Received by OCD: 4/11/2023 2:02:04 PM



[Sheldon L. Hitchcock] [HSE Coordinator]

March 29, 2018

Crystal Weaver Oil Conservation Division, District 2 811 S. First St. Artesia, NM 88210

Mark Naranjo New Mexico State Land Office 1001 S. Atkinson Roswell, NM 88230

Re: Closure Letter GJ West COOP Unit #210 API #: 30-015-36703 RP#: 2RP-4487 Unit Letter C Section 16, Township 17S, Range 29E Eddy County, NM

Ms. Weaver/Mr. Naranjo,

COG Operating, LLC (COG) is pleased to submit for your consideration the following closure request for the GJ West COOP Unit #210. This release occurred on November 13, 2017, and impacted the lined tank battery. Upon inspection of the liner it was determined that the liner was not integrally sound and that fluid had impacted the soil beneath the liner. Following an investigation a remediation work plan was drafted and submitted to the New Mexico Oil Conservation Division (NMOCD) and New Mexico State Land Office (NMSLO) on February 16, 2018. The work plan was approved by NMOCD on March 2, 2018.

BACKGROUND

The GJ West COOP Unit #210 is located in Unit Letter C, Section 16, Township 17S, and Range 29 East in Eddy County, New Mexico. More specifically the latitude and longitude for this release are 32.8391876 North and -104.0830383 West.

On November 13, 2017, a swedge on the production tank failed due to corrosion, resulting in the release of approximately one-hundred and fifty (150) barrels (bbls) of crude oil. The fluid remained inside of the lined containment. Vacuum trucks were utilized to recover freestanding fluids. Approximately one-hundred and forty (140) bbls of oil were recovered. An inspection of the liner was conducted once the oil and gravel were removed. Holes were discovered in the liner and the soil beneath the liner was visibly impacted.

On December 20, 2017, Tetra Tech utilized an air rotary drilling rig to assess the soil impacts beneath the liner. Analytical results from the soil boring activities are summarized in the table below. Due to limitations presented by the infrastructure within the tank battery. The battery was dismantled to allow for remedial activities.

GROUNDWATER AND SITE RANKING

According to the New Mexico Office of the State Engineers database, groundwater in the project vicinity is approximately seventy-six (76) feet below ground surface (BGS). Therefore the site ranking for this release is ten (10) based on the following:

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

Analytical Results

Soil Boring Results

Sample ID	Depth (feet)	Benzene (mg/kg)	Total BTEX	Chloride (mg/kg)	Total TPH
			(mg/kg)		(mg/kg)
BH-1	0-1	0.663	0.746		2200
BH-1	2-3	0.979	21.1		4520
BH-1	4-5				58.5
BH-1	6-7				<15.0
BH-1	9-10				150
BH-2	0-1	37.3	388		10500
BH-2	2-3	0.276	11.8		4850
BH-2	4-5				<15.0
BH-2	6-7				237
BH-2	9-10				<14.9
BH-3	0-1	23.9	233		12900
BH-3	2-3	3.74	51		3270
BH-3	4-5	< 0.0100	0.0535		19.7
BH-3	6-7				<15.0
BH-3	9-10				<15.0
BH-4	0-1	12.0	144		12400
BH-4	2-3	0.00410	0.0812		30.7

(--) Analysis Not Requested

.

Sample ID	Depth	Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)	Total TPH (mg/kg)
S-1	4' 2"	< 0.002	< 0.002	<24.6	33.0
S-1 E.	SIDEWALL	< 0.002	< 0.002	86.7	160
S-1 W.	SIDEWALL	< 0.002	< 0.002	103	221
SOUTH	SIDEWALL	< 0.002	< 0.002	121	338
S-2	4' 2"	< 0.002	< 0.002	588	33
S-2 E.	SIDEWALL	< 0.002	< 0.002	19.6	<15.0
S-2 W.	SIDEWALL	< 0.002	< 0.002	10.7	<15.0
S-3	4' 2"	< 0.002	0.0289	13.7	<14.9
S-3 E.	SIDEWALL	< 0.00199	< 0.00199	22.8	<15.0
S-3 W.	SIDEWALL	< 0.00199	< 0.00199	47.0	<15.0
S-4	2.5'	< 0.00199	0.00414	153	<15.0
S-4 E.	SIDEWALL	< 0.00199	0.0170	68.3	<15.0
S-4 W.	SIDEWALL	< 0.002	< 0.002	<4.95	<15.0
NORTH	SIDEWALL	< 0.002	< 0.002	<4.95	<15.0

Confirmation Soil Sampling Results

March 29, 2018

REMEDIAL ACTIONS

- The impacted area in the vicinity of bore hole locations BH-1 through BH-3 was excavated to the depth of four (4) feet BGS.
- The impacted area in the vicinity of bore hole location BH-4 was excavated to a depth of two and one-half (2.5) feet BGS.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- Per NMOCD stipulations confirmation soil samples were taken from the bottom and sidewalls of the excavation. The confirmation soil samples representing each of the four bore hole locations are labeled with an "S" and their corresponding number. A site diagram of sample locations is presented in Appendix I.
- Confirmation soil samples were also taken from the north and south sidewall of the excavated area.
- After reviewing the results from the confirmation soil sampling, NMOCD granted permission to backfill the excavation.
- The excavation was backfilled with caliche and prepared for the construction of a new tank battery.

March 29, 2018

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 GJ West COOP Unit #210 incident that occurred on November 13, 2017.

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

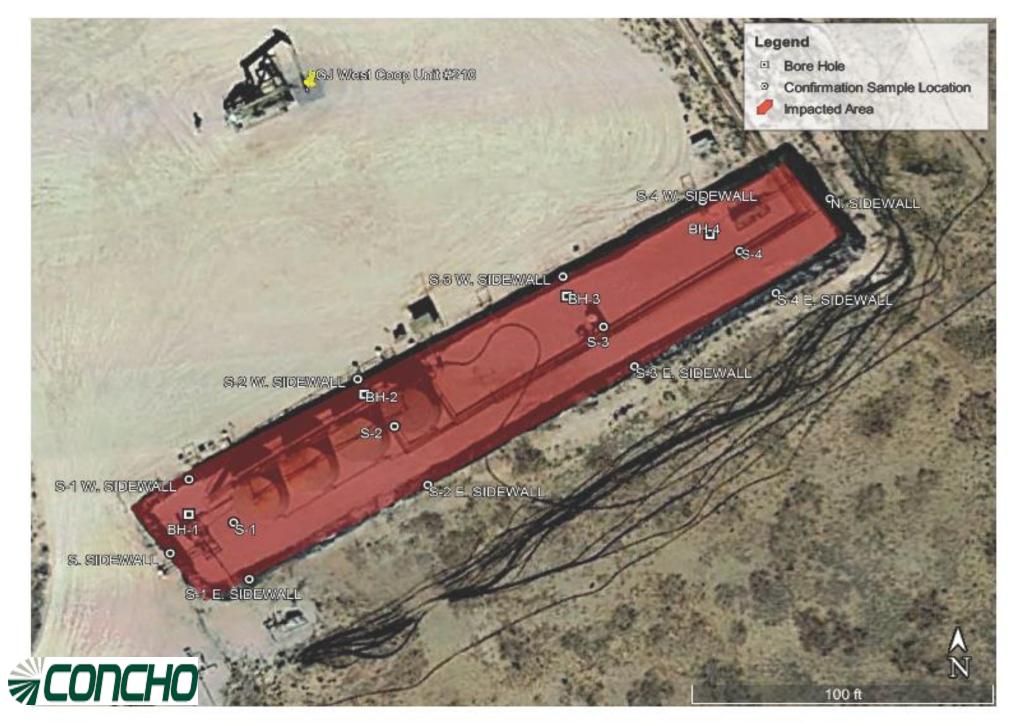
Enclosed:

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

November 13, 3017

GJ West COOP Unit #210



Released to Imaging: 5/8/2023 12:23:10 PM

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)	(quar			IE 3=SW () largest)	,	3 UTM in meters)		(In feet)
POD Number	POD Sub- Code basin C	ounty	Q Q 64 16	 c Tws	Rng	x	Y		•	Water Column
RA 11807 POD1		ED		17S	•	587360	3631585 🥌 Average Depth to Minimum Maximum	Depth:	76 76 fr 76 fr 76 fr	eet
Record Count: 1				 						

Basin/County Search:

County: Eddy

PLSS Search:

Township: 17S Range: 29E

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

Release Notification and Corrective Action DAB_D173_0U+2014 OPERATOR Initial Report Final Report Name of Company: COG Operating, LLC (OGRID# 229137) Contact: Robert McNeill Address: 500 West Illinois Avenue, Midland TX 79701 Telephone No: 432-683-7443 Address: 600 West Illinois Avenue, Midland TX 79701 Telephone No: 432-683-7443 Fearling Type: Tank Battery Surface Owner: State Mineral Owner: State API No: 30-015-36703 LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North Eddy Surface Owner: State API No: 30-015-36703 Eddy Eddy Eddy LOCATION OF RELEASE Unit Letter Section Township Range Feet from the Hours Hours Source of Release: Oni Source of Release: Oni Usbate of Hour of Occurrence: Usbate of Hour of Discovery: 11/13/2017 9.00am Was Immediate Notice Givern? Yes No Not Required Mise Backade MSIG Date and Hour of Discovery: 11/13/2017 9.00am Was Immediate Notice Givern? Wes No Not Required Moure State Acrystal Waster-NMOCD	Received by OCD: 4/11/2023 2:02:04 PM1625 N. French Dr., Hobbs. NM 88240District II811 S. First St., Artesia, NM 88210District III1000 Rio Brazos Road, Aztec, NM 87410District IV1220 S. St. Francis Dr., Santa Fe, NM 87505	rgy Minerals Oil Conse 1220 Sout	New Mexico and Natural R rvation Divis h St. Francis Fe, NM 87505	ion Dr.	OIL CONSER ARTESIA DISTR SUGMI 1 50720 RECEIVE	RICT Form C-141 Revised April 3, 2017 17 to appropriate District Office in cordance with 19.15.29 NMAC.
Name of Company: COG Operating, LLC (OCRID# 229137) Contact: Robert MENeill Address: 600 West Ultinois Avenue, Midland TX 79701 Telephone No: 432-683-7443 Facility Name: CJ West Coop Unit #210 Facility Type: Tank Battery Surface Owner: State Mineral Owner: State API No.: 30-015-36703 Loc Cartion Or RELEASE West Unit Carter County Unit Letter Section Township Range 296 Fer from the North South Line EastWest Line County Latitude: 32.8391876 Longitude: 104.083083 NAB3 NATURE OF RELEASE Type of Release: Swedge on production tank Wohn of Release: Mobble Mobble Source of Release: Swedge on production tank Units 2017 9:00um 11/13/2017 9:00um 11/13/2017 9:00um Was Immediate Notice Given? If YES, To Whon? Mite Bratcher & Crystal Weaver-NMSLO Amber Grover-NMSLO Swedge as production tank failed due to corrosion. The fittings were replaced. Date and Hour: 11/13/2017 9:00um If YES, Volume Impacting the Watercourse. If a Watercourse was Impacted, Describe Fully.* Describe Area Affected and Cleanup Action Taken * All of the fluid crenained inskide of the lined containment. A vacuum		otificatio	n and Cor	rective A	ction	
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Signature: Signature: OIL CONSERVATION DIVISION Signature: Shelden L. Hitchcock Approved by Envirosinterstill Specialist Statute Printed Name: Shelden L. Hitchcock Approved by Envirosinterstill Specialist Statute Title: HSE Coordinator Approval Date: 11/16/17 Expiration Date: N/A E-mail Address: silhitchcock@concho.com Conditions of Approval: Attached Attached Date: 11/15/2017 Phone: 575-746-2010 Step Attached ARP-4487	or the environment. In addition, NMOCD acceptance of a					
Signature: Shelden Hitchcock Printed Name: Shelden L. Hitchcock Approved by EnviroShi200811 Specificity Title: HSE Coordinator Approval Date: 111617 E-mail Address: shitchcock@concho.com Conditions of Approval: Attached Date: 11/15/2017 Phone: 575-746-2010 Step Attached Attached	iederal, state, or local laws and/or regulations.			OIL CONS	FRVATION	DIVISION
Printed Name: Sheldon L. Hitchcock Approved by Environmental Specialist. A Distance of the Dista	Simon 94 11 Alt					DIVISION
Printed Name: Sheldon L. Hitchcock Approval Date: 111617 Expiration Date: NIA Title: HSE Coordinator Approval Date: 111617 Expiration Date: NIA E-mail Address: slhitchcock@concho.com Conditions of Approval: Attached Attached Date: 11/15/2017 Phone: 575-746-2010 Step Attached ARP-4487	Signature: Sheloren Purcha		Annroved by En	Siznedi Ru	All by Bre	Alter Tan Son allow
E-mail Address: slhitchcock@concho.com Conditions of Approval: Date: 11/15/2017 Phone: 575-746-2010 Conditions of Approval: Attached BRP-4487	Printed Name: Sheldon L. Hitchcock		Approved by En	чи оппистиат эф	etranist.	
E-mail Address: slhitchcock@concho.com Conditions of Approval: Date: 11/15/2017 Phone: 575-746-2010 Conditions of Approval: Attached BRP-4487	Title: HSE Coordinator		Approval Date:	11/16/17	Expiration D	Date: NIA
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	L-man Audress, sinnencock/a/concho.com		Conumons of A		Land	Attached
	Date: 11/15/2017 Phone: 575 Attach Additional Sheets If Necessary	-746-2010	*****	JEL	TTUCKED	DKY-448

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APPENDIX IV

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised April 3, 2017

Page 13 of 130

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

						z, INIVI 07.							
			Rele	ease Notific	catio	n and Co	orrecti	ive Ac	ction	1			
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-		est Coop OI	π210					Dattery	Y	-			
Surface Ow	ner: State			Mineral C	Wher:	State				API No	.: 30-015-3	6703	
				LOCA	TIO	N OF RE	LEASE	C					
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from			West Line	County		
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			Latit	ude: 32.839187	6 Long	itude: -104	0830383	N	AD83	;			
				NAT	URE	OF REL	EASE						
Type of Rele	ase: Oil				0112	Volume of				Volume R	ecovered:		
G (D)						150bbls				140bbls			
Source of Re	lease: Swed	ge on product	ion tank			Date and 1 11/13/201		ccurrence	:	Date and 11/13/201	Hour of Dis 7 9:00am	covery	
Was Immedia	ate Notice C		Vac 🗌] No 🗌 Not Re	auirad	If YES, To Mike Brat		vetal Wa	over N	MOCD			
			168		quireu	Amber Gr			avei-in	MOCD			
By Whom? I						Date and I							
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	01 11												
Signature:	sheld	on flita	m			Approved by	Fnvironn	nental Sn	ecialie	t. Ash	ley M	alu.	rell
Printed Name	y Shaldon I	Uitabaaala				r ippioved by	LIVIOIII	ientai 5p	cerans		J. I.		
Printed Name	e. Sheldon I	. michcock											
Title: HSE C	oordinator					Approval Da	te: 05	5/08/20	23	Expiration l	Date:		
F-mail ∆ddra	ss. slhitche	ock@concho.	com			Conditions o	f Annrova	ŀ					
		ore conchio.	0011			Conditions (i rippiova				Attached		

* Attach Additional Sheets If Necessary

Phone: 575-746-2010

Date: March 29, 2018

APPENDIX V

Analytical Report 571931

for Tetra Tech- Midland

Project Manager: Ike Tavarez

GJ West Coop Unit #210

212C-MD-01056.300

18-JAN-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

Xenco-El Paso (EPA Lab code: TX00127): Texas (T104704221-17-12) Xenco-Lubbock (EPA Lab code: TX00139): Texas (T104704219-17-16) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-17-13) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757) Received by OCD: 4/11/2023 2:02:04 PM



18-JAN-18

Project Manager: **Ike Tavarez Tetra Tech- Midland** 4000 N. Big Spring Suite 401 Midland, TX 79705

Reference: XENCO Report No(s): **571931 GJ West Coop Unit #210** Project Address: Eddy Co, NM

Ike Tavarez:

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) 571931. 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. 571931 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,

Huns hoah

Kelsey Brooks Project Manager

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

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





Sample Cross Reference 571931



Tetra Tech- Midland, Midland, TX

GJ West Coop Unit #210

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
BH-1 0-1	S	12-20-17 00:00		571931-001
BH-1 2-3	S	12-20-17 00:00		571931-002
BH-1 4-5	S	12-20-17 00:00		571931-003
BH-1 6-7	S	12-20-17 00:00		571931-004
BH-1 9-10	S	12-20-17 00:00		571931-005
BH-2 0-1	S	12-21-17 00:00		571931-009
BH-2 2-3	S	12-21-17 00:00		571931-010
BH-2 4-5	S	12-21-17 00:00		571931-011
BH-2 6-7	S	12-21-17 00:00		571931-012
BH-2 9-10	S	12-21-17 00:00		571931-013
BH-3 0-1	S	12-21-17 00:00		571931-018
BH-3 2-3	S	12-21-17 00:00		571931-019
BH-3 4-5	S	12-21-17 00:00		571931-020
BH-3 6-7	S	12-21-17 00:00		571931-021
BH-3 9-10	S	12-21-17 00:00		571931-022
BH-4 0-1	S	12-21-17 00:00		571931-026
BH-4 2-3	S	12-21-17 00:00		571931-027
BH-1 14-15	S	12-20-17 00:00		Not Analyzed
BH-1 19-20	S	12-20-17 00:00		Not Analyzed
BH-1 24-25	S	12-20-17 00:00		Not Analyzed
BH-2 14-15	S	12-21-17 00:00		Not Analyzed
BH-2 19-20	S	12-21-17 00:00		Not Analyzed
BH-2 24-25	S	12-21-17 00:00		Not Analyzed
BH-2 29-30	S	12-21-17 00:00		Not Analyzed
BH-3 14-15	S	12-21-17 00:00		Not Analyzed
BH-3 19-20	S	12-21-17 00:00		Not Analyzed
BH-3 24-25	S	12-21-17 00:00		Not Analyzed
BH-4 4-5	S	12-21-17 00:00		Not Analyzed
BH-4 6-7	S	12-21-17 00:00		Not Analyzed
BH-4 9-10	S	12-21-17 00:00		Not Analyzed
BH-4 14-15	S	12-21-17 00:00		Not Analyzed
BH-4 19-20	S	12-21-17 00:00		Not Analyzed
BH-4 24-25	S	12-21-17 00:00		Not Analyzed





Client Name: Tetra Tech- Midland Project Name: GJ West Coop Unit #210

 Project ID:
 212C-MD-01056.300

 Work Order Number(s):
 571931

ORATORIES

 Report Date:
 18-JAN-18

 Date Received:
 12/21/2017

Sample receipt non conformances and comments:

01/02/18: added Btex on BH-3 @ 4-5' per Clair Gonzales.

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3036675 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3036802 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3037056 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3037186 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3037361 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



212C-MD-01056.300

Ike Tavarez

Eddy Co, NM

Project Id:

Project Location:

Contact:

Certificate of Analysis Summary 571931

Tetra Tech- Midland, Midland, TX Project Name: GJ West Coop Unit #210



Date Received in Lab:Thu Dec-21-17 02:48 pmReport Date:18-JAN-18Project Manager:Kelsey Brooks

	Lab Id:	571931-	.001	571931-0	02	571931-0	03	571931-0	04	571931-0	05	571931-0	09
Analysis Requested	Field Id:	BH-1 ()-1	BH-1 2-	3	BH-1 4-3	5	BH-1 6-7	7	BH-1 9-1	10	BH-2 0-	1
	Depth:												
	Matrix:	SOII		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-20-17	00:00	Dec-20-17 (00:00	Dec-20-17 0	00:00	Dec-20-17 0	0:00	Dec-20-17 0	00:00	Dec-21-17 (00:00
BTEX by EPA 8021B	Extracted:	Dec-21-17	17:00	Dec-22-17 ()9:30		ľ				ľ	Dec-28-17 1	0:00
	Analyzed:	Dec-22-17	10:12	Dec-22-17 1	8:14							Dec-28-17 2	23:30
	Units/RL:	mg/kg	RL	mg/kg	RL							mg/kg	RL
Benzene		0.0663	0.00200	0.979	0.100							37.3	0.994
Toluene		0.162	0.00200	1.58	0.100							131	0.994
Ethylbenzene		0.160	0.00200	4.80	0.100							83.5	0.994
m,p-Xylenes		0.261	0.00399	9.67	0.200							99.4	1.99
o-Xylene		0.0964	0.00200	4.03	0.100							37.2	0.994
Total Xylenes		0.357	0.00200	13.7	0.100							137	0.994
Total BTEX		0.746	0.00200	21.1	0.100							388	0.994
TPH By SW8015 Mod	Extracted:	Dec-21-17	16:00	Dec-21-17 1	6:00	Jan-10-18 1'	7:00	Jan-16-18 1	5:00	Jan-10-18 1	7:00	Dec-21-17 1	6:00
	Analyzed:	Dec-22-17	06:13	Dec-22-17 ()6:35	Jan-11-18 0	1:34	Jan-17-18 0	1:10	Jan-11-18 0	2:17	Dec-22-17 (06:56
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		515	14.9	1300	74.9	27.9 K	14.9	<15.0	15.0	46.6 K	14.9	4450	74.9
Diesel Range Organics (DRO)		1410	14.9	2730	74.9	30.6 K	14.9	<15.0	15.0	103 K	14.9	5060	74.9
Oil Range Hydrocarbons (ORO)		297	297 14.9		74.9	<14.9	14.9	<15.0	15.0	<14.9	14.9	1000	74.9
Total TPH		2220	14.9	4520	74.9	58.5 K	14.9	<15.0	15.0	150 K	14.9	10500	74.9

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Kelsey Brooks Project Manager



Certificate of Analysis Summary 571931

Tetra Tech- Midland, Midland, TX Project Name: GJ West Coop Unit #210



Project Id:212C-MD-01056.300Contact:Ike TavarezProject Location:Eddy Co, NM

Date Received in Lab:Thu Dec-21-17 02:48 pmReport Date:18-JAN-18Project Manager:Kelsey Brooks

		571021 (10	571021.01		571021 0	10	571021.0	10	571021 (10	571021.0	10
	Lab Id:	571931-0	010	571931-01	11	571931-0	12	571931-0	13	571931-0	18	571931-0	119
Analysis Requested	Field Id:	BH-2 2-	-3	BH-2 4-5	5	BH-2 6-7	7	BH-2 9-1	0	BH-3 0-	-1	BH-3 2-	.3
Analysis Kequesieu	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Dec-21-17	00:00	Dec-21-17 0	0:00	Dec-21-17 0	0:00	Dec-21-17 0	0:00	Dec-21-17	00:00	Dec-21-17 (00:00
BTEX by EPA 8021B	Extracted:	Dec-22-17	09:30							Dec-26-17	10:00	Dec-22-17 ()9:30
	Analyzed:	Dec-22-17	17:55							Dec-27-17	07:26	Dec-22-17	19:11
	Units/RL:	mg/kg	RL							mg/kg	RL	mg/kg	RL
Benzene		0.276	0.100							23.9	0.501	3.74	0.101
Toluene		1.09 0.100								68.2	0.501	15.3	0.101
Ethylbenzene		2.34	0.100							43.4	0.501	11.5	0.101
m,p-Xylenes		4.36	0.200							70.5	1.00	15.0	0.201
o-Xylene		3.73	0.100							27.3	0.501	5.46	0.101
Total Xylenes		8.09	0.100							97.8	0.501	20.5	0.101
Total BTEX		11.8	0.100							233	0.501	51.0	0.101
TPH By SW8015 Mod	Extracted:	Dec-21-17	16:00	Jan-10-18 17	7:00	Jan-10-18 17	7:00	Jan-10-18 1	7:00	Dec-21-17	16:00	Dec-21-17	16:00
	Analyzed:	Dec-22-17	07:17	Jan-11-18 02	2:39	Jan-11-18 03	3:01	Jan-11-18 0.	3:23	Dec-22-17	07:36	Dec-22-17 (08:37
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		786	75.0	<15.0	15.0	120 K	14.9	<14.9	14.9	3840	74.8	1250	14.9
Diesel Range Organics (DRO)		3350	3350 75.0		15.0	98.9 K	14.9	<14.9	14.9	7690	74.8	1710	14.9
Oil Range Hydrocarbons (ORO)		709	709 75.0		15.0	18.4 K	14.9	<14.9	14.9	1320	74.8	307	14.9
Total TPH		4850	75.0	<15.0	15.0	237 K	14.9	<14.9	14.9	12900	74.8	3270	14.9

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Kelsey Brooks Project Manager



Certificate of Analysis Summary 571931

Tetra Tech- Midland, Midland, TX Project Name: GJ West Coop Unit #210



Project Id:212C-MD-01056.300Contact:Ike TavarezProject Location:Eddy Co, NM

Date Received in Lab:Thu Dec-21-17 02:48 pmReport Date:18-JAN-18Project Manager:Kelsey Brooks

	Lab Id:	571931-0	20	571931-02	21	571931-02	22	571931-0	026	571931-	027	
A surface Description I	Field Id:	BH-3 4-	5	BH-3 6-7	7	BH-3 9-1	0	BH-4 0-	-1	BH-4 2	-3	
Analysis Requested	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	,	
	Sampled:	Dec-21-17	00:00	Dec-21-17 0	0:00	Dec-21-17 0	0:00	Dec-21-17	00:00	Dec-21-17	00:00	
BTEX by EPA 8021B	Extracted:	Jan-03-18 1	4:00					Dec-22-17	09:30	Dec-22-17	09:30	
	Analyzed:	Jan-03-18 1	7:20					Dec-22-17	19:28	Dec-22-17	15:57	
	Units/RL:	mg/kg	RL					mg/kg	RL	mg/kg	RL	
Benzene		< 0.0100	0.0100					12.0	0.198	0.00410	0.00201	
Toluene		< 0.0100	0.0100					39.6	0.198	0.0117	0.00201	
Ethylbenzene		< 0.0100	0.0100					34.1	0.198	0.0185	0.00201	
m,p-Xylenes		0.0535	0.0200					42.2	0.396	0.0310	0.00402	
o-Xylene		< 0.0100	0.0100					16.5	0.198	0.0159	0.00201	
Total Xylenes		0.0535	0.0100					58.7	0.198	0.0469	0.00201	
Total BTEX		0.0535	0.0100					144	0.198	0.0812	0.00201	
TPH By SW8015 Mod	Extracted:	Jan-12-18 1	0:00	Jan-12-18 10	0:00	Jan-12-18 1	0:00	Dec-21-17	16:00	Dec-21-17	16:00	
	Analyzed:	Jan-12-18 1	9:54	Jan-13-18 07	7:09	Jan-13-18 0	6:49	Dec-22-17	08:58	Dec-22-17	09:18	
	Units/RL:	mg/kg	RL	mg/kg	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	4570	74.9	<15.0	15.0	
Diesel Range Organics (DRO)		19.7 K	15.0	<15.0	15.0	<15.0	15.0	6630	74.9	30.7	15.0	
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	1160	74.9	<15.0	15.0	
Total TPH		19.7 K	15.0	<15.0	15.0	<15.0	15.0	12400	74.9	30.7	15.0	

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Kelsey Brooks Project Manager



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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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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: GJ West Coop Unit #210

Lab Batch #:	ers: 571933 3036677	Sample: 571931-001 / SMP	Batc	Project ID h: 1 Matrix			
Units:	mg/kg	Date Analyzed: 12/22/17 06:13	SU	RROGATE R	ECOVERY S	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctane	e		86.0	99.6	86	70-135	
o-Terphenyl			37.2	49.8	75	70-135	
Lab Batch #:	3036677	Sample: 571931-002 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/22/17 06:35	SU	RROGATE R	ECOVERY S	STUDY	
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		Analytes	00.2	00.8		70.125	
o-Terphenyl	с 		88.3	99.8	88	70-135	
Lab Batch #:	3036677	Sample: 571931-009 / SMP	43.3 Batc	49.9 h: 1 Matrix	87 •• Soil	70-135	
Lab Batch #. Units:	mg/kg	Date Analyzed: 12/22/17 06:56					
	mg/kg	Date Analyzeu: 12/22/17 00.50	SU	RROGATE R	ECOVERY S	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctane	e		87.9	99.9	88	70-135	
o-Terphenyl			41.0	50.0	82	70-135	
Lab Batch #:	3036677	Sample: 571931-010 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/22/17 07:17	SU	RROGATE R	ECOVERY S	STUDY	
	TPH E	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes	[**]	[2]	[D]	/011	
1-Chlorooctane			88.6	100	89	70-135	
o-Terphenyl			41.1	50.0	82	70-135	
Lab Batch #:	3036677	Sample: 571931-018 / SMP	Batc	h: 1 Matrix	: Soil	1	<u> </u>
Units:	mg/kg	Date Analyzed: 12/22/17 07:36	SU	RROGATE R	ECOVERY S	STUDY	
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctane	e		92.6	99.7	93	70-135	
o-Terphenyl			40.0	49.9	80	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: GJ West Coop Unit #210

Work Ord Lab Batch #	ers: 57193 : 3036677	1, Sample: 571931-019 / SMP	Bate	-	: 212C-MD-0 : Soil	01056.300			
Units:	mg/kg	Date Analyzed: 12/22/17 08:37	SURROGATE RECOVERY STUDY						
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooctar	ne		90.8	99.6	91	70-135			
o-Terphenyl			40.0	49.8	80	70-135			
Lab Batch #	3036677	Sample: 571931-026 / SMP	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 12/22/17 08:58	SU	RROGATE R	ECOVERY S	STUDY			
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1 Chlore e etce		Analytes	07.4	00.0		70.105			
1-Chlorooctar	ie		97.4	99.8	98	70-135			
o-Terphenyl	2026677	G 1 571021 007 / SMD	41.4	49.9	83	70-135			
Lab Batch #		Sample: 571931-027 / SMP	Batc						
Units:	mg/kg	Date Analyzed: 12/22/17 09:18	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooctar	ne		91.4	99.8	92	70-135			
o-Terphenyl			49.2	49.9	99	70-135			
Lab Batch #	3036675	Sample: 571931-001 / SMP	Batc	h: 1 Matrix	: Soil	1	I		
Units:	mg/kg	Date Analyzed: 12/22/17 10:12	SU	RROGATE R	ECOVERY S	STUDY			
	втех	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorob	an7ana	Anarytes	0.0220	0.0200		80-120			
4-Bromofluor			0.0320	0.0300	107	80-120			
Lab Batch #		Sample: 571931-027 / SMP	Batc			00-120			
Units:	mg/kg	Date Analyzed: 12/22/17 15:57							
Сшю. 	111 ₆ / 11 ₆	Dute Mary 200, 12/22/11/15.57	SL	RROGATE R	ECOVERYS	51001	1		
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluorob	an7ana		0.0262	0.0200		80.120			
· · · · · · · · · · · · · · · · · · ·			0.0262	0.0300	87	80-120			
4-Bromofluor	obelizene		0.0301	0.0300	100	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



Project Name: GJ West Coop Unit #210

	r ders : 57193 #: 3036802	1, Sample: 571931-010 / SMP	Batc	-	: 212C-MD-0 : Soil	1056.300			
Units:	mg/kg	Date Analyzed: 12/22/17 17:55	SURROGATE RECOVERY STUDY						
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	obenzene		0.0242	0.0300	81	80-120			
4-Bromoflu	orobenzene		0.0306	0.0300	102	80-120			
Lab Batch	#: 3036802	Sample: 571931-002 / SMP	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 12/22/17 18:14	SU	RROGATE R	ECOVERY S	STUDY			
	ΒΤΕΣ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	ohanzana	Analytes	0.0247	0.0200		80.120			
	orobenzene		0.0247	0.0300	82	80-120			
	#: 3036802	Somelar 571021 010 / SMD	0.0294	0.0300	98 98	80-120			
		Sample: 571931-019 / SMP	Batc						
Units:	mg/kg	Date Analyzed: 12/22/17 19:11	SU	RROGATE R	ECOVERY S	STUDY			
	ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	obenzene		0.0270	0.0300	90	80-120			
4-Bromoflu	orobenzene		0.0334	0.0300	111	80-120			
Lab Batch	#: 3036802	Sample: 571931-026 / SMP	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 12/22/17 19:28	SU	RROGATE R	ECOVERY	STUDY			
	ВТЕХ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	obenzene		0.0290	0.0300	97	80-120			
· ·	lorobenzene		0.0356	0.0300	119	80-120			
	#: 3037056	Sample: 571931-018 / SMP	Batc						
Units:	mg/kg	Date Analyzed: 12/27/17 07:26	SU	RROGATE R		STUDY			
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
4 4 19 1 19		Analytes							
1,4-Difluor			0.0253	0.0300	84	80-120			
4-Bromoflu	orobenzene		0.0336	0.0300	112	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



Project Name: GJ West Coop Unit #210

Work Orders : 571931, Lab Batch #: 3037186 Sample: 571931-009 / SMP			Project ID: 212C-MD-01056.300 Batch: 1 Matrix: Soil						
Units:	mg/kg	Date Analyzed: 12/28/17 23:30	SURROGATE RECOVERY STUDY						
		X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluoro	benzene		0.0269	0.0300	90	80-120			
4-Bromofluo	robenzene		0.0258	0.0300	86	80-120			
Lab Batch #	#: 3037361	Sample: 571931-020 / SMP	Batc	h: 1 Matrix	: Soil	·			
Units:	mg/kg	Date Analyzed: 01/03/18 17:20	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluoro	honzono	Analytes	0.0265	0.0200		00.120			
4-Bromofluo			0.0265	0.0300	88	80-120			
		Samely 571021.002 / SMD	0.0276	0.0300 h: 1 Matrix	92	80-120			
Lab Batch #		Sample: 571931-003 / SMP	Batc		-				
Units:	mg/kg	Date Analyzed: 01/11/18 01:34	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chloroocta	ine		77.4	99.1	78	70-135			
o-Terphenyl			38.6	49.6	78	70-135			
Lab Batch #	#: 3038189	Sample: 571931-005 / SMP	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 01/11/18 02:17	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chloroocta	220	Analytes	01.1	00.5		70.125			
o-Terphenyl	uic		81.1 40.9	99.5	82	70-135			
Lab Batch #	4. 3038189	Sample: 571931-011 / SMP	Batc		82	70-135			
Units:	mg/kg	Date Analyzed: 01/11/18 02:39							
Units:	mg/kg	Date Analyzeu: 01/11/10 02.39	SU	RROGATE R	ECOVERY	STUDY			
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes							
1-Chloroocta	ine		73.2	99.9	73	70-135			
o-Terphenyl			36.9	50.0	74	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: GJ West Coop Unit #210

Work Ord Lab Batch #:	ers: 57193 3038189	1, Sample: 571931-012 / SMP	Batch	-	: 212C-MD-0 : Soil	01056.300			
Units:	mg/kg	Date Analyzed: 01/11/18 03:01	SURROGATE RECOVERY STUDY						
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooctan	e		72.5	99.2	73	70-135			
o-Terphenyl			35.5	49.6	72	70-135			
Lab Batch #:	3038189	Sample: 571931-013 / SMP	Batch	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 01/11/18 03:23	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooctan	e		81.8	99.1	83	70-135			
o-Terphenyl			40.2	49.6	83	70-135			
Lab Batch #:	3038390	Sample: 571931-020 / SMP	Batcl			70-135			
Units:	mg/kg	Date Analyzed: 01/12/18 19:54		RROGATE R		STUDY			
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes		[D]	[D]	70K			
1-Chlorooctan	e		76.5	100	77	70-135			
o-Terphenyl			39.8	50.0	80	70-135			
Lab Batch #:	3038391	Sample: 571931-022 / SMP	Batcl	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 01/13/18 06:49	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooctan	e		75.9	100	76	70-135			
o-Terphenyl			40.0	50.0	80	70-135			
Lab Batch #:	3038391	Sample: 571931-021 / SMP	Batcl	h: 1 Matrix	: Soil	1			
Units:	mg/kg	Date Analyzed: 01/13/18 07:09	SU	RROGATE R	ECOVERY S	STUDY			
		3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooctan	e		78.7	100	79	70-135			
o-Terphenyl			41.1	50.0	82	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: GJ West Coop Unit #210

	rders : 57193 #: 3038511	1, Sample: 571931-004 / SMF	Project ID: 212C-MD-01056.300 IP Batch: 1 Matrix: Soil						
Units:	mg/kg	Date Analyzed: 01/17/18 01:10	0 SURROGATE RECOVERY STUDY						
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooc			78.9	99.7	79	70-135			
o-Terpheny			41.0	49.9	82	70-135			
Lab Batch	#: 3036675	Sample: 7636472-1-BLK /	BLK Batc	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 12/22/17 02:03	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	obenzene	Anarytes	0.0269	0.0300	90	80-120			
· · · · · · · · · · · · · · · · · · ·	orobenzene								
	#: 3036677	Sample: 7636450-1-BLK /	0.0241 BLK Batc	0.0300 h: 1 Matrix	80 Realid	80-120			
		-							
Units:	mg/kg	Date Analyzed: 12/22/17 02:51	SU	RROGATE R	ECOVERY S	STUDY			
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooc	tane		80.3	100	80	70-135			
o-Terpheny	1		41.5	50.0	83	70-135			
Lab Batch	#: 3036802	Sample: 7636560-1-BLK /	BLK Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 12/22/17 13:03	SU	RROGATE R	ECOVERY	STUDY			
	ВТЕХ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	obenzene		0.0287	0.0300	96	80-120			
,	lorobenzene		0.0252	0.0300	84	80-120			
	#: 3037056	Sample: 7636696-1-BLK /				1			
Units:	mg/kg	Date Analyzed: 12/26/17 10:25	SU	RROGATE R	ECOVERY	STUDY			
		X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1 4 5 2		Analytes							
1,4-Difluor			0.0280	0.0300	93	80-120			
4-Bromoflu	orobenzene		0.0243	0.0300	81	80-120	<u> </u>		

* 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: GJ West Coop Unit #210

	r ders : 57193 #: 3037186	1, Sample: 7636780-1-BLK / 2	BLK Bate		: 212C-MD-0 : Solid	01056.300			
Units:	mg/kg	Date Analyzed: 12/28/17 16:54	4 SURROGATE RECOVERY STUDY						
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	obenzene		0.0276	0.0300	92	80-120			
4-Bromoflu	orobenzene		0.0251	0.0300	84	80-120			
Lab Batch	#: 3037361	Sample: 7636913-1-BLK /	BLK Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 01/03/18 15:35	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
140.0	1	Analytes							
1,4-Difluor			0.0271	0.0300	90	80-120			
	orobenzene		0.0242	0.0300	81	80-120			
	#: 3038189	Sample: 7637441-1-BLK /							
Units:mg/kgDate Analyzed: 01/10/18 18:14SURROGATE RECOVERY S'									
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooc	tane		83.0	100	83	70-135			
o-Terpheny	1		41.9	50.0	84	70-135			
Lab Batch	#: 3038390	Sample: 7637443-1-BLK /	BLK Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 01/12/18 18:49	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	tana	Analytes	01.0	100		70.125			
o-Terpheny			91.0 47.8	100	91	70-135			
	#: 3038391	Sample: 7637444-1-BLK / 1			96	70-135			
Units:	mg/kg	Date Analyzed: 01/13/18 04:48							
Units.	111 6 / Kg	Date Analyzet. 01/15/10 07.40	SU	RROGATE R	LCUVERY				
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1.011		Analytes		100		70.10-			
1-Chlorooc			94.8	100	95	70-135			
o-Terpheny	1		49.9	50.0	100	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: GJ West Coop Unit #210

	rders: 57193 #: 3038511	1, Sample: 7637574-1-BLK /	BLK Batc	-	: 212C-MD-0 :: Solid	1056.300			
Units:	mg/kg	Date Analyzed: 01/16/18 22:08	8 SURROGATE RECOVERY STUDY						
	TPH	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooc	tane		92.9	100	93	70-135			
o-Terpheny	/1		49.9	50.0	100	70-135			
Lab Batch	#: 3036675	Sample: 7636472-1-BKS /	BKS Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 12/22/17 00:09	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1 4 Diffuor	ahangana	Analytes	0.0200	0.0200		80.120			
1,4-Difluor	orobenzene		0.0309	0.0300	103	80-120			
		Sample: 7636450-1-BKS /	0.0299	0.0300 h: 1 Matrix	100	80-120			
Lab Batch #: 3036677 Sample: 7636450-1-BKS / BKS Batch: 1 Matrix: Solid Units: mg/kg Date Analyzed: 12/22/17 03:10 SURROGATE RECOVERY S									
Units:	mg/kg	Date Analyzeu: 12/22/17/05.10	su	RROGATE R	ECOVERY	STUDY			
	TPH]	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooc	tane		77.3	100	77	70-135			
o-Terpheny	/1		40.7	50.0	81	70-135			
Lab Batch	#: 3036802	Sample: 7636560-1-BKS /	BKS Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 12/22/17 11:10	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-Difluor	obenzene	Thury tes	0.0292	0.0300	97	80-120			
· ·	iorobenzene		0.0292	0.0300	97	80-120			
	#: 3037056	Sample: 7636696-1-BKS /				00-120			
Units:	mg/kg	Date Analyzed: 12/26/17 08:31		RROGATE R		STUDY			
	втех	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	obenzene		0.0339	0.0300	113	80-120			
4-Bromoflu	iorobenzene		0.0325	0.0300	108	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



Project Name: GJ West Coop Unit #210

	r ders : 57193 #: 3037186	1, Sample: 7636780-1-BKS / I	BKS Bate		: 212C-MD-0 :: Solid	01056.300			
Units:	mg/kg	Date Analyzed: 12/28/17 15:00	SURROGATE RECOVERY STUDY						
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	obenzene		0.0279	0.0300	93	80-120			
4-Bromoflu	orobenzene		0.0279	0.0300	93	80-120			
Lab Batch	#: 3037361	Sample: 7636913-1-BKS / 1	BKS Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 01/03/18 13:38	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	ohanzana	Analytes	0.0202	0.0200		90.120			
-	obenzene		0.0302	0.0300	101	80-120			
	#: 3038189	Sample: 7637441-1-BKS / 1	0.0277 BKS Batcl	0.0300 h: 1 Matrix	92 r: Solid	80-120			
		-							
Units:	mg/kg	Date Analyzed: 01/10/18 18:34	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooc	tane		74.8	99.9	75	70-135			
o-Terpheny	1		45.7	50.0	91	70-135			
Lab Batch	#: 3038390	Sample: 7637443-1-BKS / 1	BKS Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 01/12/18 19:11	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	3y SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooc	tana	Analytes	70.5	100		70-135			
o-Terpheny			79.5	100	80				
	#: 3038391	Sample: 7637444-1-BKS / 1	47.6 BKS Batcl	50.0 h: 1 Matrix	95 r: Solid	70-135			
Units:	mg/kg	Date Analyzed: 01/13/18 05:08							
onns:	mg/Kg	Date Analyzeu: 01/15/18 05:08	SU	RROGATE R	ECOVERY S	STUDY			
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooc	tane		93.1	100	93	70-135			
o-Terpheny	ʻl		57.4	50.0	115	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: GJ West Coop Unit #210

	ders : 57193 #: 3038511	1, Sample: 7637574-1-BKS /	BKS Bate	0	: 212C-MD-0	01056.300			
Units:	mg/kg	Date Analyzed: 01/16/18 22:31	31 SURROGATE RECOVERY STUDY						
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage		
		Analytes			[D]				
1-Chlorooct	ane		90.7	100	91	70-135			
o-Terpheny	l		44.6	50.0	89	70-135			
Lab Batch	#: 3036675	Sample: 7636472-1-BSD /	BSD Batc	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 12/22/17 00:28	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage		
1 4 D:fl.	. 1	Analytes	0.0200	0.0200		00.100			
1,4-Difluoro			0.0290	0.0300	97	80-120			
4-Bromoflu		Comments 7/2/450 1 DOD /	0.0276	0.0300	92 92	80-120			
	#: 3036677	Sample: 7636450-1-BSD /							
Units:	mg/kg	Date Analyzed: 12/22/17 03:32	SU	RROGATE R	ECOVERY	STUDY			
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage		
		Analytes			[D]				
1-Chlorooct	ane		79.2	100	79	70-135			
o-Terpheny	l		41.8	50.0	84	70-135			
Lab Batch	#: 3036802	Sample: 7636560-1-BSD /	BSD Bate	h: 1 Matrix	: Solid				
Units:	mg/kg	Date Analyzed: 12/22/17 11:28	SU	RROGATE R	ECOVERY	STUDY			
	ВТЕХ	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage		
1,4-Difluoro	obenzene	•	0.0292	0.0300	97	80-120			
4-Bromoflu			0.0284	0.0300	95	80-120			
	#: 3037056	Sample: 7636696-1-BSD /							
Units:	mg/kg	Date Analyzed: 12/26/17 08:50	SU	RROGATE R	ECOVERY	STUDY			
		K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag		
		Analytes			[D]				
1,4-Difluoro	obenzene		0.0341	0.0300	114	80-120			
4-Bromoflu	orobenzene		0.0339	0.0300	113	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



	r ders : 57193 #: 3037186	1, Sample: 7636780-1-BSD /	BSD Batc	-	: 212C-MD-0 :: Solid	1056.300	
Units:	mg/kg	Date Analyzed: 12/28/17 15:17	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluor	obenzene		0.0281	0.0300	94	80-120	
4-Bromoflu	orobenzene		0.0288	0.0300	96	80-120	
Lab Batch	#: 3037361	Sample: 7636913-1-BSD /	BSD Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 01/03/18 13:57	SU	RROGATE R	ECOVERY S	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluor		Analytes	0.0297	0.0300		80-120	
4-Bromoflu			0.0297		99		
	#: 3038189	Sample: 7637441-1-BSD /		0.0300 h: 1 Matrix	95 Solid	80-120	
Lab Batch Units:	mg/kg	Date Analyzed: 01/10/18 18:55					
Units.	mg/kg	Date Analyzeu. 01/10/18 18:55	SU	RROGATE R	ECOVERY	STUDY	
	TPH F	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		82.1	99.8	82	70-135	
o-Terpheny	1		47.6	49.9	95	70-135	
Lab Batch	#: 3038391	Sample: 7637444-1-BSD / 1	BSD Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 01/13/18 05:29	SU	RROGATE R	ECOVERY S	STUDY	
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		92.1	100	92	70-135	
o-Terpheny			55.8	50.0	112	70-135	
Lab Batch	#: 3038511	Sample: 7637574-1-BSD /	BSD Bate	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 01/16/18 22:54	SU	RROGATE R	ECOVERY S	STUDY	
		By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		88.7	100	89	70-135	
o-Terpheny	1		44.6	50.0	89	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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

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Project Name: GJ West Coop Unit #210

	:ders : 57193 #: 3036675	1, Sample: 571798-009 S / MS	Batc	-	: 212C-MD-0 : Soil	1056.300			
Units:	mg/kg	Date Analyzed: 12/22/17 00:47	SURROGATE RECOVERY STUDY						
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluor	obenzene		0.0304	0.0300	101	80-120			
4-Bromoflu	orobenzene		0.0303	0.0300	101	80-120			
Lab Batch	#: 3036677	Sample: 571800-013 S / MS	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 12/22/17 04:14	SU	RROGATE R	ECOVERY	STUDY			
		By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct		Analytes	74.4	00.0		70.125			
			74.4	99.8	75	70-135			
o-Terpheny	#: 3036802	Sample: 571876-002 S / MS	40.5 Batc	49.9 h: 1 Matrix	81 81	70-135			
		-							
Units:	mg/kg	Date Analyzed: 12/22/17 11:47	SU	RROGATE R	ECOVERYS	STUDY			
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes	[]	[-]	[D]	,			
1,4-Difluor	obenzene		0.0313	0.0300	104	80-120			
4-Bromoflu	orobenzene		0.0329	0.0300	110	80-120			
Lab Batch	#: 3037056	Sample: 572035-035 S / MS	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 12/26/17 09:09	SU	RROGATE R	ECOVERY	STUDY			
		X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
140.0		Analytes	0.0054	0.0200		00.100			
1,4-Difluor			0.0274	0.0300	91	80-120			
4-Bromoflu	#: 3037186	Sample: 572178-011 S / MS	0.0277 Batc	0.0300 h: 1 Matrix	92	80-120			
Lab Batch Units:	mg/kg	Date Analyzed: 12/28/17 15:38							
Units:	mg/Kg	Datt Milary Zcu; 12/20/17 13.30	SU	RROGATE R	ECOVERY S	STUDY			
		A polytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1400		Analytes	0.000	0.0700		00.175			
1,4-Difluor			0.0331	0.0300	110	80-120			
4-Bromoflu	orobenzene		0.0355	0.0300	118	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



Project Name: GJ West Coop Unit #210

Work Ord Lab Batch #:		1, Sample: 572446-001 S / MS	Bate	-	: 212C-MD-0 : Soil	01056.300			
Units:	mg/kg	Date Analyzed: 01/03/18 14:19	SURROGATE RECOVERY STUDY						
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluorobe	enzene		0.0299	0.0300	100	80-120			
4-Bromofluoro	obenzene		0.0340	0.0300	113	80-120			
Lab Batch #:	3038189	Sample: 572901-019 S / MS	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 01/10/18 19:35	SU	RROGATE R	ECOVERY S	STUDY			
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes							
1-Chlorooctan	e		89.2	99.6	90	70-135			
o-Terphenyl	2020200		51.0	49.8	102	70-135			
Lab Batch #:		Sample: 573261-001 S / MS	Batc						
Units:	mg/kg	Date Analyzed: 01/13/18 02:42	SU	RROGATE R	ECOVERY S	STUDY			
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooctan	e		85.1	100	85	70-135			
o-Terphenyl			50.3	50.0	101	70-135			
Lab Batch #:	3038391	Sample: 572902-004 S / MS	Batc	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 01/13/18 06:09	SU	RROGATE R	ECOVERY S	STUDY			
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
		Analytes							
1-Chlorooctan	e		78.8	100	79	70-135			
o-Terphenyl	2020511		43.4	50.0	87	70-135			
Lab Batch #:		Sample: 572902-001 S / MS	Batc						
Units:	mg/kg	Date Analyzed: 01/16/18 23:40	SU	RROGATE R	ECOVERY S	STUDY			
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1-Chlorooctan	e		85.1	99.8	85	70-135			
o-Terphenyl			36.0	49.9	72	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



	:ders : 57193 #: 3036675		MSD Batch	-	: 212C-MD-()1056.300	
Lab Batch Units:	mg/kg	Sample: 571798-009 SD / M Date Analyzed: 12/22/17 01:06	r	RROGATE R	-	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene			0.0324	0.0300	108	80-120	
4-Bromofluorobenzene			0.0325	0.0300	108	80-120	
Lab Batch #: 3036677 Sample: 571800-013 SD / 1			MSD Batch	: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 12/22/17 04:34	SU	RROGATE R	ECOVERY	STUDY	
	TPH]	By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	tane	Analytes	82.6	99.9	83	70-135	
o-Terphenyl			43.6	50.0	83	70-135	
	#: 3036802	Sample: 571876-002 SD / N				70-155	
Units:	mg/kg	Date Analyzed: 12/22/17 12:06 SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B Analytes			Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene			0.0322	0.0300	107	80-120	
4-Bromofluorobenzene			0.0309	0.0300	103	80-120	
Lab Batch	#: 3037056	Sample: 572035-035 SD / N					
Units:	mg/kg	Date Analyzed: 12/26/17 09:28	SURROGATE RECOVERY STUDY				
	BTE	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorobenzene			0.0291	0.0300	97	80-120	
4-Bromofluorobenzene			0.0287	0.0300	96	80-120	
Lab Batch	#: 3037186	Sample: 572178-011 SD / N	MSD Batch	: 1 Matrix	: Soil		
Units:	mg/kg Date Analyzed: 12/28/17 15:57 SURROGATE RECOVERY STUD						
BTEX by EPA 8021B Analytes			Amount	True		Control	
	BTEX		Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flags
1,4-Difluoro			Found		%R	1	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



Form 2 - Surrogate Recoveries

Project Name: GJ West Coop Unit #210

	r ders : 57193 #: 3037361	1, Sample: 572446-001 SD / M	ASD Batc	-	: 212C-MD-0 :: Soil	01056.300	
Units:	mg/kg	Date Analyzed: 01/03/18 14:38	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0293	0.0300	98	80-120	
4-Bromoflu	orobenzene		0.0294	0.0300	98	80-120	
Lab Batch	#: 3038189	Sample: 572901-019 SD / N	ASD Batch	h: 1 Matrix	: Soil	· · · · · · · · · · · · · · · · · · ·	
Units:	mg/kg	Date Analyzed: 01/10/18 19:56	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.011		Analytes					
1-Chlorooct			79.9	99.5	80	70-135	
o-Terpheny			46.4	49.8	93	70-135	
Lab Batch	#: 3038390	Sample: 573261-001 SD / N	ASD Batch	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/13/18 03:03	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	3y SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct	ane		88.2	100	88	70-135	
o-Terpheny	1		40.7	50.0	81	70-135	
Lab Batch	#: 3038391	Sample: 572902-004 SD / N	ASD Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 01/13/18 06:29	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 Chlanssort		Analytes	00.7	100		70.105	
1-Chlorooct			80.7	100	81	70-135	
o-Terpheny	#: 3038511	Sample: 572902-001 SD / N	39.5 ISD Batc	50.0 h: 1 Matrix	79 79	70-135	
		-					
Units:	mg/kg	Date Analyzed: 01/17/18 00:03	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analytes					
1-Chlorooct			83.4	100	83	70-135	
o-Terpheny	1		38.5	50.0	77	70-135	

* Surrogate outside of Laboratory QC limits

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

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

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



Blank Spike Recovery



Project Name: GJ West Coop Unit #210

Work Order #:	571931				Project ID	:	212C-MI	D-01056.300
Lab Batch #:	3038390	S	ample: 763744	3-1-BKS	Matrix	: Solid		
Date Analyzed:	01/12/2018	Date Pre	pared: 01/12/2	018	Analyst	: ALJ		
Reporting Units:	mg/kg	Ва	atch #: 1	BLANK /	BLANK SPI	KE REC	COVERY S	STUDY
	TPH By SW8015 Mod		Blank Result	Spike Added	Blank Spike	Blank Spike	Control Limits	Flags
	Analytes		[A]	[B]	Result [C]	%R [D]	%R	
Gasoline Range Hy	drocarbons (GRO)		<15.0	1000	862	86	70-135	
Diesel Range Organ	nics (DRO)		<15.0	1000	861	86	70-135	

Blank Spike Recovery [D] = 100*[C]/[B] All results are based on MDL and validated for QC purposes. BRL - Below Reporting Limit





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Project Name: GJ West Coop Unit #210

Work Order #: 571931							Proj	ject ID: 2	212C-MD-()1056.300	
Analyst: ALJ	D	ate Prepar	ed: 12/21/201	7			Date A	nalyzed: 1	2/22/2017		
Lab Batch ID: 3036675 Sample: 7636472-1	-BKS	Batcl	n #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	ΟY	
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	< 0.00200	0.0998	0.0872	87	0.100	0.0854	85	2	70-130	35	
Toluene	< 0.00200	0.0998	0.0805	81	0.100	0.0788	79	2	70-130	35	
Ethylbenzene	< 0.00200	0.0998	0.0871	87	0.100	0.0848	85	3	71-129	35	
m,p-Xylenes	< 0.00399	0.200	0.172	86	0.201	0.167	83	3	70-135	35	
o-Xylene	< 0.00200	0.0998	0.0824	83	0.100	0.0798	80	3	71-133	35	
Analyst: ALJ	D	ate Prepar	ed: 12/22/201	7			Date A	nalyzed:	2/22/2017		
Lab Batch ID: 3036802 Sample: 7636560-1	-BKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK S	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	ŊΥ	
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	< 0.00198	0.0990	0.0915	92	0.0994	0.0894	90	2	70-130	35	
Toluene	<0.00198	0.0990	0.0852	86	0.0994	0.0831	84	2	70-130	35	
Ethylbenzene	<0.00198	0.0990	0.0925	93	0.0994	0.0913	92	1	71-129	35	
m,p-Xylenes	< 0.00396	0.198	0.182	92	0.199	0.180	90	1	70-135	35	
o-Xylene	< 0.00198	0.0990	0.0851	86	0.0994	0.0849	85	0	71-133	35	





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Project Name: GJ West Coop Unit #210

Work Order #: 571931							Proj	ject ID:	212C-MD-(01056.300	
Analyst: ALJ	D	ate Prepar	ed: 12/26/201	7			Date A	nalyzed: 1	12/26/2017		
Lab Batch ID: 3037056 Sample: 7636696-1	-BKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	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	< 0.00199	0.0996	0.0748	75	0.100	0.0752	75	1	70-130	35	
Toluene	< 0.00199	0.0996	0.0748	75	0.100	0.0765	77	2	70-130	35	
Ethylbenzene	< 0.00199	0.0996	0.0759	76	0.100	0.0777	78	2	71-129	35	
m,p-Xylenes	< 0.00398	0.199	0.161	81	0.201	0.160	80	1	70-135	35	
o-Xylene	< 0.00199	0.0996	0.0773	78	0.100	0.0791	79	2	71-133	35	
Analyst: ALJ	D	ate Prepar	ed: 12/28/201	7			Date A	nalyzed:	12/28/2017		
Lab Batch ID: 3037186 Sample: 7636780-1	-BKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK S	SPIKE / I	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	< 0.00200	0.0998	0.0872	87	0.100	0.0836	84	4	70-130	35	
Toluene	< 0.00200	0.0998	0.0823	82	0.100	0.0788	79	4	70-130	35	
Ethylbenzene	< 0.00200	0.0998	0.0931	93	0.100	0.0888	89	5	71-129	35	
m,p-Xylenes	< 0.00399	0.200	0.184	92	0.200	0.175	88	5	70-135	35	
o-Xylene	< 0.00200	0.0998	0.0858	86	0.100	0.0820	82	5	71-133	35	





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Project Name: GJ West Coop Unit #210

Work Order #: 571931							Proj	ject ID: 2	212C-MD-0	01056.300	
Analyst: ALJ	D	ate Prepar	red: 01/03/202	18			Date A	nalyzed: (01/03/2018		
Lab Batch ID: 3037361 Sample: 7636913-1-	BKS	Batc	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOVI	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	<0.00202	0.101	0.0894	89	0.100	0.0877	88	2	70-130	35	
Toluene	<0.00202	0.101	0.0840	83	0.100	0.0825	83	2	70-130	35	
Ethylbenzene	<0.00202	0.101	0.0941	93	0.100	0.0914	91	3	71-129	35	
m,p-Xylenes	< 0.00404	0.202	0.185	92	0.201	0.180	90	3	70-135	35	
o-Xylene	<0.00202	0.101	0.0865	86	0.100	0.0846	85	2	71-133	35	
Analyst: ARM	D	ate Prepar	red: 12/21/202	17			Date A	nalyzed: 1	2/22/2017		
Lab Batch ID: 3036677 Sample: 7636450-1-	BKS	Bate	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	813	81	1000	851	85	5	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	845	85	1000	866	87	2	70-135	35	





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Project Name: GJ West Coop Unit #210

Work Order #: 571931							Proj	ject ID:	212C-MD-	01056.300)
Analyst: ALJ	D	ate Prepar	ed: 01/10/20	18			Date A	nalyzed: (01/10/2018		
Lab Batch ID: 3038189 Sample: 7637441-1-	BKS	Batcl	h #: 1					Matrix:	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 2	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	999	851	85	998	855	86	0	70-135	35	
Diesel Range Organics (DRO)	<15.0	999	802	80	998	838	84	4	70-135	35	
Analyst: ALJ	D	ate Prepar	red: 01/12/20	18	-	1	Date A	nalyzed: (01/13/2018	-	1
Lab Batch ID: 3038391 Sample: 7637444-1-	BKS	Batcl	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 2	BLANK	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1040	104	1000	993	99	5	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	1040	104	1000	1020	102	2	70-135	35	
Analyst: ARM		ate Prenar	ed: 01/16/20	18			Date A	nalvzed: (01/16/2018		
Lab Batch ID: 3038511 Sample: 7637574-1-		_	h #: 1				Dute	Matrix:			
Units: mg/kg			K/BLANK	SPIKE / 2	BLANK	SPIKE DUP	LICATE			DY	
TPH By SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	923	92	1000	866	87	6	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	974	97	1000	925	93	5	70-135	35	





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Project Name: GJ West Coop Unit #210

Work Order # :	571931						Project II): 212C-1	MD-0105	6.300		
Lab Batch ID:	3036675	QC- Sample ID:	571798	-009 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	12/22/2017	Date Prepared:	12/21/2	017	An	alyst: A	ALJ					
Reporting Units:	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA'	TE REC	OVERY	STUDY		
	BTEX by EPA 8021B	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	
Benzene		<0.00201	0.100	0.0767	77	0.101	0.0767	76	0	70-130	35	
Toluene		<0.00201	0.100	0.0707	71	0.101	0.0702	70	1	70-130	35	
Ethylbenzene		<0.00201	0.100	0.0745	75	0.101	0.0747	74	0	71-129	35	
m,p-Xylenes		<0.00402	0.201	0.146	73	0.202	0.147	73	1	70-135	35	
o-Xylene		<0.00201	0.100	0.0694	69	0.101	0.0702	70	1	71-133	35	X
Lab Batch ID:	3036802	QC- Sample ID:	571876	-002 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	12/22/2017	Date Prepared:	12/22/2	017	An	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	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag

BTEX by EPA 8021B	Sample	Spike	Result	Sample	Spike	Spiked Sample	-	RPD	Limits	Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	<0.00198	0.0990	0.0745	75	0.0994	0.0688	69	8	70-130	35	X
Toluene	<0.00198	0.0990	0.0674	68	0.0994	0.0613	62	9	70-130	35	X
Ethylbenzene	< 0.00198	0.0990	0.0717	72	0.0994	0.0652	66	9	71-129	35	X
m,p-Xylenes	< 0.00396	0.198	0.141	71	0.199	0.128	64	10	70-135	35	X
o-Xylene	< 0.00198	0.0990	0.0666	67	0.0994	0.0614	62	8	71-133	35	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: GJ West Coop Unit #210

Work Order # :	571931						Project II): 212C-1	MD-0105	6.300		
Lab Batch ID:	3037056	QC- Sample ID:	572035	-035 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed:	12/26/2017	Date Prepared:	12/26/2	017	An	alyst: A	ALJ					
Reporting Units:	mg/kg		Ν	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	BTEX by EPA 8021B	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	-	RPD	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%0K	%RPD	
Benzene		<0.00202	0.101	0.0474	47	0.100	0.0528	53	11	70-130	35	X
Toluene		< 0.00202	0.101	0.0426	42	0.100	0.0490	49	14	70-130	35	X
Ethylbenzene		<0.00202	0.101	0.0477	47	0.100	0.0538	54	12	71-129	35	X
m,p-Xylenes		< 0.00403	0.202	0.0942	47	0.200	0.107	54	13	70-135	35	X
o-Xylene		< 0.00202	0.101	0.0459	45	0.100	0.0504	50	9	71-133	35	X
Lab Batch ID:	3037186	QC- Sample ID:	572178	-011 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed:	12/28/2017	Date Prepared:	12/28/2	017	An	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 Posult	Spike	Spiked Sample Result	Spiked Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag

BIEX DY EPA 8021B	Sample	Spike	Result	Sample	-	Spiked Sample	-	RPD	Limits	Limits	Flag
Analytes	Result [A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Benzene	< 0.00200	0.100	0.0968	97	0.101	0.0871	86	11	70-130	35	
Toluene	< 0.00200	0.100	0.0873	87	0.101	0.0760	75	14	70-130	35	
Ethylbenzene	< 0.00200	0.100	0.0887	89	0.101	0.0821	81	8	71-129	35	
m,p-Xylenes	< 0.00401	0.200	0.174	87	0.201	0.162	81	7	70-135	35	
o-Xylene	<0.00200	0.100	0.0829	83	0.101	0.0776	77	7	71-133	35	

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

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

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Project Name: GJ West Coop Unit #210

Work Order # :	571931						Project II	D: 212C-1	MD-0105	6.300		
Lab Batch ID:	3037361	QC- Sample ID:	572446	-001 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	01/03/2018	Date Prepared:	01/03/2	018	Ar	nalyst: A	ALJ					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	IKE DUPLICA	TE REC	OVERY	STUDY		
	BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	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]		[G]				
Benzene		< 0.00200	0.100	0.0693	69	0.0998	0.0670	67	3	70-130	35	X
Toluene		<0.00200	0.100	0.0615	62	0.0998	0.0588	59	4	70-130	35	x
Ethylbenzene		0.00532	0.100	0.0736	68	0.0998	0.0717	67	3	71-129	35	X
m,p-Xylenes		0.00481	0.200	0.141	68	0.200	0.138	67	2	70-135	35	X
o-Xylene		< 0.00200	0.100	0.0662	66	0.0998	0.0647	65	2	71-133	35	X
Lab Batch ID:	3036677	QC- Sample ID:	571800	-013 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	12/22/2017	Date Prepared:	12/21/2	017	Ar	nalyst: 4	ARM					
Reporting Units:	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	Spiked Dup.	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	823	82	999	830	83	1	70-135	35	
Diesel Range Or	rganics (DRO)	<15.0	998	851	85	999	853	85	0	70-135	35	
Lab Batch ID:	3038189	QC- Sample ID:	572901	-019 S	Ba	tch #:	1 Matrix	x: Soil	•			
Date Analyzed:	01/10/2018	Date Prepared:	01/10/2	018	Ar	nalyst: /	ALJ					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	'RIX SPI	IKE DUPLICA	TE REC	OVERY	STUDY		
	TPH By SW8015 Mod	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]	/0	/01		
Gasoline Range	Hydrocarbons (GRO)	<14.9	996	795	80	995	798	80	0	70-135	35	
									1	1		

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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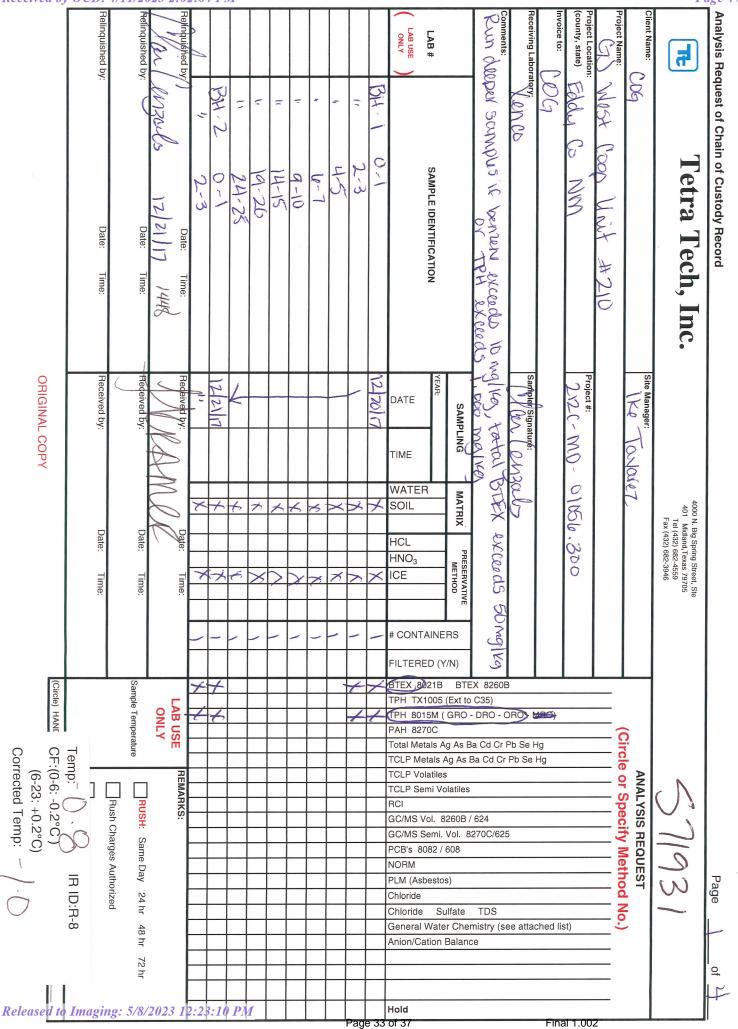
Project Name: GJ West Coop Unit #210

Work Order #: 571931						Project II): 212C-1	MD-0105	6.300		
Lab Batch ID: 3038390	QC- Sample ID:	573261	-001 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed: 01/13/2018	Date Prepared:	01/12/2	018	Ar	alyst: A	ALJ					
Reporting Units: mg/kg		N	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH By SW8015 Mod	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]				
Gasoline Range Hydrocarbons (GRO)	23.0	1000	796	77	1000	831	81	4	70-135	35	
Diesel Range Organics (DRO)	120	1000	856	74	1000	870	75	2	70-135	35	
Lab Batch ID: 3038391	QC- Sample ID:	572902	-004 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed: 01/13/2018	Date Prepared:	01/12/2	018	Ar	alyst: A	ALJ					
Reporting Units: mg/kg		N	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH By SW8015 Mod	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]	Kesutt [F]	[G]	70			
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	687	69	1000	703	70	2	70-135	35	Х
Diesel Range Organics (DRO)	<15.0	1000	725	73	1000	742	74	2	70-135	35	
Lab Batch ID: 3038511	QC- Sample ID:	572902	-001 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed: 01/16/2018	Date Prepared:	01/16/2	018	Ar	alyst: A	ARM					
Reporting Units: 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	Spiked Dup.	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	998	836	84	1000	837	84	0	70-135	35	
Diesel Range Organics (DRO)	<15.0	998	965	97	1000	964	96	0	70-135	35	

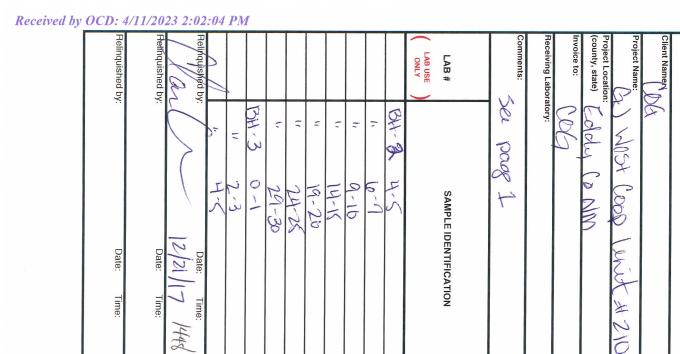
Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

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.

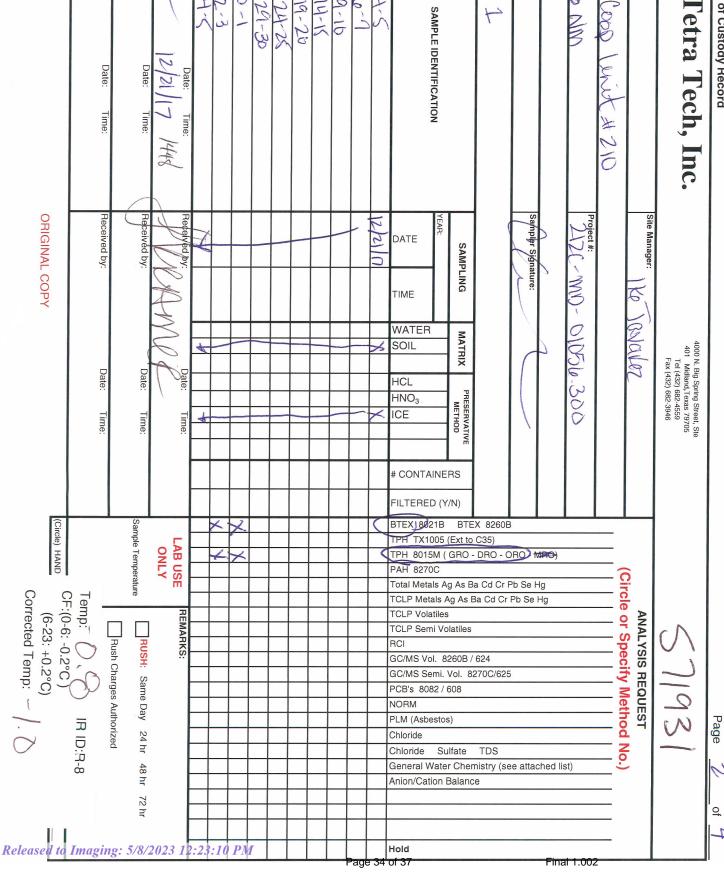
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ORIGINAL COPY

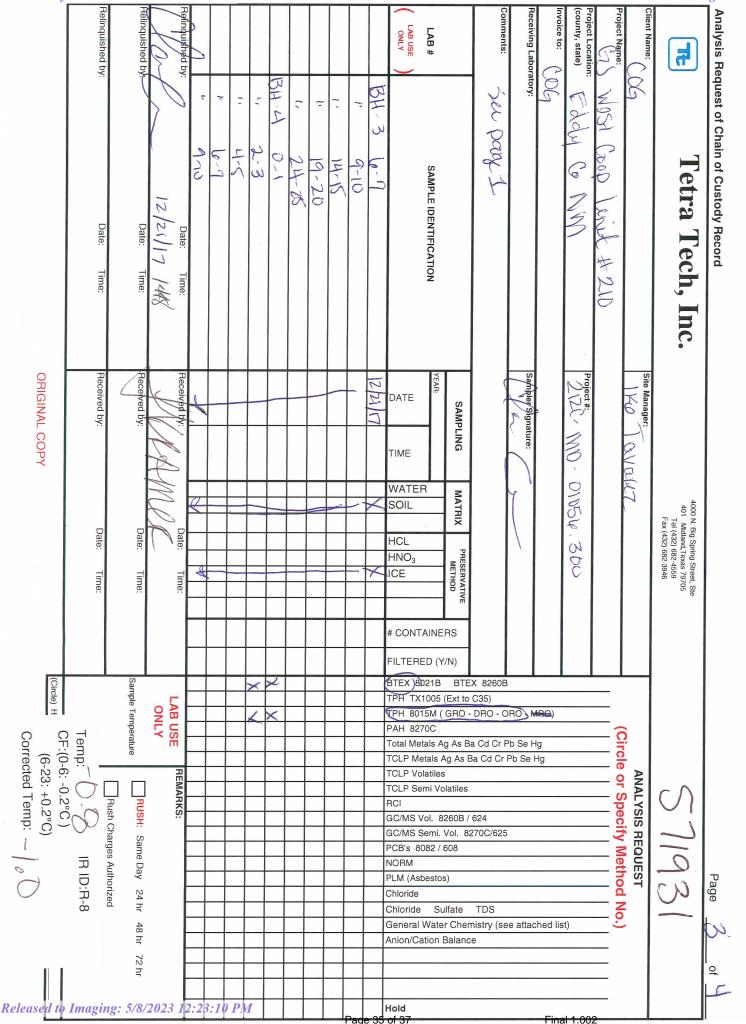


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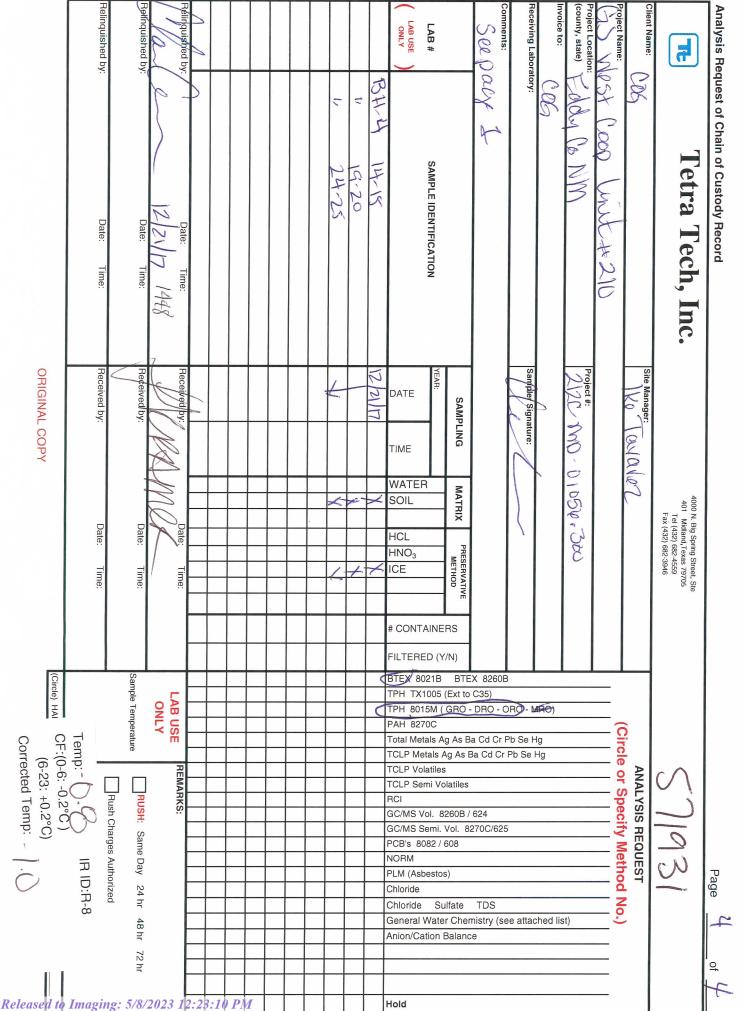
Analysis Request of Chain of Custody Record

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Hold the of 37

Final 1.002



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 12/21/2017 02:48:00 PM Temperature Measuring device used : R8 Work Order #: 571931 Comments Sample Receipt Checklist #1 *Temperature of cooler(s)? -1 #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? NI/A

#6 Custody Sears 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#:

Date: 12/21/2017

Checklist completed by: Jawe Matto Shawnee Smith Checklist reviewed by: Mark Moak Kelsey Brooks

Date: 12/27/2017



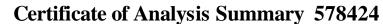


Project Id:

Contact:

Project Location: Edd

Sheldon Hitchcock Eddy County NM



COG Operating LLC, Artesia, NM Project Name: GJ West Coop Unit #210



Date Received in Lab:Wed Mar-07-18 11:00 amReport Date:08-MAR-18Project Manager:Jessica Kramer

	Lab Id:	578424-0	001	578424-0	002	578424-0	03	578424-	004		
Annahusia Desaucated	Field Id:	S1 Bttr	m	S1 E. Side	wall	S1 W. Side	wall	S1 S. Side	ewall		
Analysis Requested	Depth:	4'-2 In	ı i								
	Matrix:	SOIL	,	SOIL	,	SOIL		SOIL			
	Sampled:	Mar-05-18	10:00	Mar-05-18	10:05	Mar-05-18	10:10	Mar-05-18	10:15		
BTEX by EPA 8021B	Extracted:	Mar-08-18	07:00	Mar-08-18	07:00	Mar-08-18	07:00	Mar-08-18	07:00		
	Analyzed:	Mar-08-18	11:35	Mar-08-18	11:54	Mar-08-18	12:13	Mar-08-18	13:11		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199		
Toluene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199		
Ethylbenzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199		
m,p-Xylenes		< 0.00399	0.00399	< 0.00401	0.00401	< 0.00403	0.00403	< 0.00398	0.00398		
o-Xylene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199		
Total Xylenes		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199		
Total BTEX		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00202	0.00202	< 0.00199	0.00199		
Chloride by EPA 300	Extracted:	Mar-08-18	13:00	Mar-08-18	13:00	Mar-08-18	13:00	Mar-08-18	13:00		
	Analyzed:	Mar-08-18	15:02	Mar-08-18	15:08	Mar-08-18	14:36	Mar-08-18	15:24		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		<24.6	24.6	86.7	4.97	103	4.97	121	4.98		
TPH By SW8015 Mod	Extracted:	Mar-07-18	16:00	Mar-07-18	16:00	Mar-07-18	16:00	Mar-07-18	16:00		
	Analyzed:	Mar-08-18	03:42	Mar-08-18	05:02	Mar-08-18	05:27	Mar-08-18	05:55		
	Units/RL:	mg/kg	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	<15.0	15.0		
Diesel Range Organics (DRO)		<15.0	15.0	129	15.0	199	15.0	298	15.0		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	30.8	15.0	21.5	15.0	40.3	15.0		
Total TPH		<15.0	15.0	160	15.0	221	15.0	338	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

Version: 1.%

fession kramer

Jessica Kramer Project Assistant

Final 1.000

Analytical Report 578424

for COG Operating LLC

Project Manager: Sheldon Hitchcock

GJ West Coop Unit #210

08-MAR-18

Collected By: Client



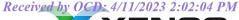


1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-18-24), 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 (T104704400-18-14) 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)





08-MAR-18

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

Reference: XENCO Report No(s): **578424 GJ West Coop Unit #210** Project Address: Eddy County 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) 578424. 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. 578424 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,

Jession Vermer

Jessica Kramer Project Assistant

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Sample Id

S1 Bttm
S1 E. Sidewall
S1 W. Sidewall
S1 S. Sidewall

Sample Cross Reference 578424



COG Operating LLC, Artesia, NM

GJ West Coop Unit #210

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	03-05-18 10:00	4' - 2 In	578424-001
S	03-05-18 10:05	ft	578424-002
S	03-05-18 10:10	ft	578424-003
S	03-05-18 10:15	ft	578424-004

Version: 1.%

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CASE NARRATIVE

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Client Name: COG Operating LLC Project Name: GJ West Coop Unit #210

Project ID: Work Order Number(s): 578424

BORATORIES

Report Date:08-MAR-18Date Received:03/07/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3043124 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: S1 Bttm Lab Sample Id: 578424-001		Matrix: Date Collecte	Soil d: 03.05.18 10.00		ate Received:03.0 ample Depth:4' -		
Analytical Method: Chloride by EF Tech: OJS	PA 300				ep Method: E30 Moisture:	00P	
Analyst: OJS Seq Number: 3043151		Date Prep:	03.08.18 13.00	Ba	asis: We	t Weight	
Parameter	Cas Number	Result R	L	Units	Analysis Date	Flag	Dil

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	<24.6	24.6	mg/kg	03.08.18 15.02	U	5	

Analytical Method: TPH By SW801 Tech: ARM Analyst: ARM	5 Mod	Date Pre	p: 03.07.	18 16.00	9	Prep Method: TX 6 Moisture: Basis: We	X1005P et Weight	
Seq Number: 3043122			-					
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	03.08.18 03.42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	03.08.18 03.42	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	03.08.18 03.42	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	03.08.18 03.42	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	110	%	70-135	03.08.18 03.42		
o-Terphenyl		84-15-1	108	%	70-135	03.08.18 03.42		





COG Operating LLC, Artesia, NM

Sample Id:S1 BttmLab Sample Id:578424-001	Matrix: Date Collecte	Soil ed: 03.05.18 10.00		ved:03.07.18 11.00 epth:4' - 2 In
Analytical Method: BTEX by EPA 8021B Tech: ALJ			Prep Meth % Moistur	od: SW5030B e:
Analyst: ALJ Seq Number: 3043124	Date Prep:	03.08.18 07.00	Basis:	Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	03.08.18 11.35	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	03.08.18 11.35	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	03.08.18 11.35	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	03.08.18 11.35	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	03.08.18 11.35	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	03.08.18 11.35	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	03.08.18 11.35	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	109	%	70-130	03.08.18 11.35		
1,4-Difluorobenzene		540-36-3	90	%	70-130	03.08.18 11.35		





COG Operating LLC, Artesia, NM

Sample Id:S1 E. SidewallLab Sample Id:578424-002	Matrix: Date Collect	Soil ted: 03.05.18 10.05		Date Received:03	.07.18 11.00)
Analytical Method: Chloride by EPA 300				Prep Method: E3	800P	
Tech: OJS Analyst: OJS	Date Prep:	03.08.18 13.00		% Moisture: Basis: W	et Weight	
Seq Number: 3043151						
Parameter Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride 16887-00-6	86.7	4.97	mg/kg	03.08.18 15.08		1

Analytical Method: TPH By SW801 Tech: ARM Analyst: ARM Seq Number: 3043122	5 Mod	Date Pre	p: 03.07.	18 16.00	%	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	03.08.18 05.02	U	1
Diesel Range Organics (DRO)	C10C28DRO	129	15.0		mg/kg	03.08.18 05.02		1
Oil Range Hydrocarbons (ORO)	PHCG2835	30.8	15.0		mg/kg	03.08.18 05.02		1
Total TPH	PHC635	160	15.0		mg/kg	03.08.18 05.02		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	108	%	70-135	03.08.18 05.02		
o-Terphenyl		84-15-1	108	%	70-135	03.08.18 05.02		





COG Operating LLC, Artesia, NM

Sample Id:S1 E. SidewallLab Sample Id:578424-002	Matrix: Soil Date Collected: 03.05.18 10.05	Date Received:03.07.18 11.00
Analytical Method: BTEX by EPA 8021B Tech: ALJ		Prep Method: SW5030B % Moisture:
Analyst: ALJ Seq Number: 3043124	Date Prep: 03.08.18 07.00	Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	03.08.18 11.54	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	03.08.18 11.54	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	03.08.18 11.54	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401		mg/kg	03.08.18 11.54	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	03.08.18 11.54	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	03.08.18 11.54	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	03.08.18 11.54	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	108	%	70-130	03.08.18 11.54		
1,4-Difluorobenzene		540-36-3	81	%	70-130	03.08.18 11.54		





COG Operating LLC, Artesia, NM

Sample Id: S1 W. Sidewall Lab Sample Id: 578424-003	Matrix: Date Collec	Soil eted: 03.05.18 10.10	1	Date Received:03.0	07.18 11.00	0
Analytical Method: Chloride by EPA 300			I	Prep Method: E30	00P	
Tech: OJS			Ģ	% Moisture:		
Analyst: OJS	Date Prep:	03.08.18 13.00	I	Basis: We	t Weight	
Seq Number: 3043151						
Parameter Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride 16887-00-6	103	4.97	mg/kg	03.08.18 14.36		1

Analytical Method: TPH By SW801 Tech: ARM Analyst: ARM Seq Number: 3043122	Date Pre	Date Prep: 03.07.18 16.00			Prep Method: TX1005P % Moisture: Basis: Wet Weight				
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	03.08.18 05.27	U	1	
Diesel Range Organics (DRO)	C10C28DRO	199	15.0		mg/kg	03.08.18 05.27		1	
Oil Range Hydrocarbons (ORO)	PHCG2835	21.5	15.0		mg/kg	03.08.18 05.27		1	
Total TPH	PHC635	221	15.0		mg/kg	03.08.18 05.27		1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1-Chlorooctane o-Terphenyl		111-85-3 84-15-1	106 104	% %	70-135 70-135	03.08.18 05.27 03.08.18 05.27			





COG Operating LLC, Artesia, NM

Sample Id: S1 W. Sidewall Lab Sample Id: 578424-003	Matrix: Soil Date Collected: 03.05.18 10.10	Date Received:03.07.18 11.00
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3043124	Date Prep: 03.08.18 07.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	03.08.18 12.13	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	03.08.18 12.13	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	03.08.18 12.13	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	03.08.18 12.13	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	03.08.18 12.13	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	03.08.18 12.13	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	03.08.18 12.13	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	113	%	70-130	03.08.18 12.13		
1,4-Difluorobenzene		540-36-3	81	%	70-130	03.08.18 12.13		





COG Operating LLC, Artesia, NM

Sample Id: S1 S. Sidewall Lab Sample Id: 578424-004	Matrix: Date Collect	Soil ted: 03.05.18 10.15]	Date Received:03	.07.18 11.00)
Analytical Method: Chloride by EPA 300				Prep Method: E3	800P	
Tech: OJS				% Moisture:		
Analyst: OJS	Date Prep:	03.08.18 13.00		Basis: W	et Weight	
Seq Number: 3043151						
Parameter Cas Num	nber Result	RL	Units	Analysis Date	Flag	Dil
Chloride 16887-00-	6 121	4.98	mg/kg	03.08.18 15.24		1

Analytical Method: TPH By SW801 Tech: ARM Analyst: ARM Seq Number: 3043122	Date Pre	Date Prep: 03.07.18 16.00			Prep Method: TX1005P % Moisture: Basis: Wet Weight				
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	03.08.18 05.55	U	1	
Diesel Range Organics (DRO)	C10C28DRO	298	15.0		mg/kg	03.08.18 05.55		1	
Oil Range Hydrocarbons (ORO)	PHCG2835	40.3	15.0		mg/kg	03.08.18 05.55		1	
Total TPH	PHC635	338	15.0		mg/kg	03.08.18 05.55		1	
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag		
1-Chlorooctane		111-85-3	101	%	70-135	03.08.18 05.55			
o-Terphenyl		84-15-1	101	%	70-135	03.08.18 05.55			





COG Operating LLC, Artesia, NM

Sample Id:S1 S. SidewallLab Sample Id:578424-004	Matrix: Soil Date Collected: 03.05.1	Date Received:03.07.18 11.00
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3043124	Date Prep: 03.08.1	Prep Method: SW5030B % Moisture: 18 07.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	03.08.18 13.11	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	03.08.18 13.11	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	03.08.18 13.11	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	03.08.18 13.11	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	03.08.18 13.11	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	03.08.18 13.11	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	03.08.18 13.11	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	80	%	70-130	03.08.18 13.11		
4-Bromofluorobenzene		460-00-4	104	%	70-130	03.08.18 13.11		



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 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/Labo	oratory 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 578424

COG Operating LLC

GJ West Coop Unit #210

Analytical Method: Seq Number:	Chloride by EPA 3 3043151	600		Matrix:					rep Meth Date Pr	rep: 03.0	08.18	
MB Sample Id:	7640419-1-BLK		LCS Sat	mple Id:	7640419-	1-BKS		LCS	D Sample	e Id: 764	0419-1-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	248	99	249	100	90-110	0	20	mg/kg	03.08.18 14:25	
Analytical Method:	Chloride by EPA 3	300						Р	rep Meth	od: E30	0P	
Seq Number:	3043151			Matrix:	Soil			1	Date Pr		08.18	
Parent Sample Id:	578424-003		MS Sat	mple Id:	578424-0	03 S		MS			424-003 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	% RP D	RPD Limit	Units	Analysis Date	Flag
Chloride	103	249	360	103	360	103	90-110	0	20	mg/kg	03.08.18 14:41	
Analytical Method: Seq Number: Parent Sample Id: Parameter Chloride	Chloride by EPA 3 3043151 578425-005 Parent Result <4.97	Spike Amount	MS Sau MS Result 250	Matrix: mple Id: MS %Rec 100	Soil 578425-0 MSD Result 250	05 S MSD %Rec 100	Limits 90-110			ep: 03.0		Flag
Analytical Method: Seq Number: MB Sample Id:	TPH By SW8015 I 3043122 7640359-1-BLK	Mod		Matrix: mple Id:	Solid 7640359-	1-BKS			rep Meth Date Pr D Sample	ep: 03.0	.005P 07.18 0359-1-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 Hydrocarb	ons (GRO) <15.0		986	99	971	97	70-135	2	35	mg/kg	03.08.18 02:51	
Diesel Range Organics	(DRO) <15.0	1000	1020	102	996	100	70-135	2	35	mg/kg	03.08.18 02:51	
Surrogate	MB %Rea	MB Flag		CS Rec	LCS Flag	LCSI %Ree			imits	Units	Analysis Date	
1-Chlorooctane	103		1	10		107		70)-135	%	03.08.18 02:51	
o-Terphenyl	103		1	09		104		70)-135	%	03.08.18 02:51	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery 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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COG Operating LLC

GJ West Coop Unit #210

Analytical Method: Seq Number:	TPH By 3043122	SW8015 M	lod	Matrix: Soil						Prep Method: TX1005P Date Prep: 03.07.18			
Parent Sample Id:	578424-0	578424-001 MS S				MS Sample Id: 578424-001 S MSD Sa					ple Id: 578424-001 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 Hydrocarb	ons (GRO)	<15.0	997	1030	103	1040	104	70-135	1	35	mg/kg	03.08.18 04:10	
Diesel Range Organics	(DRO)	<15.0	997	1050	105	1090	109	70-135	4	35	mg/kg	03.08.18 04:10	
Surrogate					IS Rec	MS Flag	MSD %Rec			imits	Units	Analysis Date	
1-Chlorooctane				1	17		117		70)-135	%	03.08.18 04:10	
o-Terphenyl				1	.09		112		70)-135	%	03.08.18 04:10	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3043124 7640418-1-BLK	1B	LCS Sat	Matrix: mple Id:	Solid 7640418-	1-BKS			Prep Meth Date Pr SD Sample	ep: 03.0	5030B 18.18 0418-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00202	0.101	0.0766	76	0.0725	73	70-130	5	35	mg/kg	03.08.18 07:26	
Toluene	< 0.00202	0.101	0.0827	82	0.0777	78	70-130	6	35	mg/kg	03.08.18 07:26	
Ethylbenzene	< 0.00202	0.101	0.0953	94	0.0889	89	70-130	7	35	mg/kg	03.08.18 07:26	
m,p-Xylenes	< 0.00403	0.202	0.188	93	0.176	88	70-130	7	35	mg/kg	03.08.18 07:26	
o-Xylene	< 0.00202	0.101	0.0941	93	0.0901	90	70-130	4	35	mg/kg	03.08.18 07:26	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSE %Rec		_	imits	Units	Analysis Date	
1,4-Difluorobenzene	78		:	83		89		7	0-130	%	03.08.18 07:26	
4-Bromofluorobenzene	94		1	11		116		7	0-130	%	03.08.18 07:26	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3043124 578423-001	1B		Matrix: mple Id:	Soil 578423-0	01 S			rep Metho Date Pr D Sample	ep: 03.0	5030B 98.18 423-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	% RP D	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00201	0.100	0.0241	24	0.0452	45	70-130	61	35	mg/kg	03.08.18 08:05	XF
Toluene	0.00225	0.100	0.0301	28	0.0506	48	70-130	51	35	mg/kg	03.08.18 08:05	XF
Ethylbenzene	0.00208	0.100	0.0372	35	0.0592	57	70-130	46	35	mg/kg	03.08.18 08:05	XF
m,p-Xylenes	0.00700	0.201	0.0970	45	0.121	56	70-130	22	35	mg/kg	03.08.18 08:05	Х
o-Xylene	0.00369	0.100	0.0474	44	0.0610	57	70-130	25	35	mg/kg	03.08.18 08:05	Х
Surrogate				1S Rec	MS Flag	MSD %Rec			imits	Units	Analysis Date	
1,4-Difluorobenzene			-	78		78		70)-130	%	03.08.18 08:05	
4-Bromofluorobenzene			1	18		110		70)-130	%	03.08.18 08:05	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery 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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Setting the Standard since 1990 **MATORIES**

HAIN OF CUSTODY

Page -1- Of -1-

San Antonio, Texas (210-509-3334) Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

Released to Imaging: 5/8/2023 12:23:10 PM

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Received by OCD: 4/11/2023 2:02:04 PM

		miniana, i	rexas (402-	midiand, Fexas (432-704-5251) www	251) www.xenco.com	m			Xen	Xenco Quote #	#			Xenco Job #	#	Ň	5	5	717	
											Ana	Analytical Information	ormatio					-		Matrix Code
ing			Proje	Project Information	tion				_			_		_	-					Matrix Codes
Company Name / Branch: COG Operating LLC		Project Name/Number: GJ WEST COOP U	Project Name/Number: GJ WEST COOP UNIT #210	T #210																W = Water
Company Address: 2407 Pecos Ave. Artesia NM 88210		Project Location:	ition:	Eddy County NM	M				5M)											S = Soil/Sed/Solid GW =Ground Water DW = Drinking Water
Lemail: Openet/Comment Phone No: shilchcock@concho.com 575-746-2010 575-746-2010 ogray@concho.com; rhaskeli@concho.com 575-746-2010 575-746-2010		Invoice To:		COG Operating LLC Attn: Robert Mcneill	ert Mcneill				PA80		00)									P = Product SW = Surface water SL = Sludge
Project Contact: Sheldon Hitchcock		PO Number:		Midland TX, 79701	X, 79701				D (E	100	A 30									OW =Ocean/Sea Water WI = Wine
Samplers's Name Dakota Neel		Civalinet.							DE		EP									0 = 01
		Collection				Number o	Number of preserved bottles	d bottles	TEN		DE (_	WW= Waste Water A = Air
No. Field ID / Point of Collection	Sample					I/Zn te	14	04	- 1	EX (E	ORII									
0	Depth	Date	Time	Matrix bot	bottles HC	NaC Ace	H2S NaC	NaH MEC	TP		CH								Field	Field Comments
1	4'2"	3/5/2018	10:00 AM	S					×	×	×									
2 S1 E. Sidewall	N/A	3/5/2018	10:05 AM	S	-		_		×	×	×	-		+						
3 S1 W. Sidewall	N/A	3/5/2018	10:10 AM	S	-	_			×	×	×	-		_						
4 S1 S. Sidewall	N/A	3/5/2018	10:15 AM	S	-				×	×	×			+	+					
Ch									-			+		+	+					
0				_					+			+		+						
7							-		_			+		-						
8							-		_			-		_	+					
9				_					-			+		+						
10							-		+			+		+						
Turnaround Time (Business days)				Data	Data Deliverable Information	Information					-		Te	Temp: 3.1	ŝ	-		R	IR ID:R-8	}- 8
Same Day TAT 5 Day TAT			Leve	Level II Std QC		П	Level IV	Level IV (Full Data Pkg /raw data)	^o kg /raw c	data)			ç	:(0-6	 0	CF:(0-6: -0.2°C)	<u> </u>			
X Next Day EMERGENCY 7 Day TAT			Leve	Level III Std QC+ Forms	+ Forms	П		vel IV						(6-2	ين +	0.2°	(6-23: +0.2°C)	C		
2 Day EMERGENCY Contract TAT			Leve	Level 3 (CLP Forms)	orms)	П	UST / RG -411	-411					Co	rrect	ed T	emp): L	Ì		
3 Day EMERGENCY			TRR	TRRP Checklist																
TAT Starts Day received by Lab, if received by 5:00 pm	00 pm											FED	FED-EX / UPS: Tracking #	Track	na #					
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY Relinquished by Sampler: Date Time: Received area Including area	DY MUST BE I	OCUMENTED	BELOW EAG	CH TIME SAN	MPLES CHA	NGE POSSE	SSION, INC	LUDING CO	URIER DEL					P			1			A
1 L Relinquished by:	3-6-15 Date Time:	1-35	Received By:	y 2 Ba	the.	m/s	Relinguished By:	hed By:	R		Date Time:	NY / Yus		Received By:	, second	$\left \left(\right.\right $	2	A		e e
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5 Notice: Stanature of this document and relinquishment of semoles covering	Date lime:		Received By:				Custody Seal #	eal #		Prese	rved wh	Preserved where applicable	L			<u> </u>	Coole	Cooler Temp.		Thermo. Corr. Factor
losses or expenses incurred by the Client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be inforced unless previously negotiated under a fully executed client contract.	beyond the con	trol of Xenco. /	A minimum cha	arge of \$75 w	vill be applied	to each proj	lect. Xenco's	signs standa liability will b	e limited to t	d condition the cost of	ins of ser	ice. Xenco . Any samp	will be lia ples receiv	ble only /ed by X	or the concord	St of sar	nples an zed will	d shall r	not assu	and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any to the cost of samples. Any samples received by Xenco but not analyzed will be involved as \$5 nor complete two to the cost of samples.

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Stafford, Texas (281-240-4200)



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: 03/07/2018 11:00:00 AM Temperature Measuring device used : R8 Work Order #: 578424 Sample Receipt Checklist Comments #1 *Temperature of cooler(s)? 2.9 #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 relinguished/ 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? No TPH received in bulk jars #13 Samples properly preserved? Yes #14 Sample container(s) intact? Yes #15 Sufficient sample amount for indicated test(s)? Yes

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Date: 03/07/2018

Yes

No

N/A

Checklist reviewed by: Jession Whamer

#16 All samples received within hold time?

#18 Water VOC samples have zero headspace?

#17 Subcontract of sample(s)?

Jessica Kramer

Date: 03/08/2018

Released to Imaging: 5/8/2023 12:23:10 PM

Analytical Report 578034

for COG Operating LLC

Project Manager: Sheldon Hitchcock

GJ West COOP Unit#210

05-MAR-18

Collected By: Client



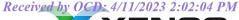


1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-18-24), 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 (T104704400-18-14) 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)





05-MAR-18

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

Reference: XENCO Report No(s): **578034 GJ West COOP Unit#210** Project Address: Eddy County, 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) 578034. 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. 578034 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 Cross Reference 578034



COG Operating LLC, Artesia, NM

GJ West COOP Unit#210

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-2 Bttm	S	03-01-18 12:00	4' - 2''	578034-001
S-2 E.Sidewall	S	03-01-18 11:40		578034-002
S-2 W. Sidewall	S	03-01-18 11:50		578034-003



CASE NARRATIVE

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Client Name: COG Operating LLC Project Name: GJ West COOP Unit#210

Project ID: Work Order Number(s): 578034

ATORIES

Report Date: 05-MAR-18 Date Received: 03/02/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3042714 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3042830 Inorganic Anions by EPA 300

Lab Sample ID 578034-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 578034-001, -002, -003. The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



Sheldon Hitchcock

Eddy County, NM

Project Id:

Project Location:

Contact:

Certificate of Analysis Summary 578034

COG Operating LLC, Artesia, NM Project Name: GJ West COOP Unit#210



Date Received in Lab:Fri Mar-02-18 11:50 amReport Date:05-MAR-18Project Manager:Jessica Kramer

	Lab Id:	578034-0	001	578034-0	002	578034-0	003		
	Field Id:	S-2 Btt		S-2 E.Side		S-2 W. Side			
Analysis Requested				5-2 E.Siu	wall	5-2 W. 510	ewall		
	Depth:	4'-2"							
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Mar-01-18	12:00	Mar-01-18	11:40	Mar-01-18	11:50		
BTEX by EPA 8021B	Extracted:	Mar-03-18	08:00	Mar-03-18	08:00	Mar-03-18	08:00		
	Analyzed:	Mar-03-18	13:47	Mar-03-18	13:27	Mar-03-18	15:22		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.0202	0.0202	< 0.00200	0.00200	< 0.00200	0.00200		
Toluene		< 0.0202	0.0202	< 0.00200	0.00200	< 0.00200	0.00200		
Ethylbenzene		< 0.0202	0.0202	< 0.00200	0.00200	< 0.00200	0.00200		
m,p-Xylenes		< 0.0403	0.0403	< 0.00399	0.00399	< 0.00401	0.00401		
o-Xylene		< 0.0202	0.0202	< 0.00200	0.00200	< 0.00200	0.00200		
Total Xylenes		< 0.0202	0.0202	< 0.00200	0.00200	< 0.00200	0.00200		
Total BTEX		< 0.0202	0.0202	< 0.00200	0.00200	< 0.00200	0.00200		
Chloride by EPA 300	Extracted:	Mar-02-18	16:00	Mar-02-18	16:00	Mar-02-18	16:00		
	Analyzed:	Mar-02-18	23:25	Mar-02-18	23:53	Mar-02-18	23:58		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		588	4.99	19.6	4.96	10.7	4.94		
TPH by SW8015 Mod	Extracted:	Mar-02-18	18:00	Mar-02-18	18:00	Mar-02-18	18:00		
	Analyzed:	Mar-03-18	05:18	Mar-03-18	05:39	Mar-03-18	05:59		
	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)		33.0	15.0	<15.0	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		33.0	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.

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Mike Kimmel Client Services Manager

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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 Ha	rry Hines Blvd, Dallas, TX 75220	(214) 902 0300	(214) 351-9139
5332 Bla	ackberry Drive, San Antonio TX 78238	(210) 509-3334	(210) 509-3335
1211 W	Florida Ave, Midland, TX 79701	(432) 563-1800	(432) 563-1713
2525 W.	Huntington Dr Suite 102, Tempe AZ 85282	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: GJ West COOP Unit#210

Work Ord Lab Batch #:	ers : 57803 : 3042782	4, Sample: 578034-001 / SMP	Batch:	Project ID 1 Matrix			
Units:	mg/kg	Date Analyzed: 03/03/18 05:18	SUR	ROGATE R	RECOVERY	STUDY	
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctar	ie		103	99.9	103	70-135	
o-Terphenyl			51.0	50.0	102	70-135	
Lab Batch #		Sample: 578034-002 / SMP	Batch:				
Units:	mg/kg	Date Analyzed: 03/03/18 05:39	SUR	ROGATE R	RECOVERY	STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctar		Analytes	01.0	00.0		70.125	
	le		94.9	99.8	95	70-135	
o-Terphenyl Lab Batch #	2042792	Serverlag 578024 002 / SMD	47.6	49.9 1 Matrix	95	70-135	
		Sample: 578034-003 / SMP	Batch:				
Units:	mg/kg	Date Analyzed: 03/03/18 05:59	SUR	ROGATE R	RECOVERY	STUDY	
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctan	ie		107	99.9	107	70-135	
o-Terphenyl			55.4	50.0	111	70-135	
Lab Batch #	: 3042714	Sample: 578034-002 / SMP	Batch:	1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 03/03/18 13:27	SUR	ROGATE R	RECOVERY	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorob	enzene		0.0234	0.0300	78	70-130	
4-Bromofluor			0.0321	0.0300	107	70-130	
Lab Batch #:		Sample: 578034-001 / SMP	Batch:				
Units:	mg/kg	Date Analyzed: 03/03/18 13:47	SUR	ROGATE R	RECOVERY	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorob	enzene		0.0224	0.0200		70.120	
4-Bromofluor			0.0224	0.0300	75	70-130	
4-Bromonuor	obenzene		0.0258	0.0300	86	70-130	

* 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: GJ West COOP Unit#210

Lab Batch #	: 3042714	Sample: 578034-003 / SMP	Batc	h: 1 Matrix	: Soil		
U nits:	mg/kg	Date Analyzed: 03/03/18 15:22	SU	JRROGATE R	ECOVERY S	STUDY	
	BTEX	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorob	enzene		0.0244	0.0300	81	70-130	
4-Bromofluor	obenzene		0.0327	0.0300	109	70-130	
Lab Batch #	: 3042782	Sample: 7640130-1-BLK / B	LK Batc	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 04:17	SU	JRROGATE R	ECOVERY S	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta		Anarytes	92.0	100	92	70-135	
o-Terphenyl			48.2	50.0	92	70-135	
Lab Batch #	• 30/271/	Sample: 7640101-1-BLK / B				/0-155	
Units:	mg/kg	Date Analyzed: 03/03/18 10:56					
Units.	iiig/Kg	Date Analyzed: 05/05/18 10.50	SU	JRROGATE R	ECOVERY	STUDY	
	BTEX	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorob	enzene		0.0243	0.0300	81	70-130	
4-Bromofluor	obenzene		0.0318	0.0300	106	70-130	
Lab Batch #	: 3042782	Sample: 7640130-1-BKS / B	KS Batc	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 04:37	SU	JRROGATE R	ECOVERY S	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta		Anaryus	104	100	104	70-135	
o-Terphenyl			50.9	50.0	104	70-135	
Lab Batch #	: 3042714	Sample: 7640101-1-BKS / B				/0-155	
Units:	mg/kg	Date Analyzed: 03/03/18 09:00		JRROGATE R			
ciiitas.	6	Date Analyzet, 05/05/10 07.00	SU	KKUGAIE K	LCOVERYS		
		by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorob	enzene		0.0263	0.0300	88	70-130	
4-Bromofluoi	obenzene		0.0344	0.0300	115	70-130	

* 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: GJ West COOP Unit#210

	r ders : 578034 #: 3042782	4, Sample: 7640130-1-BSD / I	BSD Batcl	Project ID h: 1 Matrix	: x: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 04:56	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		110	100	110	70-135	
o-Terpheny	1		54.6	50.0	109	70-135	
Lab Batch	#: 3042714	Sample: 7640101-1-BSD / 1	BSD Batcl	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 09:19	SU	RROGATE R	ECOVERY	STUDY	
		K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4.5.0		Analytes					
1,4-Difluor			0.0274	0.0300	91	70-130	
	orobenzene	a	0.0364	0.0300	121	70-130	
	#: 3042782	Sample: 578034-003 S / MS					
Units:	mg/kg	Date Analyzed: 03/03/18 06:18	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		101	99.7	101	70-135	
o-Terpheny	1		48.6	49.9	97	70-135	
Lab Batch	#: 3042714	Sample: 578037-001 S / MS	S Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 03/03/18 09:39	SU	RROGATE R	ECOVERY	STUDY	
		K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluor		Anarytes	0.0253	0.0300	84	70-130	
,	orobenzene		0.0233	0.0300	116	70-130	
	#: 3042782	Sample: 578034-003 SD / N				/0-150	
Units:	mg/kg	Date Analyzed: 03/03/18 06:38		RROGATE R		STUDV	
			Amount	True		Control	
		by SW8015 Mod Analytes	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flags
		1 11111 y 1 00					
1-Chlorooc	tane		107	99.9	107	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: GJ West COOP Unit#210

)rders : 57803 h #: 3042714	4, Sample: 578037-001 SD / 1	MSD Batcl	Project ID: n: 1 Matrix:								
Units:	mg/kg	Date Analyzed: 03/03/18 09:58	SU	SURROGATE RECOVERY STUDY								
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags					
1,4-Difluor	robenzene		0.0261	0.0300	87	70-130						
4-Bromofl	luorobenzene		0.0344	0.0300	115	70-130						

* 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



BS / BSD Recoveries



.

Project Name: GJ West COOP Unit#210

Work Ord	er #: 578034							Pro	ject ID:			
Analyst:	ALJ	D	ate Prepar	ed: 03/03/20	18			Date A	nalyzed:	03/03/2018		
Lab Batch I	D: 3042714 Sample: 7640	101-1-BKS	Batc	h #: 1					Matrix:	Solid		
Units:	mg/kg		BLAN	K /BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
	BTEX by EPA 8021B	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]				
Benzene	e	<0.00199	0.0996	0.0877	88	0.100	0.0869	87	1	70-130	35	
Toluene	2	<0.00199	0.0996	0.0933	94	0.100	0.0926	93	1	70-130	35	
Ethylber	nzene	< 0.00199	0.0996	0.110	110	0.100	0.107	107	3	70-130	35	
m,p-Xyl	lenes	<0.00398	0.199	0.217	109	0.200	0.211	106	3	70-130	35	
o-Xylen	ne	< 0.00199	0.0996	0.107	107	0.100	0.103	103	4	70-130	35	
Analyst:	OJS	D	ate Prepar	ed: 03/02/20	18	-		Date A	nalyzed:	03/02/2018	•	
Lab Batch I	D: 3042830 Sample: 7640	137-1-BKS	Batcl	h #: 1					Matrix:	Solid		
Units:	mg/kg		BLAN	K /BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
	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
	lytes							[0]				<u> </u>
Chloride	e	<5.00	250	235	94	250	228	91	3	90-110	20	

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



BS / BSD Recoveries



Project Name: GJ West COOP Unit#210

Work Order #: 578034							Pro	ect ID:			
Analyst: ARM	D	ate Prepai	red: 03/02/201	18			Date A	nalyzed: (03/03/2018		
Lab Batch ID: 3042782 Sample:	7640130-1-BKS	Batc	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 2	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	ЭY	
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
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1030	103	1000	1150	115	11	70-135	35	
Diesel Range Organics (DRO)	<15.0	1000	852	85	1000	932	93	9	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



Form 3 - MS / MSD Recoveries

SUP ACCREDIE

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Project Name: GJ West COOP Unit#210

Work Order # : 578034						Project II):				
Lab Batch ID: 3042714	QC- Sample ID:	578037-	001 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed: 03/03/2018	Date Prepared:	03/03/20	018	Ar	nalyst: A	ALJ					
Reporting Units: mg/kg		Μ	ATRIX 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]	itesute [1]	[G]		,	/ 112	
Benzene	<0.00199	0.0994	0.0599	60	0.0998	0.0667	67	11	70-130	35	X
Toluene	0.0122	0.0994	0.0689	57	0.0998	0.0794	67	14	70-130	35	X
Ethylbenzene	0.00447	0.0994	0.0717	68	0.0998	0.0787	74	9	70-130	35	X
m,p-Xylenes	0.00812	0.199	0.142	67	0.200	0.153	72	7	70-130	35	X
o-Xylene	0.00412	0.0994	0.0736	70	0.0998	0.0772	73	5	70-130	35	
Lab Batch ID: 3042830	QC- Sample ID:	578034-	001 S	Ba	ntch #:	1 Matrix	k: Soil				
Date Analyzed: 03/02/2018	Date Prepared:	03/02/20	018	Ar	nalyst: (OJS					
Reporting Units: 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		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	588	250	790	81	250	807	88	2	90-110	20	X
Lab Batch ID: 3042830	QC- Sample ID:	578036-	002 S	Ba	tch #:	1 Matrix	k: Soil		1		1
Date Analyzed: 03/03/2018	Date Prepared:	03/02/20	018	Ar	nalyst: (OJS					
Reporting Units: 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]	[-]	[D]	[E]		[G]				
Chloride	<4.95	248	237	96	248	233	94	2	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.

Page 13 of 16



Form 3 - MS / MSD Recoveries

Project Name: GJ West COOP Unit#210



Work Order # :	578034						Project II):				
Lab Batch ID:	3042782	QC- Sample ID:	578034	-003 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	03/03/2018	Date Prepared:	03/02/2	018	An	alyst: A	ARM					
Reporting Units:	mg/kg		Μ	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	1020	102	999	1090	109	7	70-135	35	
Diesel Range Or	rganics (DRO)	<15.0	997	825	83	999	880	88	6	70-135	35	

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

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

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CHAIN OF CUSTODY Page <u>1</u> Of <u>1</u>

San Antonio, Texas (210-509-3334)

Stafford, Texas (281-240-4200)

Setting the Standard since 1990

Phoenix, Arizona (480-355-0900)

Final 1.000

5. Voltoe: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for and to assume any responsibility for and to be so or expenses incurred by the Client if such losss are due to circumstances beyond the control of Xanco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples received by Xenco but not analyzed will be invoiced as \$25 per sample; These terms \$25\$ will be applied to each project. Xenco's liability will be finited to the cost of samples received by Xenco but not analyzed will be invoiced as \$25 per sample; These terms \$25\$ will be applied to each project. Xenco's liability will be limited to the cost of samples received by Xenco but not analyzed will be invoiced as \$25 per sample; These terms \$25\$ will be applied to each project. Xenco's liability will be limited to the cost of samples received by Xenco but not analyzed will be invoiced as \$25 per sample; These terms \$25\$ will be applied to each project. Xenco's liability will be limited to the cost of samples received by Xenco but not analyzed will be invoiced as \$25 per sample; These terms \$25\$ will be applied to each project. Xenco's liability will be limited to the cost of samples received by Xenco but not analyzed will be invoiced as \$25 per sample; These terms \$25\$ will be applied to each project. Xenco's liability will be limited to the cost of samples received by Xenco but not analyzed will be linvoiced as \$25 per sample; These terms \$25\$ will be applied to each project. Xenco's liability will be limited to the cost of samples received by Xenco but not analyzed will be applied to each project. Xenco's liability will be limited to the cost of samples and the cost of samples areceived by Xenco but not analyzed will be applied to each project.	Relinquished by:	ω	Relinquished by Sampler:		TAT Starts Day received by Lab, if received by 5:00 pm	3 Day EMERGENCY	2 Day EMERGENCY	x Next Day EMERGENCY	Same Day TAT	Turnaround Time (Business days)	10	9	8	7	σ	5	4	3 S-2 W. SIDEWALL	2 S-2 E. SIDEWALL	1 S-2 Bttm	No. Field ID / Point of Collection		Samplers's Name: Sheldon Hitchcock	Project Contact: Sheldon Hitchcock	Email: <u>Sinitchcock@conciro.com</u> dneel2@concho.com; cgray@concho.com; rhaskell@concho.com	2407 Pecos Ave. Artesia NM 88210	COG Operating, LLC	Client / Reporting Information			Dallas Texas (214-902-0300)
inquishment of samples constit oses are due to circumstances			1	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY	_ab, if received by 5:0		Contract TAT	7 Day TAT	5 Day TAT	s)											Collection				Phone No: 575-703-6475 m; rhaskell@concho.com						
utes a valid p beyond the c	Date Time		Date Time: 3-1 - 18 Date Time:	Y MUST BE	00 pm													N/A	NIA	4' 2"	Sample Depth				1						
urchase orde ontrol of Xeno	*		90:1	DOCUMENT														2/29/2026	2/29/2025	2/29/2018	Date	Collection		PO Number:	INVOICE TO:	4	GJ West COO Project Location:	Project Name/Number:			Midland,
5 r from client c o. A minimum	Received By:	ω	Received By:	ED BELOW E		RL [Le.	Le	Le									11:50	11:40	12:00	Time				Attn: Robert McNeill 600 W. Illnois Ave.	śl.	GJ West COOP Unit #210 Project Location:	e/Number:			Midland, Texas (432-704-5251)
ompany to	d By:		1 By:	ACH TIM		TRRP Checklist	vel 3 (CL	vel III Sto	Level II Std QC		S							s	s	S	Matrix			Tx, 7970	erating, bert McN Inois Av	Eddy County, NM	#210	Project Information		15	-704-52
Xenco, its			Jal	SAMPLE		klist	Level 3 (CLP Forms)	Level III Std QC+ Forms	QC	Data Deliverable Information	_							-	-	-	# of bottles				eill C	, NM		nation		www.xenco.com	51)
affiliatee a				S CHANG				rms		erable Info				-							HCI NaOH/Zn Acetate	Nu								io.com	
ind subco				E POSSE						rmation											HNO3	Number of preserved bottles									
phrastore	Custody Seal #	4	Relinquished By:	SSION, I			UST /	TRRP	Level			-		_				_			H2SO4 NaOH	preserv									
	y Seal #		iished E 1.412-0 Iished E	NCLUDIN			UST / RG -411	TRRP Level IV	Level IV (Full Data Pkg	1											NaHSO4	ed bottl									
			sy for	IG COUF					Data Pk					-	-			×	×	×	MEOH ICE	es									
			A-	IER DEL					g /raw data)									×	×	×	TPH EX	TEN	ND	ED	(EPA8	015M)				Velico	Yanco
	Prese		-	- 1					lata)									×	×	×	BTEX (I									Velico daore #	Duoto #
	ved wh		Date Time: 3 - 1 - 18 Date Time:												_			×	×	×	CHLOR	IDE	S ((EP/	A 300)		n		Analy		
_	ere app		US ···		FED																								Analytical Information		
	icable		ø		-EX / UF					Notes:																			ormatio		<u>_</u>
		4	Received By		FED-EX / UPS: Tracking #	Cor)	CF:	Terr		-			-								4							-	Velico 200 #	
	Onl		d By:	J	king #	ecte	(6-23: +0.2°C)	CF:(0-6: -0.2°C)	Temp: 3																					-	*
	ce		A	1)	dler	+0.	-0.2°	SN C													1								04	5
	Cooler		A			Corrected Lemp:	2°C)	<u> </u>	0																					þ	
nd shall n	Temp.		Q.	11	1	10)		R												<u>1</u>									R	J
ot assume	Therr		N		2	t	-		IR ID:R-8									2			Field Comments	A = Air	WW=	WI = Wipe	SL = SW =	P = P	GW = S	W = Water	Mati	+	
any resp	no. Corr		210						ά												Iments	lir	WW= Waste Water	Nipe	SW = Surface water SL = Sludge OW =Ocean/Sea Wa	DW = Drinkin P = Product	S = Soil/Sed/Solid GW =Ground Water	later	Matrix Codes		
onsibility for	Factor		1																				Nater		SW = Surrace water SL = Sludge OW =Ocean/Sea Water	DW = Drinking Water P = Product	Solid		S		
sed	to	Im	iging.	: 5	/8/	202	3 12	:23	101	PM									10						er F		200				

Received by OCD: 4/11/2023 2:02:04 PM

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MATORIES

Received by OCD: 4/11/2023 2:02:04 PM

Work Order #: 578034



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC Date/ Time Received: 03/02/2018 11:50:00 AM

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

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.4	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	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	NM JOB
#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: 03/02/2018

Checklist reviewed by: Jessign Whamer

Jessica Kramer

Date: 03/02/2018

Analytical Report 578037

for COG Operating LLC

Project Manager: Sheldon Hitchcock

GJ West COOP Unit#210

05-MAR-18

Collected By: Client



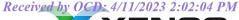


1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-18-24), 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 (T104704400-18-14) 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)





05-MAR-18

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

Reference: XENCO Report No(s): **578037 GJ West COOP Unit#210** Project Address: Eddy County, 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) 578037. 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. 578037 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Veramer

Jessica Kramer Project Assistant

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Sample Cross Reference 578037



COG Operating LLC, Artesia, NM

GJ West COOP Unit#210

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-3 BTTM	S	02-28-18 11:00	4' - 2"	578037-001
S-3 E. Sidewall	S	02-28-18 11:10		578037-002
S-3 W. Sidewall	S	02-28-18 11:20		578037-003



CASE NARRATIVE

Page 89 of 130

Client Name: COG Operating LLC Project Name: GJ West COOP Unit#210

Project ID: Work Order Number(s): 578037

ORATORIES

Report Date: 05-MAR-18 Date Received: 03/02/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3042714 BTEX by EPA 8021B

Lab Sample ID 578037-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes recovered below QC limits in the Matrix Spike. Benzene, Toluene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 578037-001, -002, -003.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene is within laboratory Control Limits, therefore the data was accepted.

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



Sheldon Hitchcock

Eddy County, NM

Project Id:

Project Location:

Contact:

Certificate of Analysis Summary 578037

COG Operating LLC, Artesia, NM Project Name: GJ West COOP Unit#210



Date Received in Lab: Fri Mar-02-18 11:50 am Report Date: 05-MAR-18 Project Manager: Jessica Kramer

	Lab Id:	578037-	001	578037-0	002	578037-0	003		
	Field Id:	S-3 BT	ГМ	S-3 E. Side	ewall	S-3 W. Sid	ewall		
Analysis Requested	Depth:	4'-2"							
	Matrix:	SOIL	_	SOIL	,	SOIL			
	Sampled:	Feb-28-18	11:00	Feb-28-18	11:10	Feb-28-18	11:20		
BTEX by EPA 8021B	Extracted:	Mar-03-18	08:00	Mar-03-18	08:00	Mar-03-18	08:00		
	Analyzed:	Mar-03-18	11:15	Mar-03-18	16:39	Mar-03-18	16:58		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene	·	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00199	0.00199		
Toluene		0.0122	0.00200	< 0.00199	0.00199	< 0.00199	0.00199		
Ethylbenzene		0.00447	0.00200	< 0.00199	0.00199	< 0.00199	0.00199		
m,p-Xylenes		0.00812	0.00401	< 0.00398	0.00398	< 0.00398	0.00398		
o-Xylene		0.00412	0.00200	< 0.00199	0.00199	< 0.00199	0.00199		
Total Xylenes		0.0122	0.00200	< 0.00199	0.00199	< 0.00199	0.00199		
Total BTEX		0.0289	0.00200	< 0.00199	0.00199	< 0.00199	0.00199		
Chloride by EPA 300	Extracted:	Mar-02-18	16:00	Mar-02-18	16:00	Mar-02-18	16:00		
	Analyzed:	Mar-03-18	01:13	Mar-03-18	01:19	Mar-03-18	01:24		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		13.7	4.99	22.8	5.00	47.0	4.98		
TPH by SW8015 Mod	Extracted:	Mar-02-18	18:00	Mar-02-18	18:00	Mar-02-18	18:00		
	Analyzed:	Mar-03-18	08:00	Mar-03-18	08:19	Mar-03-18	08:41		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0		
Diesel Range Organics (DRO)		<14.9	14.9	<15.0	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)		<14.9	14.9	<15.0	15.0	<15.0	15.0		
Total TPH		<14.9	14.9	<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

fession kramer

Jessica Kramer Project Assistant

Page 5 of 16



Flagging Criteria



Page 91 of 130

- 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	



570027

**7

Form 2 - Surrogate Recoveries

Project Name: GJ West COOP Unit#210

	:ders : 57803' #: 3042782	7, Sample: 578037-001 / SMP	Batch:	Project ID 1 Matrix			
Units:	mg/kg	Date Analyzed: 03/03/18 08:00	SUR	ROGATE R	RECOVERY	STUDY	
		oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
4 611		Analytes					ļ
1-Chlorooct			98.9	99.6	99	70-135	<u> </u>
o-Terpheny			50.4	49.8	101	70-135	<u> </u>
	#: 3042782	Sample: 578037-002 / SMP	Batch:				
Units:	mg/kg	Date Analyzed: 03/03/18 08:19	SUR	ROGATE R	RECOVERY	STUDY	
		by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 Chlores et		Analytes	105	00.0		70.105	ļ
1-Chlorooct			105	99.8	105	70-135	I
o-Terpheny		G	52.2	49.9 1 Matrix	105	70-135	<u>.</u>
	#: 3042782	Sample: 578037-003 / SMP	Batch:				
Units:	mg/kg	Date Analyzed: 03/03/18 08:41	SUR	ROGATE R	RECOVERY	STUDY	
	TPH I	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct	tane		96.4	99.9	96	70-135	
o-Terpheny	1		48.3	50.0	97	70-135	
Lab Batch	#: 3042714	Sample: 578037-001 / SMP	Batch:	1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 03/03/18 11:15	SUR	ROGATE R	RECOVERY	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor			0.0247	0.0300	82	70-130	
4-Bromoflu			0.0322	0.0300	107	70-130	
	#: 3042714	Sample: 578037-002 / SMP	Batch:		1		
Units:	mg/kg	Date Analyzed: 03/03/18 16:39	SUR	ROGATE R	RECOVERY	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4 Diffuor	obenzene	· · · · · · · · · · · · · · · · · · ·	0.0245	0.0300	82	70-130	
	J C CHILCHIC		0.0275	0.0500	02	10-150	1

* 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: GJ West COOP Unit#210

Lab Batch a	#: 3042714	Sample: 578037-003 / SMP	Bate	ch: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 03/03/18 16:58	SU	JRROGATE R	ECOVERY S	STUDY	
	BTEX	L by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0237	0.0300	79	70-130	
4-Bromofluc	orobenzene		0.0304	0.0300	101	70-130	
Lab Batch #	#: 3042782	Sample: 7640130-1-BLK / B	LK Bate	ch: 1 Matrix	: Solid	<u> </u>	
Units:	mg/kg	Date Analyzed: 03/03/18 04:17	SU	URROGATE R	ECOVERY S	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta		Anarytes	92.0	100	92	70-135	
o-Terphenyl			48.2	50.0	92	70-135	
Lab Batch		Sample: 7640101-1-BLK / B				/0-155	
Units:	mg/kg	Date Analyzed: 03/03/18 10:56					
Units:	mg/kg	Date Analyzed: 05/05/18 10.50	SU	JRROGATE R	ECOVERYS	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0243	0.0300	81	70-130	
4-Bromofluc	orobenzene		0.0318	0.0300	106	70-130	
Lab Batch #	#: 3042782	Sample: 7640130-1-BKS / B	KS Bate	ch: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 04:37	SU	URROGATE R	ECOVERY S	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta			104	100	104	70-135	
o-Terphenyl			50.9	50.0	104	70-135	
• •	#: 3042714	Sample: 7640101-1-BKS / B					
Units:	mg/kg	Date Analyzed: 03/03/18 09:00		URROGATE R		STUDY	
		K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage
		Analytes			[D]		
1,4-Difluoro	benzene		0.0263	0.0300	88	70-130	
4-Bromofluc	probenzene		0.0344 0.0300 115 70-				

* 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: GJ West COOP Unit#210

	r ders : 57803' #: 3042782	7, Sample: 7640130-1-BSD / H	BSD Batch	Project ID : 1 Matrix	: c: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 04:56	SUI	RROGATE R	RECOVERY	STUDY	
		oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		110	100	110	70-135	
o-Terpheny	1		54.6	50.0	109	70-135	
Lab Batch	#: 3042714	Sample: 7640101-1-BSD / H	BSD Batch	: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 09:19	SUI	RROGATE R	RECOVERY	STUDY	
		X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 4 D'C		Analytes	0.007.4	0.0200		50.100	
1,4-Difluor			0.0274	0.0300	91	70-130	
	orobenzene	G 1 570024.002.G / MS	0.0364	0.0300	121	70-130	
	#: 3042782	Sample: 578034-003 S / MS					
Units:	mg/kg	Date Analyzed: 03/03/18 06:18	SUI	RROGATE R	RECOVERY	STUDY	
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		101	99.7	101	70-135	
o-Terpheny	1		48.6	49.9	97	70-135	
Lab Batch	#: 3042714	Sample: 578037-001 S / MS	Batch	: 1 Matrix	c: Soil		
Units:	mg/kg	Date Analyzed: 03/03/18 09:39	SUI	RROGATE R	RECOVERY	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluor			0.0253	0.0300	84	70-130	
4-Bromoflu			0.0348	0.0300	116	70-130	
	#: 3042782	Sample: 578034-003 SD / N					
Units:	mg/kg	Date Analyzed: 03/03/18 06:38		RROGATE R	RECOVERY	STUDY	
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooc	tane		107	99.9	107	70-135	
o-Terpheny	1		52.9	50.0	106	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: GJ West COOP Unit#210

	orders : 57803 h #: 3042714	7, Sample: 578037-001 SD / N	MSD Batcl	Project ID: h: 1 Matrix:			
Units:	mg/kg	Date Analyzed: 03/03/18 09:58	SU	RROGATE RI	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluor	robenzene		0.0261	0.0300	87	70-130	
4-Bromofl	uorobenzene		0.0344	0.0300	115	70-130	

* 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



BS / BSD Recoveries



.

Project Name: GJ West COOP Unit#210

Work Order #: 578037							Proj	ject ID:			
Analyst: ALJ	D	ate Prepa	red: 03/03/20	18			Date A	nalyzed: (03/03/2018		
Lab Batch ID: 3042714 S	ample: 7640101-1-BKS	Batc	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
BTEX by EPA 802	21B Blank Sample Result [A]		Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	<0.00199	0.0996	0.0877	88	0.100	0.0869	87	1	70-130	35	
Toluene	<0.00199	0.0996	0.0933	94	0.100	0.0926	93	1	70-130	35	
Ethylbenzene	<0.00199	0.0996 0.110		110	0.100	0.107	107	3	70-130	35	
m,p-Xylenes	<0.00398	0.199	0.217	109	0.200	0.211	106	3	70-130	35	
o-Xylene	<0.00199	0.0996	0.107	107	0.100	0.103	103	4	70-130	35	
Analyst: OJS	D	ate Prepa	red: 03/02/20	18	*		Date A	nalyzed: (3/02/2018	+	
Lab Batch ID: 3042830 S	ample: 7640137-1-BKS	Batc	h #: 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K /BLANK	SPIKE / 2	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI)Y	
Chloride by EPA 3 Analytes	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	235	94	250	228	91	3	90-110	20	

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



BS / BSD Recoveries



Project Name: GJ West COOP Unit#210

Work Order #: 578037							Pro	Project ID:									
Analyst: ARM	D	ate Prepai	red: 03/02/201	18			Date A	nalyzed: (03/03/2018								
Lab Batch ID: 3042782 Sample: 7640	130-1-BKS	Bate	h #: 1					Matrix: S	Solid								
Units: mg/kg		BLAN	K /BLANK	SPIKE / 2	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	ЭY							
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						
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]										
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1030	103	1000	1150	115	11	70-135	35							
Diesel Range Organics (DRO)	<15.0	1000	852	85	1000	932	93	9	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



Form 3 - MS / MSD Recoveries

Project Name: GJ West COOP Unit#210



Work Order # :	578037						Project II) :				
Lab Batch ID:	3042714	QC- Sample ID:	578037	-001 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	03/03/2018	Date Prepared:	03/03/2	018	An	alyst: A	ЛIJ					
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]		[D]	[E]		[G]				
Benzene		<0.00199	0.0994	0.0599	60	0.0998	0.0667	67	11	70-130	35	Х
Toluene		0.0122	0.0994	0.0689	57	0.0998	0.0794	67	14	70-130	35	Х
Ethylbenzene		0.00447	0.0994	0.0717	68	0.0998	0.0787	74	9	70-130	35	Х
m,p-Xylenes		0.00812	0.199	0.142	67	0.200	0.153	72	7	70-130	35	Х
o-Xylene		0.00412	0.0994	0.0736	70	0.0998	0.0772	73	5	70-130	35	
Lab Batch ID:	3042830	QC- Sample ID:	578034	-001 S	Ba	tch #:	1 Matrix	:: Soil				
Date Analyzed:	03/02/2018	Date Prepared:	03/02/2	018	An	alyst: (DJS					
Reporting Units:	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
		Parent										
	Chloride by EPA 300	Sample	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Chloride by EPA 300 Analytes		Spike Added [B]			Spike Added [E]		-	RPD %	Control		Flag
Chloride	·	Sample Result	Added	Result	Sample %R	Added	Spiked Sample	Dup. %R		Control Limits	Limits	Flag
Chloride	·	Sample Result [A]	Added [B] 250	Result [C] 790	Sample %R [D] 81	Added [E]	Spiked Sample Result [F]	Dup. %R [G] 88	%	Control Limits %R	Limits %RPD	
	Analytes	Sample Result [A] 588	Added [B] 250 578036	Result [C] 790 -002 S	Sample %R [D] 81 Ba	Added [E] 250	Spiked Sample Result [F] 807 1 Matrix	Dup. %R [G] 88	%	Control Limits %R	Limits %RPD	
Chloride Lab Batch ID: Date Analyzed:	Analytes 3042830	Sample Result [A] 588 QC- Sample ID:	Added [B] 250 578036 03/02/2	Result [C] 790 -002 S 018 -002 S	Sample %R [D] 81 Ba An	Added [E] 250 tch #: alyst: C	Spiked Sample Result [F] 807 1 Matrix	Dup. %R [G] 88 x: Soil	%	Control Limits %R 90-110	Limits %RPD	
Chloride Lab Batch ID: Date Analyzed: Reporting Units:	Analytes 3042830 03/03/2018 mg/kg Chloride by EPA 300	Sample Result [A] 588 QC- Sample ID:	Added [B] 250 578036 03/02/2	Result [C] 790 -002 S 018 -002 S	Sample %R [D] 81 Ba An E / MAT	Added [E] 250 tch #: alyst: C	Spiked Sample Result [F] 807 1 Matrix DJS	Dup. %R [G] 88 x: Soil	%	Control Limits %R 90-110	Limits %RPD	
Chloride Lab Batch ID: Date Analyzed: Reporting Units:	Analytes 3042830 03/03/2018 mg/kg	Sample Result [A] 588 QC- Sample ID: Date Prepared: Parent Sample	Added [B] 250 578036 03/02/2 M Spike	Result [C] 790 -002 S 018 IATRIX SPIK Spiked Sample Result	Sample %R [D] 81 Ba An E / MAT Spiked Sample	Added [E] 250 tch #: alyst: C RIX SPI Spike	Spiked Sample Result [F] 807 1 Matrix DJS KE DUPLICA Duplicate Spiked Sample	Dup. %R [G] 88 c: Soil TE REC Spiked Dup.	% 2 OVERY : RPD	Control Limits %R 90-110 STUDY Control Limits	Limits %RPD 20 Control Limits	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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Form 3 - MS / MSD Recoveries

Project Name: GJ West COOP Unit#210



Work Order # :	578037						Project II):				
Lab Batch ID:	3042782	QC- Sample ID:	578034	-003 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:			03/02/2	018	An	alyst: A	ARM					
Reporting Units:	mg/kg		Μ	ATRIX 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	1020	102	999	1090	109	7	70-135	35	
Diesel Range Or	rganics (DRO)	<15.0	997	825	83	999	880	88	6	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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Received by OCD: 4/11/2023 2:02:04 PM

losses or expenses incurred by the Client it such loses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the will be enforced unless previously negotiated under a fully executed client contract.	5 Notice: Notice: Signature of this document and relinquishment of samples con	3 Relinquished by:	Relinquished by:	Sampler:	TAT Starts Day received by Lab, if received by 5:00 pm	3 Day EMERGENCY	2 Day EMERGENCY	X Next Day EMERGENCY 7 Day TAT	Same Day TAT 5 Day TAT	Turnaround Time (Business days)	10	Ø	8	7	6	σ	4	3 S-3 W. SIDEWALL	2 S-3 E. SIDEWALL	1 S-3 BTTM	No. Field ID / Point of Collection	Samplers a Mane, Shenon Linchovy	Dania Israia Manaa Oholdan Ulfabaaal	Email: <u>shitchcock@concho.com</u> Phone No: 575-703-6475 dneel2@concho.com; cgray@concho.com; rhaskell@concho.com project contact: Sheldon Hitchcock	Company Address: 2407 Pecos Ave. Artesia NM 88210	Company Name / Branch: COG Operating, LLC	Client / Reporting Information	-		Dallas Texas (214-902-0300)	Setting the Standard since 1990 Stafford,Texas (281-240-4200)	LABORATORIES	XENCO
ces beyond the contract.	nstitutes a valid p	Date Time:	Date Time:	Date Time:														NIA	N/A	4' 2"	Sample Depth			3475									
ontrol of Xenco	urchase order f	0		1:05	DOCIMENTER													2/28/2018	2/28/2018	2/28/2018	Date	Colloction	PO Number:	Invoice To:	Project Location: Eddy County, NM	Project Name/Number: GJ West COOP Unit #210				Midland, Texas (432-704-5251)	San Antonio, Texas (210-509-3334)		
. A minimum c	5 from client com	3 Received By:	Received By:	Received By:		TRRI	Leve	Leve	Leve									11:20	11:10	11:00	Time			COG Operating, LLC Attn: Robert McNeill 600 W. Illnois Ave. Midland Tx, 79701	NM IN	Number: DOP Unit #2	Project		-	exas (432-7)	o, Texas (2		CH/
harge of \$75 w	pany to Xenco	y:	C	Y: P	TIME SAM	TRRP Checklist	Level 3 (CLP Forms)	Level III Std QC+ Forms	Level II Std QC	Data De	S 1	s 1	S 1	s 1	s 1	s 1	د د	s -	s 1	د د	# of # bottles	_		ating, LLC t McNeill bis Ave. 79701		210	Project Information		WWW.X	04-5251)	10-509-333	Page	CHAIN OF
rill be applied t	o, its affiliates a		Brok	- (),			ms)	Forms		Data Deliverable Information	_										HCI	N							www.xenco.com	,	4)	1 Of	OF
o each project.	and subcontrac	4 Cus	Rel	Rel	FDOSSESSI		U.		Le	rmation	_										NaOH/Zn Acetate HNO3 OF H2SO4 NaOH NaHSO4 MEOH											-	CU
Xenco's liabili	tors. It assigns	4 Custody Seal #	Relinquished By:	Relinquished By			UST / RG -411	TRRP Level IV	Level IV (Full Data Pkg /raw data)												NaOH NaHSO4	and hall											CUSTODY
ty will be lin	s standard t		y: but						Data Pkg									×	×	×	ICE	2						14					DY
nited to the	erms and c	Pro	G	P					raw data									××	××	××	TPH EXT BTEX (EF				015M)				Xenco Quote #		^o hoenix,		
cost of san	onditions of	eserved w	Date Time:	Date Time:	V													×	×	×	CHLORIE							Ana	te #		Arizona		
te cost of samples. Any samples	f service. Xe	Preserved where applicable		01	FED						-																	Analytical Information			^o hoenix, Arizona (480-355-0900)		
amples	enco will	licable		У Р R	-EX / UPS					Notes:																		ormation	Xen		-0900)		
(corre	(CF:(C	Temp:	Received By:	Received By	FED-EX / UPS: Tracking #																								Xenco Job #				
ected Temp:	(CF:(0-6: -0.2°C)			12C	#						-																		5				
(b-z3: +U.2°C) Corrected Temp: ス	2°C)	6	Z	Sol of																									AH AH				
4		IR ID:R-8		13/2/1811:50	1	10 /2	0.2.2	12	0.2-1		Die										Field Comments	A = Air		SW = Surface water SL = Sludge OW =Ocean/Sea Water WI = Wipe	GW =Ground Water DW = Drinking Water P = Product	w = water S = Soil/Sed/Solid		Matrix Codes	727				
ĸe	ieu:	sed to	, 1m	agin	<u>g: </u>	y 0/ 4	043	14:	43:1	. V .	[[]] [V]	L					Pag	e 15	of f	16					Final	1.00	0	l					

Received by OCD: 4/11/2023 2:02:04 PM

Work Order #: 578037



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC Date/ Time Received: 03/02/2018 11:50:00 AM

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

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.4	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	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	NM JOB
#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: 03/02/2018

Checklist reviewed by: Jessign Whamer

Jessica Kramer

Date: 03/02/2018





Project Id: Contact: Sheldon Hitchcock

Project Location:

Certificate of Analysis Summary 577421

COG Operating LLC, Artesia, NM Project Name: GJ West Loop Unit 210



Date Received in Lab: Mon Feb-26-18 07:45 am Report Date: 27-FEB-18 Project Manager: Jessica Kramer

Lah Id.	577421 001					
Field Id:	S4-Bottom Hole					
Depth:	2.5- ft					
Matrix:	SOIL					
Sampled:	Feb-23-18 11:00					
Extracted:	Feb-26-18 10:00	1				
Analyzed:	Feb-26-18 14:04					
Units/RL:	mg/kg RL					
	<0.00199 0.00199					
	<0.00199 0.00199					
	<0.00199 0.00199					
	0.00414 0.00398					
	<0.00199 0.00199					
	0.00414 0.00199					
	0.00414 0.00199					
Extracted:	Feb-26-18 14:00					
Analyzed:	Feb-26-18 21:36					
Units/RL:	mg/kg RL					
	153 4.90					
Extracted:	Feb-26-18 08:00					
Analyzed:	Feb-26-18 10:34					
Units/RL:	mg/kg RL					
	<15.0 15.0					
	<15.0 15.0					
	<15.0 15.0					
	<15.0 15.0					
	Matrix: Sampled: Extracted: Analyzed: Units/RL: Extracted: Analyzed: Units/RL: Extracted: Analyzed:	Field Id: S4-Bottom Hole Depth: $2.5 \cdot ft$ Matrix: SOIL Sampled: Feb-23-18 $\cdot 1 : 00$ Extracted: Feb-26-18 $\cdot 1 : 00$ Analyzed: Feb-26-18 $\cdot 1 : 00$ Analyzed: Feb-26-18 $\cdot 1 : 00$ Units/RL: mg/kg RL 0.00199 0.00199 0.00199 < 0.00199 0.00199 0.00199 < 0.00199 0.00199 0.00199 < 0.00414 0.00398 < 0.00414 0.00199 0.00414 0.00199 Extracted: Feb-26-18 $\cdot 1 : : 30$ Malyzed: Feb-26-18 $\cdot 1 : : 34$ Units/RL: mg/kg RL Malyzed: Feb-26-18 $\cdot 1 : : 34$ Units/RL: mg/kg RL Un	Field Id: S4-Bottom Hole Depth: 2.5- ft Matrix: SOIL Sampled: Feb-23-18 11:00 Extracted: Feb-26-18 10:00 Analyzed: Feb-26-18 14:04 Units/RL: mg/kg RL <0.00199	Field Id: S4-Bottom Hole Depth: 2.5 - ft Matrix: SOIL Sampled: Feb-23-18 11:00 Extracted: Feb-26-18 10:00 Analyzed: Feb-26-18 14:04 Units/RL: mg/kg RL < 0.00199 0.00199 < 0.00199 0.00199 < 0.00199 0.00199 < 0.00199 0.00199 < 0.00199 0.00199 < 0.00414 0.00398 Extracted: Feb-26-18 14:00 Analyzed: Feb-26-18 10:34 Units/RL: mg/kg RL Mainty/RE: Feb-26-18 10:34 Units/RL: mg/kg RL Analyzed: Feb-26-18 10:34 Hermitian for the second s	Field Id: S4-Bottom Hole Depth: 2.5- ft Matrix: SOIL Sampled: Feb-23-18 11:00 Extracted: Feb-26-18 10:00 Analyzed: Feb-26-18 14:04 Units/RL: mg/kg RL Soll Matrix: Soll Malayzed: Feb-26-18 14:04 Units/RL: mg/kg RL Matrix: mg/kg RL Matrix: mg/kg RL Malayzed: Feb-26-18	Field Id: S4-Bottom Hole Depth: 2.5- ft Matrix: SOIL Sampled: Feb-23-18 11:00 Extracted: Feb-26-18 10:00 Analyzed: Feb-26-18 14:04 Units/RL: mg/kg RL 0.00199 0.00199

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

Version: 1.%

fession kramer

Jessica Kramer Project Assistant

Final 1.000

Analytical Report 577421

for COG Operating LLC

Project Manager: Sheldon Hitchcock

GJ West Loop Unit 210

27-FEB-18

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

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

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

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





27-FEB-18

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

Reference: XENCO Report No(s): 577421 GJ West Loop Unit 210 Project Address:

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) 577421. 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. 577421 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,

Jession Vermer

Jessica Kramer Project Assistant

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Page 104 of 130



Sample Cross Reference 577421



COG Operating LLC, Artesia, NM

GJ West Loop Unit 210

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S4-Bottom Hole	S	02-23-18 11:00	2.5 ft	577421-001

Version: 1.%

.



Page 106 of 130

Client Name: COG Operating LLC Project Name: GJ West Loop Unit 210

Project ID: Work Order Number(s): 577421

ORATORIES

Report Date: 27-FEB-18 Date Received: 02/26/2018

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3042157 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030. Lab Sample ID 577421-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Toluene recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 577421-001.

The Laboratory Control Sample for Toluene, Benzene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 577421



COG Operating LLC, Artesia, NM

GJ West Loop Unit 210

Sample Id:S4-Bottom HoleLab Sample Id:577421-001		Matrix: Date Collecte	Soil d: 02.23.18 11.00		ate Received:02 mple Depth: 2.5		
Analytical Method:Chloride by EPA 3Tech:OJSAnalyst:OJSSeq Number:3042243	300	Date Prep:	02.26.18 14.00	%	ep Method: E3 Moisture: Isis: Wo	00P et Weight	
Parameter	Cas Number	Result R	L	Units	Analysis Date	Flag	Dil

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	153	4.90	mg/kg	02.26.18 21.36		1

Analytical Method: TPH By SW801	5 Mod				P	Prep Method: TX	1005P	
Tech: ARM					9	6 Moisture:		
Analyst: ARM		Date Pre	p: 02.26.	18 08.00	E	Basis: We	t Weight	
Seq Number: 3042219								
Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0		mg/kg	02.26.18 10.34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0		mg/kg	02.26.18 10.34	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0		mg/kg	02.26.18 10.34	U	1
Total TPH	PHC635	<15.0	15.0		mg/kg	02.26.18 10.34	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	94	%	70-135	02.26.18 10.34		
o-Terphenyl		84-15-1	96	%	70-135	02.26.18 10.34		



Certificate of Analytical Results 577421



COG Operating LLC, Artesia, NM

GJ West Loop Unit 210

Sample Id:S4-Bottom HoleLab Sample Id:577421-001	Matrix: Soil Date Collected: 02.23.18 11.00	Date Received:02.26.18 07.45 Sample Depth: 2.5 ft
Analytical Method:BTEX by EPA 8021BTech:ALJAnalyst:ALJSeq Number:3042157	Date Prep: 02.26.18 10.00	Prep Method: SW5030B % Moisture: Basis: Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	02.26.18 14.04	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	02.26.18 14.04	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	02.26.18 14.04	U	1
m,p-Xylenes	179601-23-1	0.00414	0.00398		mg/kg	02.26.18 14.04		1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	02.26.18 14.04	U	1
Total Xylenes	1330-20-7	0.00414	0.00199		mg/kg	02.26.18 14.04		1
Total BTEX		0.00414	0.00199		mg/kg	02.26.18 14.04		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	111	%	80-120	02.26.18 14.04		
1,4-Difluorobenzene		540-36-3	81	%	80-120	02.26.18 14.04		



LABORATORIES

Flagging Criteria



Page 109 of 130

- 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	





QC Summary 577421

COG Operating LLC

GJ West Loop Unit 210

Analytical Method:	Chloride by EPA 3	00						P	rep Methoo	l: E30	0P	
Seq Number:	3042243			Matrix:	Solid				Date Prep	b: 02.2	6.18	
MB Sample Id:	7639810-1-BLK		LCS Sar	nple Id:	7639810-	1-BKS		LCS	D Sample	ld: 763	9810-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	< 5.00	250	262	105	262	105	90-110	0	20	mg/kg	02.26.18 19:35	

Analytical Method:	Chloride by EPA 30	00						Pr	ep Metho	od: E30	0P	
Seq Number:	3042243			Matrix:	Soil				Date Pre	ep: 02.2	6.18	
Parent Sample Id:	577014-031		MS Sar	nple Id:	577014-03	31 S		MSI	O Sample	Id: 5770	014-031 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limi	it Units	Analysis Date	Flag
Chloride	596	250	835	96	859	105	90-110	3	20	mg/kg	02.26.18 19:51	

Analytical Method:	Chloride by EPA 30)0						P	rep Meth	od: E30	0P	
Seq Number:	3042243			Matrix:	Soil				Date Pr	ep: 02.2	26.18	
Parent Sample Id:	577094-006		MS Sar	nple Id:	577094-00)6 S		MS	D Sample	e Id: 577	094-006 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Lim	it Units	Analysis Date	Flag
Chloride	< 5.05	253	268	106	282	111	90-110	~	20	mg/kg	02.26.18 21:05	

Analytical Method:	TPH By S	W8015 M	lod						I	Prep Metho	d: TX1	.005P	
Seq Number:	3042219				Matrix:	Solid				Date Pre	p: 02.2	6.18	
MB Sample Id:	7639805-1	-BLK		LCS Sar	nple Id:	7639805-	1-BKS		LCS	SD Sample	Id: 763	9805-1-BSD	
Parameter		MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	t Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	<15.0	1000	887	89	1020	102	70-135	14	35	mg/kg	02.26.18 09:41	
Diesel Range Organics	(DRO)	<15.0	1000	915	92	1040	104	70-135	13	35	mg/kg	02.26.18 09:41	
Surrogate		MB %Rec	MB Flag		CS Rec	LCS Flag	LCSI %Re			Limits	Units	Analysis Date	
1-Chlorooctane		109		1	09		124		7	0-135	%	02.26.18 09:41	
o-Terphenyl		112		1	07		121		7	0-135	%	02.26.18 09:41	

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

.

Received by OCD: 4/11/2023 2:02:04 PM



COG Operating LLC

GJ West Loop Unit 210

Analytical Method:	-	W8015 M	lod						F	rep Method		005P	
Seq Number:	3042219				Matrix:	Soil				Date Prep	p: 02.2	6.18	
Parent Sample Id:	577421-00	1		MS San	nple Id:	577421-00	01 S		MS	SD Sample	Id: 5774	421-001 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarb	ons (GRO)	<15.0	999	971	97	907	91	70-135	7	35	mg/kg	02.26.18 11:02	
Diesel Range Organics	(DRO)	<15.0	999	1070	107	1000	100	70-135	7	35	mg/kg	02.26.18 11:02	
Surrogate					AS Rec	MS Flag	MSD %Re		_	Limits	Units	Analysis Date	
1-Chlorooctane				1	15		107		7	0-135	%	02.26.18 11:02	
o-Terphenyl				1	13		107		7	0-135	%	02.26.18 11:02	

Analytical Method: Seq Number: MB Sample Id:	BTEX by EPA 802 3042157 7639793-1-BLK	1B	LCS San	Matrix: nple Id:	Solid 7639793-	1-BKS			Prep Method Date Prej SD Sample	p: 02.2	5030B 26.18 9793-1-BSD	
Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPI) RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00199	0.0996	0.0931	93	0.0925	93	70-130	1	35	mg/kg	02.26.18 09:57	
Toluene	< 0.00199	0.0996	0.0994	100	0.0979	98	70-130	2	35	mg/kg	02.26.18 09:57	
Ethylbenzene	< 0.00199	0.0996	0.115	115	0.113	113	71-129	2	35	mg/kg	02.26.18 09:57	
m,p-Xylenes	< 0.00398	0.199	0.230	116	0.226	113	70-135	2	35	mg/kg	02.26.18 09:57	
o-Xylene	< 0.00199	0.0996	0.112	112	0.110	110	71-133	2	35	mg/kg	02.26.18 09:57	
Surrogate	MB %Rec	MB Flag			LCS Flag	LCSI %Ree			Limits	Units	Analysis Date	
1,4-Difluorobenzene	82		8	31		84			80-120	%	02.26.18 09:57	
4-Bromofluorobenzene	110		1	20		116			80-120	%	02.26.18 09:57	

Analytical Method: Seq Number: Parent Sample Id:	BTEX by EPA 802 3042157 577421-001	1B		Matrix: nple Id:		01 S			Prep Metho Date Pre SD Sample	p: 02.2	5030B 26.18 421-001 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	< 0.00200	0.100	0.0638	64	0.0720	72	70-130	12	35	mg/kg	02.26.18 10:36	Х
Toluene	< 0.00200	0.100	0.0679	68	0.0750	75	70-130	10	35	mg/kg	02.26.18 10:36	Х
Ethylbenzene	< 0.00200	0.100	0.0787	79	0.0845	85	71-129	7	35	mg/kg	02.26.18 10:36	
m,p-Xylenes	0.00414	0.200	0.155	75	0.170	83	70-135	9	35	mg/kg	02.26.18 10:36	
o-Xylene	< 0.00200	0.100	0.0745	75	0.0856	86	71-133	14	35	mg/kg	02.26.18 10:36	
Surrogate				1S Rec	MS Flag	MSD %Rec		-	Limits	Units	Analysis Date	
1,4-Difluorobenzene			8	30		82		8	80-120	%	02.26.18 10:36	
4-Bromofluorobenzene			1	03		117		8	80-120	%	02.26.18 10:36	

MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery 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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J Vetes Vetes							
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No.

Field ID / Point of Collection

54 - BOTTOM NOLE

2.5

7/23/18

11:00m

Depth Sample

Date

Time

Matrix S

Samplers's Name: Sherdon Hitchcock

D. hee

PO Number:

Midland Tx, 79701

Collection

roject Contact: Sheldon Hitchcock

Email: <u>slhitchcock@concho.com</u> dneel2@concho.com; cgray@concho.com; rhaskell@concho.com

Phone No: 575-703-6475

Invoice To:

COG Operating, LLC Attn: Robert McNeill 600 W. Illnois Ave.

Project Name/Nun

WEST

Project Information

Project Location:

2407 Pecos Ave. Artesia NM 88210

Company Address: COG Operating, LLC

ompany Name / Branch:

Client / Reporting Information

CHAIN OF CUSTODY

San Antonio, Texas (210-509-3334)

Midland, Texas (432-704-5251)

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Relinquished by

Relinquished by Sampler

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

 Date Time:
 Received By:
 2 - 23 - 12
 Relinguished By:

 Date Time:
 Received By:
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7-260

r V

FED-EX / UPS: Tracking #

TRRP Checklist

Level III Std QC+ Forms

TRRP Level IV UST / RG -411

Level IV (Full Data Pkg /raw data)

Notes:

Level II Std QC

S S S S S S S S S

-

Data Deliverable Information

Level 3 (CLP Forms)

3 Day EMERGENCY 2 Day EMERGENCY

> Contract TAT 7 Day TAT 5 Day TAT

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

10 9 œ 7 6 сл 4 ω N

Same Day TAT

Turnaround Time (Business days)

Next Day EMERGENCY

Notice: Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcont losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each prophe enforced unless previously negotiated under a fully executed client contract.

Corrected Temp: 1.4

CF:(0-6: -0.2°C) Temp: | , Co

IR ID:R-8

On Ice

Cooler Temp.

Thermo. Corr. Factor

for the cost of samples and shall not assume any responsibility for any enco but not analyzed will be invoiced at \$5 per sample. These terms will

(6-23: +0.2°C)

Date Time:

Received By:

Rec

Released to Imaging: 5/8/2023 12:23:10 PM
--

Received by OCD: 4/11/2023 2:02:04 PM

Client: COG Operating LLC



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

1.4

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 02/26/2018 07:45:00 AM Temperature Measuring device used : R8 Work Order #: 577421 Sample Receipt Checklist #1 *Temperature of cooler(s)? #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

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 02/26/2018

Comments

Checklist reviewed by: Jession Vramer

Jessica Kramer

Date: 02/26/2018

Analytical Report 578036

for COG Operating LLC

Project Manager: Sheldon Hitchcock

GJ West COOP Unit#210

05-MAR-18

Collected By: Client



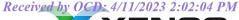


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Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215-18-24), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054) Oklahoma (2017-142)

> 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 (T104704400-18-14) 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)





05-MAR-18

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

Reference: XENCO Report No(s): **578036 GJ West COOP Unit#210** Project Address: Eddy County, 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) 578036. 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. 578036 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,

Mile K.

Mike Kimmel Client Services Manager

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Sample Cross Reference 578036



COG Operating LLC, Artesia, NM

GJ West COOP Unit#210

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
S-4 E. Sidewall	S	02-28-18 10:00		578036-001
S-4 W. Sidewall	S	02-28-18 10:10		578036-002
N. Sidewall	S	02-28-18 10:30		578036-003



CASE NARRATIVE

Client Name: COG Operating LLC Project Name: GJ West COOP Unit#210

Project ID: Work Order Number(s): 578036

BORATORIES

Report Date:05-MAR-18Date Received:03/02/2018

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments: Batch: LBA-3042714 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Project Id:

Contact:Sheldon HitchcockProject Location:Eddy County, NM

Certificate of Analysis Summary 578036

COG Operating LLC, Artesia, NM Project Name: GJ West COOP Unit#210



Date Received in Lab:Fri Mar-02-18 11:50 amReport Date:05-MAR-18Project Manager:Jessica Kramer

	Lab Id:	578036-0	001	578036-0	002	578036-0	003		
Amaluaia Doguostad	Field Id:	S-4 E. Side	ewall	S-4 W. Sid	ewall	N. Sidew	all		
Analysis Requested	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Feb-28-18	10:00	Feb-28-18	10:10	Feb-28-18	10:30		
BTEX by EPA 8021B	Extracted:	Mar-03-18	08:00	Mar-03-18	08:00	Mar-03-18 (08:00		
	Analyzed:	Mar-03-18	15:41	Mar-03-18	16:01	Mar-03-18	16:20		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00202	0.00202		
Toluene		0.00245	0.00199	< 0.00200	0.00200	< 0.00202	0.00202		
Ethylbenzene		0.00331	0.00199	< 0.00200	0.00200	< 0.00202	0.00202		
m,p-Xylenes		0.00513	0.00398	< 0.00401	0.00401	< 0.00403	0.00403		
o-Xylene		0.00614	0.00199	< 0.00200	0.00200	< 0.00202	0.00202		
Total Xylenes		0.0113	0.00199	< 0.00200	0.00200	< 0.00202	0.00202		
Total BTEX		0.0170	0.00199	< 0.00200	0.00200	< 0.00202	0.00202		
Chloride by EPA 300	Extracted:	Mar-02-18	16:00	Mar-02-18	16:00	Mar-02-18	16:00		
	Analyzed:	Mar-03-18	00:35	Mar-03-18	00:52	Mar-03-18 (01:08		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		68.3	4.96	<4.95	4.95	<4.95	4.95		
TPH by SW8015 Mod	Extracted:	Mar-02-18	18:00	Mar-02-18	18:00	Mar-02-18	18:00		
	Analyzed:	Mar-03-18	07:00	Mar-03-18	07:21	Mar-03-18 (07:40		
	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)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Oil Range Hydrocarbons (ORO)		<15.0	15.0	<15.0	15.0	<15.0	15.0		
Total TPH		<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.

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Mike Kimmel Client Services Manager

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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: GJ West COOP Unit#210

Lab Datch +	#: 3042782	Sample: 578036-001 / SMP	Batc	h: 1 Matrix	: 5011					
U nits:	mg/kg	Date Analyzed: 03/03/18 07:00	SU	JRROGATE R	ECOVERY S	STUDY	UDY			
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chloroocta	ine		101	99.7	101	70-135				
o-Terphenyl			51.3	49.9	103	70-135				
Lab Batch #	#: 3042782	Sample: 578036-002 / SMP	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 03/03/18 07:21	SU	STUDY						
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1-Chloroocta			97.9	99.8	98	70-135				
o-Terphenyl			49.9	49.9	100	70-135				
Lab Batch #	#: 3042782	Sample: 578036-003 / SMP	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 03/03/18 07:40	SURROGATE RECOVERY STUDY							
TPH by SW8015 Mod			Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
		Analytes			[D]					
1-Chloroocta	ine		106	99.8	106	70-135				
o-Terphenyl			53.3	49.9	107	70-135				
Lab Batch #	: 3042714	Sample: 578036-001 / SMP	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 03/03/18 15:41	st	JRROGATE R	ECOVERY S	STUDY				
		Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluoro	benzene	-	0.0239	0.0300	80	70-130				
4-Bromofluo	robenzene		0.0322	0.0300	107	70-130				
Lab Batch #	#: 3042714	Sample: 578036-002 / SMP	Batc	h: 1 Matrix	: Soil	1				
Units:	mg/kg	Date Analyzed: 03/03/18 16:01	su	JRROGATE R	ECOVERY	STUDY				
		C by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
140.0	Analytes			0.0300	87	70-130				
	,4-Difluorobenzene -Bromofluorobenzene			0.0300	×/	1 /0-130				

* 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: GJ West COOP Unit#210

Lab Batch	#: 3042714	Sample: 578036-003 / SMP	Batcl	h: 1 Matrix	: Soil		
U nits:	mg/kg	Date Analyzed: 03/03/18 16:20	SU	RROGATE R	ECOVERY S	STUDY	
	nits: mg/kg Date Analyzed: 03/03/18 16:20 BTEX by EPA 8021B Analytes 4-Difluorobenzene Bromofluorobenzene ab Batch #: 3042782 Sample: 7640130-1-BLK nits: mg/kg Date Analyzed: 03/03/18 04:17 TPH by SW8015 Mod Chlorooctane Terphenyl ab Batch #: 3042714 Sample: 7640101-1-BLK nits: mg/kg Date Analyzed: 03/03/18 10:56 BTEX by EPA 8021B Analytes 4-Difluorobenzene Bromofluorobenzene Bromofluorobenzene Bromofluorobenzene Bromofluorobenzene -Bromofluorobenzene -Bromofluorobenzene Terphenyl ab Batch #: 3042782 Sample: 7640130-1-BKS nits: mg/kg Date Analyzed: 03/03/18 04:37 TPH by SW8015 Mod Chlorooctane Terphenyl ab Batch #: 3042714 Sample: 7640101-1-BKS nits: mg/kg Date Analyzed: 03/03/18 09:00 BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage	
		Analytes			[D]		
1,4-Difluoro	benzene		0.0225	0.0300	75	70-130	
4-Bromoflue	orobenzene		0.0310	0.0300	103	70-130	
Lab Batch	#: 3042782	Sample: 7640130-1-BLK / E	BLK Batc	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 04:17	SU	RROGATE R	ECOVERY S	STUDY	
		-	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct		Anarytes	92.0	100	92	70-135	
			48.2	50.0	92	70-135	
1 7		Sample: 7640101-1-BLK / B				70-133	
		-					
onts.	mg/ kg	Date Analyzed. 05/05/10 10.50	SU	RROGATE R	ECOVERYS	STUDY	
	BTEX	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	benzene		0.0243	0.0300	81	70-130	
4-Bromoflue	orobenzene		0.0318	0.0300	106	70-130	
Lab Batch	#: 3042782	Sample: 7640130-1-BKS / B	BKS Batcl	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 03/03/18 04:37	SU	RROGATE R	ECOVERY S	STUDY	
		-	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1 Chlores et		Anarytes	104	100		70.105	
			104	100	104	70-135	
1 2		Sample: 7640101 1 DVS / D	50.9	50.0 50.0	102	70-135	
		•					
Units:	mg/kg	Date Analyzed: 05/05/18 09:00	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	,4-Difluorobenzene			0.0300	88	70-130	
4 Decmofly			0.0344	0.0300	115	70-130	

* 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: GJ West COOP Unit#210

		Sample: 7640130-1-BSD / B	SD Batc	Project ID h: 1 Matrix						
Units:	mg/kg	Date Analyzed: 03/03/18 04:56	SU	JRROGATE R	ECOVERY	STUDY				
	itis: mg/kg Date Analyzed: 03/03/18 04:56 TPH by SW8015 Mod Analytes Chlorooctame Terphenyl b Batch #: 3042714 Sample: 7640101-1-BSD BTEX by EPA 8021B BTEX by EPA 8021B Analytes 4-Difluorobenzene Bromofluorobenzene Bromofluorobenzene Batch #: 3042782 Sample: 578034-003 S / itis: mg/kg Date Analyzed: 03/03/18 09:39 TPH by SW8015 Mod Chlorooctame Terphenyl b Batch #: 3042714 Sample: 578037-001 S / itis: mg/kg Date Analyzed: 03/03/18 09:39 BTEX by EPA 8021B Chlorooctame Terphenyl b Batch #: 3042714 Sample: 578037-001 S / itis: mg/kg Date Analyzed: 03/03/18 09:39 BTEX by EPA 8021B BTEX by EPA 80	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags			
				[D]						
1-Chlorooctane	e		110	100	110	70-135				
o-Terphenyl			54.6	50.0	109	70-135				
Lab Batch #:	3042714	Sample: 7640101-1-BSD / B	SD Bate	h: 1 Matrix	: Solid					
Units:	mg/kg	Date Analyzed: 03/03/18 09:19	SU	JRROGATE R	ECOVERY	STUDY				
			Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1,4-Difluorobe		Analy us	0.0274	0.0300	91	70-130				
4-Bromofluoro	benzene		0.0364	0.0300	121	70-130				
Lab Batch #:	3042782	Sample: 578034-003 S / MS	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 03/03/18 06:18	SURROGATE RECOVERY STUDY							
				True Amount [B]	Recovery %R	Control Limits %R	Flage			
		Analytes			[D]					
1-Chlorooctane	2		101	99.7	101	70-135				
o-Terphenyl			48.6	49.9	97	70-135				
Lab Batch #:	3042714	Sample: 578037-001 S / MS	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 03/03/18 09:39	SU	JRROGATE R	ECOVERY S	STUDY				
			Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags			
1.4-Difluorobe			0.0253	0.0300	84	70-130				
,			0.0348	0.0300	116	70-130				
		Sample: 578034-003 SD / M					<u> </u>			
Units:		-		JRROGATE R		STUDY				
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag			
	Analytes				[D]					
1-Chlorooctane	I-Chlorooctane			99.9	107	70-135				
o-Terphenyl			52.9	50.0	106	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



	orders : 57803 h #: 3042714	6, Sample: 578037-001 SD / M	MSD Batch	Project ID: n: 1 Matrix:			
Units:	mg/kg	Date Analyzed: 03/03/18 09:58	SU	RROGATE RI	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluo	robenzene		0.0261	0.0300	87	70-130	
4-Bromofl	uorobenzene		0.0344	0.0300	115	70-130	

* 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



BS / BSD Recoveries



.

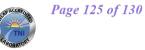
Project Name: GJ West COOP Unit#210

Work Ord	er #: 578036							Pro	ject ID:			
Analyst:	ALJ	D	ate Prepar	ed: 03/03/20	18			Date A	nalyzed:	03/03/2018		
Lab Batch I	D: 3042714 Sample: 7640	0101-1-BKS	Batcl	h #: 1		Matrix: Solid						
Units:	mg/kg		BLAN	K /BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
	BTEX by EPA 8021B	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]				
Benzene	e	< 0.00199	0.0996	0.0877	88	0.100	0.0869	87	1	70-130	35	
Toluene	2	< 0.00199	0.0996	0.0933	94	0.100	0.0926	93	1	70-130	35	
Ethylber	nzene	< 0.00199	0.0996	0.110	110	0.100	0.107	107	3	70-130	35	
m,p-Xyl	lenes	< 0.00398	0.199	0.217	109	0.200	0.211	106	3	70-130	35	
o-Xylen	ne	< 0.00199	0.0996	0.107	107	0.100	0.103	103	4	70-130	35	
Analyst:	OJS	D	ate Prepar	ed: 03/02/20	18	-		Date A	nalyzed:	03/02/2018	•	
Lab Batch I	D: 3042830 Sample: 7640)137-1-BKS	Batcl	h #: 1					Matrix:	Solid		
Units:	mg/kg		BLAN	K /BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STU	DY	
	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
	lytes											<u> </u>
Chloride	e	<5.00	250	235	94	250	228	91	3	90-110	20	

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



BS / BSD Recoveries



Project Name: GJ West COOP Unit#210

Work Order #: 57803	36							Proj	ect ID:			
Analyst: ARM		D	ate Prepar	red: 03/02/201	8			Date A	nalyzed: (3/03/2018		
Lab Batch ID: 3042782	Sample: 7640130-1-	BKS	Batc	h #: 1	Matrix: Solid							
Units: mg/kg		SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
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
Analytes			[B]	[C]	[D]	[E]	Result [F]	[G]				
Gasoline Range Hydrod	carbons (GRO)	<15.0	1000	1030	103	1000	1150	115	11	70-135	35	
Diesel Range Organics	(DRO)	<15.0	1000	852	85	1000	932	93	9	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



Form 3 - MS / MSD Recoveries

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Project Name: GJ West COOP Unit#210

Work Order #: 578036						Project II):				
Lab Batch ID: 3042714	QC- Sample ID:	578037-001	S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed: 03/03/2018	Date Prepared:	03/03/2018		An	nalyst: A	ALJ					
Reporting Units: mg/kg		MAT	RIX SPIKI	E / MAT	'RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	ked 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]		[G]				
Benzene	<0.00199	0.0994	0.0599	60	0.0998	0.0667	67	11	70-130	35	X
Toluene	0.0122	0.0994	0.0689	57	0.0998	0.0794	67	14	70-130	35	X
Ethylbenzene	0.00447	0.0994	0.0717	68	0.0998	0.0787	74	9	70-130	35	X
m,p-Xylenes	0.00812	0.199	0.142	67	0.200	0.153	72	7	70-130	35	X
o-Xylene	0.00412	0.0994	0.0736	70	0.0998	0.0772	73	5	70-130	35	
Lab Batch ID: 3042830	QC- Sample ID:	578034-001	S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed: 03/02/2018	Date Prepared:	03/02/2018		An	nalyst: (SIC					
Reporting Units: mg/kg		MAT	RIX SPIKI	E / MAT	'RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Chloride by EPA 300	Parent Sample	Spike	ked Sample Result	Spiked Sample		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	588	250	790	81	250	807	88	2	90-110	20	X
Lab Batch ID: 3042830	QC- Sample ID:	578036-002	2 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed: 03/03/2018	Date Prepared:	03/02/2018		An	nalyst: (OJS					
Reporting Units: mg/kg		MAT	RIX SPIKI	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Chloride by EPA 300	Parent Sample Result	Spike Added	ked 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]		[G]		/01		
Analytes	[[-]	L=1		[2]	[]						

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: GJ West COOP Unit#210



Work Order # :	578036						Project II):				
Lab Batch ID:	3042782	QC- Sample ID:	578034	-003 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	03/03/2018	Date Prepared:	03/02/2	018	An	alyst: A	ARM					
Reporting Units:	mg/kg	g MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY 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	e Hydrocarbons (GRO)	<15.0	997	1020	102	999	1090	109	7	70-135	35	
Diesel Range O	Organics (DRO)	<15.0	997	825	83	999	880	88	6	70-135	35	

Matrix Spike Percent Recovery $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD = $200^{*}|(C-F)/(C+F)|$ Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

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

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CHAIN OF CUSTODY Page 1 Of 1

Received by	, OCD :	4/11/2023	2:02:04	PM	

5 Notice	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	0				×		-	10	9	8	7	6	5	4	ω	2	<u> </u>	No.		Samp	Proje	dnee	2407	Comp	COG				Ū	Ņ
Relinquished by: Date Time: Received By: Custody Seal # Preserved where applicable On Ice Cooler Temp. Thermo. Corr. Factor 5	Relinquished by:	linguished by Complexit	TAT Starts Day received by Lab, if received by 5:00 pm	3 Day EMERGENCY	2 Day EMERGENCY	Next Day EMERGENCY] Same Day TAT	Turnaround Time (Business days)								N. SIDEWALL	S-4 W. SIDEWALL	S-4 E. SIDEWALL	Field ID / Point of Collection		Samplers's Name: Sheldon Hitchcock	Project Contact: Sheldon Hitchcock	none No: 575-703. dneel2@concho.com; cgray@concho.com; rhaskell@concho.com	2407 Pecos Ave. Artesia NM 88210	Company Address:	Company Name / Branch: COG Operating, LLC	Client / Reporting Information			Dallas Texas (214-902-0300)	Stafford, Texas (281-240-4200)
		SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING CC	b, if received by 5:00		Contract TAT	7 Day TAT	5 Day TAT												ollection				Phone No: 575-703-6475 ;; rhaskell@concho.com								
Date Time:	Date Time: 3-1-18 Date Time:	MUST BE D) pm													N/A	N/A	N/A	Sample Depth				6475								
	1:05	OCUMENTE														2/28/2018	2/28/2018	2/28/2018	Date	Collection		PO Number	Invoice To:		Project Location:	Project Name/Number: GJ West COOP Unit #210				Midland,	San Anto
Received By:	Received By:	D BELOW E		R I	Le	Le	Le									10:30	10:10	10:00	Time				COG Op Attn: Rol 600 W. I	Edc	ation:	te/Number:	Pro			Midland, Texas (432-704-5251)	San Antonio, Texas (210-509-3334)
By:	By: By: By:	ACH TIME S		TRRP Checklist	Level 3 (CLP Forms)	/el III Std (Level II Std QC	Da								S	S	S	Matrix			Midland Tx, 79701	COG Operating, LLC Attn: Robert McNeill 600 W. Illnois Ave.	Eddy County, NM		#210	Project Information		15	2-704-525	(210-509
	Sal	SAMPLES (list	Forms)	Level III Std QC+ Forms	õ	ta Delivera		_							_	_	# of bottles	1.1			≣ 5	MN			nation		www.xenco.com	1)	-3334)
		CHANGE PO			_			Data Deliverable Information												Numb									.com		
Custo	Relin 2 Relin	OSSESSION			UST	TRR	Leve	tion											HNO3 H2SO4	Number of preserved bottles											
Custody Seal #	Relinguished By: <u> 2 </u>	, INCLUDIN			UST / RG -411	TRRP Level IV	Level IV (Full Data												NaOH NaHSO4	arved bott											
	y: Opy									_						×	×	×	MEOH ICE	les											
Pr	\sim	URIER DELIVERY					Pkg /raw data)			_		_				×	×	×	TPH EX			0		015M)			5	Xenco Quote #		Phoeni
eserved	Date Time: 3 - 1 - 18 Date Time:	RY					2									×	×	×	BTEX (E CHLORI			,						A	iote #		x, Arizon
vhere app	Time: 3:5		H	_					_		_				_		_											Analytical Information			Phoenix, Arizona (480-355-0900)
olicable	12 L		D-EX / UP					Notes:																				nformatio			55-0900)
	Received By		FED-EX / UPS: Tracking #	Corre	6)	CF:(0-6: -0.2°C)	Temp:																					-	Xenco Job #		
On Ice	iki K	1.6	0 #	Corrected Temp:	-23: +	-6: -0.:	Ŵ						_		_	_													5		
Coole	A	10		emp:	(6-23: +0.2°C)	<u>2</u> °C)	6																					-	H		
r Temp.	L	1	0	0	1		IR												п								ľ		0		
Thermo. Corr. Facto	-3/2/18 11			+	A		IR ID:R-8												Field Comments	A = Air		WI = Wipe	SW = Surface water SL = Sludge	DW = Drinking Water P = Product	GW =Ground Water	W = Water		Matrix Codes	26		
d to 1	Imaging:	: 5/	/8/2	2023	3 12	:23	:10	PM						Pag								vater		nal 1.							

Received by OCD: 4/11/2023 2:02:04 PM

Work Order #: 578036



XENCO Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC Date/ Time Received: 03/02/2018 11:50:00 AM

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

Temperature Measuring device used : R8

Sample Receipt Che	cklist	Comments
#1 *Temperature of cooler(s)?	3.4	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seals intact on shipping container/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?	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	NM JOB
#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: 03/02/2018

Checklist reviewed by: Jessign Whamer

Jessica Kramer

Date: 03/02/2018

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:
Spur Energy Partners LLC	328947
9655 Katy Freeway	Action Number:
Houston, TX 77024	206419
	Action Type:
	[IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	5/8/2023

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Action 206419