg	07.06.18 20:15	Х
		N %	1S Rec	MS Flag	MSD %Rec	MSD Flag	L	imits	Units	Analysis Date	
		1	01		103		70	0-130	%	07.06.18 20:15	
		1	00		101		70	0-130	%	07.06.18 20:15	
	BTEX by EPA 80 3055682 591005-003 Parent Result <0.0020 <0.0020 <0.0020 <0.0040 <0.0020	BTEX by EPA 8021B 3055682 591005-003 Parent Result Spike Amount <0.00201	BTEX by EPA 8021B 3055682 591005-003 MS Sat Parent Result Spike Amount MS Result <0.00201	BTEX by EPA 8021B 3055682 Matrix: 591005-003 MS Sample Id: Parent Result Spike Amount MS MS <0.00201	BTEX by EPA 8021B 3055682 Matrix: Soil 591005-003 MS Sample Id: 591005-00 Parent Result Spike Amount MS MS MSD Result <0.00201	BTEX by EPA 8021B 3055682 Matrix: Soil 591005-003 MS Sample Id: 591005-003 S Parent Result Spike Amount MS Result MSD Result MSD Result MSD Result MSD Result <0.00201	BTEX by EPA 8021B 3055682 Matrix: Soil 591005-003 MS Sample Id: 591005-003 S Parent Result Spike Amount MS MS MSD MSD Limits <0.00201	BTEX by EPA 8021B PATEX by EPA 8021B 3055682 Matrix: Soil 591005-003 MS Sample Id: 591005-003 S MS Parent Result Spike Amount MS Result MS MS MSD Result MSD %Rec Limits %RP %D <0.00201	BTEX by EPA 8021B Prep Meth 3055682 Matrix: Soil Date Pr 591005-003 MS Sample Id: 591005-003 S MSD MSD	Prez by EPA 8021B Prep Method: SW 3055682 Matrix: Soil Date Prep: 07.0 591005-003 MS Sample Id 591005-003 S MSD MSD	Prep Method: SW5030B 3055682 Matrix: Soil Date Prep: $07.06.18$ 591005-003 MS Sample I: SP1005-003 SD MS Sample I: $591005-003$ SD MS Spike MS Seute MS MS MS MS MSD MSD MSD MSD MSD MSD MSD

Analytical Method:	BTEX by	EPA 8021	B						P	rep Meth	od: SW:	5030B	
Seq Number:	3055755				Matrix:	Soil				Date Pr	ep: 07.0	6.18	
Parent Sample Id:	591011-00)4		MS Sat	mple Id:	591011-0	04 S		MS	D Sample	e Id: 591	011-004 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene		< 0.00200	0.0998	0.0818	82	0.0798	80	70-130	2	35	mg/kg	07.07.18 05:12	
Toluene		< 0.00200	0.0998	0.0798	80	0.0783	78	70-130	2	35	mg/kg	07.07.18 05:12	
Ethylbenzene		< 0.00200	0.0998	0.0759	76	0.0752	75	70-130	1	35	mg/kg	07.07.18 05:12	
m,p-Xylenes		< 0.00399	0.200	0.156	78	0.154	77	70-130	1	35	mg/kg	07.07.18 05:12	
o-Xylene		< 0.00200	0.0998	0.0718	72	0.0717	72	70-130	0	35	mg/kg	07.07.18 05:12	
Surrogate				N %	AS Rec	MS Flag	MSD %Rec	MSD Flag	L	imits	Units	Analysis Date	
1,4-Difluorobenzene				1	01		99		7	0-130	%	07.07.18 05:12	
4-Bromofluorobenzene				9	94		85		7	0-130	%	07.07.18 05:12	

			Page 1 of	CUSTODY			Revision 2016.1
Setting the Standard since 1990							
Stafford, TX (281) 240-4200 Dallas, TX (214) 902-0300	El Paso, TX (915) 585-3. Lubbock, TX (806) 794-	143 1296	Midland, TX (432) 704-5440 San Antonio, TX (210) 509-3334	Phoenix, AZ (48 Service Center	0) 355-0900 Baton Rouge, LA (832) 712-81	43 Service Center-	- Amarillo, TX (806)678-4514 - Hobbs, NM (575) 392-7550
			www.xenco.com	Xenco			
Client / Reporting Information			Project Information		Analytical information		Matrix Codes
Company Name / Branch: CDG	Artesid	Project N	Name/Number: 1.KeYe ZZ St. Com	± + +			W = Water S = Soil/Sed/Solid
Company Address:		Project Lo	ocation:		d-cd D		GW = Ground Water DW = Drinking Water
			LAX CO. NM		itan 301		P = Product SW = Surface Water SL - Sludge
	Phone No:				ех 3 4 ј		OW = Ocean/Sea Water
SINTA COUL Con	Uno, com				и (215 РА		WI = Wipe 0 = 0il
Project Contact: 5 Weldon	Hitch cock	PO Num	ber:		5 N 02 E		WW = Waste Water A = Air
Samplers's Name: 5 Weldon	Hitchcock				10 8 1e		
		Collectio	n Numb	er of preserved bottles	· 8 * x n 1 d		
No. Field ID / Point of C	ollection S:	ample lepth Date	Time Matrix bottles HCI NaOH/Zn Accetate	HNO3 H2SO4 NaOH NaHSO4 MEOH	TP₩ BTP Chið	ŤĒ	sid Comments
1 3++m-1 2		81/6/12 7	1 5 00:8	×	× × ×		
2 B++m-2 2'	~		1 5 50%	×	XXX		
3 N.Sidewall			8:10 5 1	×	* * *		
4 S. Side Wall			1 5 71;8	X	XXX		
5 E, SIDEWAN			1 5 02:8	X	X X X		
6 W. Siderah		-	8:25 5 1	X	XXX		
~7							
00 20							
10							
Same Day TAT	5 Day TAT		Level II Std QC	Level IV (Full Data Pkg /raw d	ata)		
Next Day EMERGENCY	7 Day TAT		Level III Std QC+ Forms	TRRP Level IV	-		
2 Day EMERGENCY	Contract TAT		Level 3 (CLP Forms)	UST / RG -411			
3 Day EMERGENCY			Level II Report with TRRP ch	scklist			-
TAT Starts Day received by La	b, if received by 5:00	m			FED-EX / UF	$3: Tracking # 77 A \phi$	42962910
Relinguished,by Sampler:	SAMPLE CUSTODY MU	IST BE DOCUMEN te Time:	TED BELOW EACH TIME SAMPLES CHANGE	POSSESSION, INCLUDING COURIER E	ELIVERY Date Time:	Received By:	
1 Jnelby 'MUUU Relinquished by:		13 7.45 te Time:	Received By:	2 Relingelished By:	4/5 / 5. JO	Received By:	11.01 CITMIT
Relinquished by: 5	Da	te Time:	Received By: 5	Custody Seal #	Preserved where applicable	On ke Cooler Temp.	Thermo, Corr. Factor
Notice: Signature of this document and relinquish for any losses or expenses incurred by the Client	ment of samples constitutes a va if such losses are due to circums	tances beyond the	from client company to Xenco, its affiliates and control of Xenco. A minimum charge of \$75 will	subcontractors. It assigns standard terms be applied to each project. Xenco's liability	and conditions of service. Xenco v y will be limited to the cost of samp	vill be liable drily for the cost of samples and si oles. Any samples received by Xenco but not a	shall not assume any responsibility analyzed will be invoiced at \$5 per

Final 1.000



After printing this label:

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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.

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XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC	Acceptable Temperature Range: 0 - 6 degC							
Date/ Time Received: 07/06/2018 10:16:00 AM	Air and Metal samples	Air and Metal samples Acceptable Range: Ambient						
Work Order #: 591381	Temperature Measurin	ng device used: R8						
Sample Rec	eipt Checklist	Comments						
#1 *Temperature of cooler(s)?	4							
#2 *Shipping container in good condition?	Yes							
#3 *Samples received on ice?	Yes							
#4 *Custody Seals intact on shipping container/ cooler?	N/A							
#5 Custody Seals intact on sample bottles?	N/A							
#6*Custody Seals Signed and dated?	N/A							
#7 *Chain of Custody present?	Yes							
#8 Any missing/extra samples?	No							
#9 Chain of Custody signed when relinquished/ received?	Yes							
#10 Chain of Custody agrees with sample labels/matrix?	Yes							
#11 Container label(s) legible and intact?	Yes							
#12 Samples in proper container/ bottle?	Yes							
#13 Samples properly preserved?	Yes							
#14 Sample container(s) intact?	Yes							
#15 Sufficient sample amount for indicated test(s)?	Yes							
#16 All samples received within hold time?	Yes							
#17 Subcontract of sample(s)?	N/A							

#17 Subcontract of sample(s)? #18 Water VOC samples have zero headspace?

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

Analyst:

PH Device/Lot#:

Checklist completed by: Brianna Teel
Brianna Teel

Date: 07/06/2018

N/A

Checklist reviewed by: festion Whamek

Jessica Kramer

Date: 07/06/2018



Contact:

Project Location:

Sheldon Hitchcock

Eddy Co, NM

Certificate of Analysis Summary 592868

COG Operating LLC, Artesia, NM Project Name: Bullseye 22 St. Com #1



Date Received in Lab:Thu Jul-19-18 10:50 amReport Date:20-JUL-18Project Manager:Jessica Kramer

	Lab Id:	592868-0	01	592868-0	02			
Analysis Paguastad	Field Id:	Bttm-1	3'	W. Side W	/all			
Analysis Kequestea	Depth:	3- ft						
	Matrix:	SOIL		SOIL				
	Sampled:	Jul-17-18 0	8:00	Jul-17-18 0	8:30			
Chloride by EPA 300	Extracted:	Jul-19-18 1	6:45	Jul-19-18 1	6:45	l .		
	Analyzed:	Jul-19-18 2	1:34	Jul-19-18 2	1:40			
	Units/RL:	mg/kg	RL	mg/kg	RL			
Chloride		497	49.5	453	49.8			

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 592868

for COG Operating LLC

Project Manager: Sheldon Hitchcock

Bullseye 22 St. Com #1

20-JUL-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)







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

Reference: XENCO Report No(s): **592868 Bullseye 22 St. Com #1** 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) 592868. 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. 592868 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 kramer

Jessica Kramer Project Assistant

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Sample Cross Reference 592868



COG Operating LLC, Artesia, NM

Bullseye 22 St. Com #1

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bttm-1 3'	S	07-17-18 08:00	3 ft	592868-001
W. Side Wall	S	07-17-18 08:30	N/A	592868-002



CASE NARRATIVE

Client Name: COG Operating LLC Project Name: Bullseye 22 St. Com #1

Project ID: Work Order Number(s): 592868
 Report Date:
 20-JUL-18

 Date Received:
 07/19/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None





COG Operating LLC, Artesia, NM

Bullseye 22 St. Com #1

Sample Id: Lab Sample Id	Bttm-1 3' : 592868-001		Matrix: Date Collect	Soil ed: 07.17.18 08.00		Date Received Sample Depth	l:07.19 : 3 ft	.18 10.50	
Analytical Mer Tech:	thod: Chloride by EPA 30 SCM	00				Prep Method: % Moisture:	E300	Р	
Analyst:	SCM 3057085		Date Prep:	07.19.18 16.45		Basis:	Wet V	Weight	
Parameter	5057005	Cas Number	Result	RL	Units	Analysis D	ate	Flag	Dil

497

Chloride

16887-00-6

49.5

07.19.18 21.34

mg/kg

10





COG Operating LLC, Artesia, NM

Bullseye 22 St. Com #1

Sample Id:	W. Side Wall		Matrix:	Soil		Date Received	:07.19.18 10.5	0
Lab Sample Io	d: 592868-002		Date Collec	cted: 07.17.18 08.30				
Analytical Me	ethod: Chloride by EPA	300				Prep Method:	E300P	
Tech:	SCM					% Moisture:		
Analyst:	SCM		Date Prep:	07.19.18 16.45		Basis:	Wet Weight	
Seq Number:	3057085							
Parameter		Cas Number	Result	RL	Units	Analysis Da	ite Flag	Dil
Chloride		16887-00-6	453	49.8	mg/kg	07.19.18 21.4	40	10



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- **E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- **BRL** Below Reporting Limit.
- RL Reporting Limit
- MDL Method Detection 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	nt Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Laboration	atory Control Sample Duplicate
MD/SD	Method Duplicate/Sample Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



QC Summary 592868

COG Operating LLC

Bullseye 22 St. Com #1

Analytical Method:	Chloride by EPA 30	0						P	rep Metho	od: E30	OP				
Seq Number:	3057085			Matrix:	Solid	Solid Date Prep:					07.19.18				
MB Sample Id:	7658720-1-BLK		LCS San	nple Id:	7658720-1	I-BKS		LCS	D Sample	Id: 765	8720-1-BSD				
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag			
Chlande	- 00		255	100	240	00	00 110	2	20		07 10 18 20.25				

Analytical Method:	Chloride by	EPA 30	0						P	rep Metho	d: E30	00P				
Seq Number:	3057085]	Matrix:	Soil	Soil Date Prep:					07.19.18				
Parent Sample Id:	592865-001			MS San	nple Id:	592865-00	1 S		MS	D Sample	Id: 592	865-001 SD				
Parameter	1	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	t Units	Analysis Date	Flag			
Chloride		196	252	453	102	451	101	90-110	0	20	mg/kg	07.19.18 20:51				

Analytical Method:	Chloride by EPA 30	0						Pr	ep Metho	od: E30)0P	
Seq Number:	3057085			Matrix:	Soil				Date Pre	ep: 07.	19.18	
Parent Sample Id:	592866-001		MS Sar	nple Id:	592866-00	01 S		MS	D Sample	Id: 592	2866-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	t Units	Analysis Date	Flag
Chloride	90.4	250	341	100	342	101	90-110	0	20	mg/kg	07.19.18 22:07	

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

Relinquished by:	Relinquished by Sampler:	TAT Starts Day received by Lab, if received sample	3 Day EMERGENCY	2 Day EMERGENCY	Next Day EMERGENCY	Same Day TAT 5 Day 5	Turnaround Time (Business days)	10	9	C	7	6	Ċ	4	3	2 W. Side val	1 B + m - 1 3'	No. Field ID / Point of Collection	Samplers's Name: Sheldon Hitchcock	Project Contact: Sheldon Hitchcock	Email: <u>sihiichcock@concho.com</u> Phone N. dneel2@concho.com; cgray@concho.com; rhaskell@con	2407 Pecos Ave. Artesia NM 88210	COG Operating, LLC Company Address:	Client / Reporting Information	-		Dallas Texas (214-902-0300)	Setting the Standard since 1990 Stafford Texas (281-240-4200)		
Date Time:	Date Time: 7][/7]/C Date Time:	by 5:00 pm		t TAT	1	AT	_		-							N/A	3	Sample			: 575-703-6475 cho.com					and we want and a second and a se				
Received By:	Received By: Received By:			Level 3 (CLI	Level III Std	Level II Std		S	S	S	S	S	S	S	S	s 06:8 8/21/2	s 00;8 8/11/2	Date Time Matrix	Collection	Midland Tx, 7970	Invoice To: COG Operating, I Attn: Robert McN 600 W. Illnois Ave	Eddy co.	Project Name/Number: Project Location:	Project Infor		×	Midland. Texas (432-704-52)	San Antonio Tevas (210-500	CIIAI	
Cu +		SANPLES CHANGE POSSES	klist	P Forms)	I QC+ Forms	8 	Data Deliverable Information	1			-1				L L		. F	HCI NaOH/Zn Acetate HNO3 0 Pt H2SO4	Number of pr	1	e eii C	NM	Seye 22 St	mation		www.xenco.com	9-0004) 51)	0-2221)		
stody Seal #	Inquished By: WWM Inquished By:			ST / RG -411	RRP Level IV	evel IV (Full Data Pkg /raw da										<u> </u>	<u> </u>	NaOH NaHSO4 MEOH TPH EXT	END	= =D (I	EPA80	15M)	Com #1			Хепсо	Phoe	2	STODI	
Preserved where applicable	V 71/18/18/15:30 Date Time:	VERY FED-EX /				ita)	Note									×	×	BTEX (EF	PA 80 DES (21B EPA	300)				Analytical Informat	Quote #	nix, Afizona (480-355-090			
	Received By:	UPS: Tracking #					ι <u>φ</u>				-								······						tion	Xenco Job # SC	u)			
oden Temp. Thermo. Corr. Factor	BIJUL X	FINGENIZES											-	· · · · · · · · · · · · · · · · · · ·				Field Comments	A = Air	WI = Wipe	SW = Surface water SL = Sludge OW =Ocean/See Wa	DW = Orinking Water P = Product	W = Water S = Soil/Sed/Solid		Matrix Codes	20/19/1				

Final 1.000



Isdal sint printing this label:

1. Use the Print' button on this page to print your label to your laser or inkjet printer.

Fold the printed page along the horizontal line.
 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.

Fesure in additional plining charges, along with the cancenation of your redict additional plining charges, along with the carcenation of your redict additional plining charges, along with the service conditions in the current FedEx Service Guide, available on feders, com FedEx will not be responsible for any claim in excess of \$100 per types whether the result of loss, damage, delay, nondelex, com FedEx will not be responsible for any claim in excess of \$100 per types whether the result of loss, damage, delay, nondelex, com FedEx will not be responsible for any claim in excess of \$100 per types an additional charge, dorment your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other internation in the current feelex must be filed within strict time limits, see current FedEx Service Guide.



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 Temperature Measuring device used : R8								
Date/ Time Received: 07/19/2018 10:50:00 AM									
Work Order #: 592868									
Sample Rec	eipt Checklist Comments								
#1 *Temperature of cooler(s)?	3								
#2 *Shipping container in good condition?	Yes								
#3 *Samples received on ice?	Yes								
#4 *Custody Seals intact on shipping container/ cooler?	N/A								
#5 Custody Seals intact on sample bottles?	N/A								
#6*Custody Seals Signed and dated?	N/A								
#7 *Chain of Custody present?	Yes								
#8 Any missing/extra samples?	No								
#9 Chain of Custody signed when relinquished/ received?	Yes								
#10 Chain of Custody agrees with sample labels/matrix?	Yes								
#11 Container label(s) legible and intact?	Yes								
#12 Samples in proper container/ bottle?	Yes								
#13 Samples properly preserved?	Yes								
#14 Sample container(s) intact?	Yes								
#15 Sufficient sample amount for indicated test(s)?	Yes								
#16 All samples received within hold time?	Yes								
#17 Subcontract of sample(s)?	No								
#18 Water VOC samples have zero headspace?	N/A								

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 07/19/2018

Checklist reviewed by: Jessica Warmer

Jessica Kramer

Date: 07/19/2018