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

State of New Mexico Energy Minerals and Natural Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

# **Release Notification**

## **Responsible Party**

Responsible Party O		OGRID	OGRID			
Contact Name		Contact T	Contact Telephone			
Contact email			Incident #	t (assigned by OCL	0)	
Contact maili	ng address			<u> </u>		
			Location	of Release S	ource	
Latitude				Longitude		
			(NAD 83 in dec	cimal degrees to 5 deci	mal places)	
Site Name				Site Type		
Date Release	Discovered			API# (if ap	plicable)	
Unit Letter	Section	Township	Range	Cou	nty	
Surface Owner				l Volume of		ne volumes provided below)
Crude Oil		Volume Release		calculations of specific		overed (bbls)
Produced	Water	Volume Release	d (bbls)		Volume Recovered (bbls)	
Is the concentration of dissolved chloride in the produced water >10,000 mg/l?		hloride in the	☐ Yes ☐ No			
Condensate Volume Released (bbls)			Volume Recovered (bbls)			
Natural Gas Volume Released (Mcf)			Volume Recovered (Mcf)			
Other (describe) Volume/Weight Released (provide units)		e units)	Volume/Wei	ight Recovered (provide units)		
Cause of Rele	ease					

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		Facilit	y ID	
		Applic	cation ID	
***	Lighting of the control of the contr	91	. 1 0	
Was this a major release as defined by 19.15.29.7(A) NMAC?	If YES, for what reason(s) does the respon	sible party consider this a ma	ajor release?	
☐ Yes ☐ No				
If YES, was immediate no	otice given to the OCD? By whom? To who	om? When and by what mea	ıns (phone, e	mail, etc)?
	Initial Re	sponse		
The responsible	party must undertake the following actions immediately	unless they could create a safety h	azard that would	l result in injury
☐ The source of the rele	ease has been stopped.			
☐ The impacted area ha	as been secured to protect human health and	he environment.		
Released materials ha	ave been contained via the use of berms or d	kes, absorbent pads, or other	r containmen	t devices.
All free liquids and re	ecoverable materials have been removed and	managed appropriately.		
If all the actions described	d above have <u>not</u> been undertaken, explain w	hy:		
has begun, please attach	AC the responsible party may commence rea narrative of actions to date. If remedial ent area (see 19.15.29.11(A)(5)(a) NMAC), p.	fforts have been successfull	y completed	or if the release occurred
regulations all operators are public health or the environ failed to adequately investig	rmation given above is true and complete to the barequired to report and/or file certain release notifient. The acceptance of a C-141 report by the Otate and remediate contamination that pose a threat of a C-141 report does not relieve the operator of a C-141 report doe	cations and perform corrective CD does not relieve the operato t to groundwater, surface water	actions for relor or of liability sh human health	eases which may endanger nould their operations have n or the environment. In
Printed Name:		Title:		
Signature: Sheldo	7 Hitam	Date:		
email:		Telephone:		

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

OCD Only

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# **Site Assessment/Characterization**

This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

What is the shallowest depth to groundwater beneath the area affected by the release?	(ft bgs)		
Did this release impact groundwater or surface water?	☐ Yes ☐ No		
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	☐ Yes ☐ No		
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	☐ Yes ☐ No		
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	☐ Yes ☐ No		
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	☐ Yes ☐ No		
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	☐ Yes ☐ No		
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	☐ Yes ☐ No		
Are the lateral extents of the release within 300 feet of a wetland?	☐ Yes ☐ No		
Are the lateral extents of the release overlying a subsurface mine?	☐ Yes ☐ No		
Are the lateral extents of the release overlying an unstable area such as karst geology?	☐ Yes ☐ No		
Are the lateral extents of the release within a 100-year floodplain?	☐ Yes ☐ No		
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	☐ Yes ☐ No		
Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and ver contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.	tical extents of soil		
Characterization Report Checklist: Each of the following items must be included in the report.			
Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.  Field data  Data table of soil contaminant concentration data  Depth to water determination  Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release  Boring or excavation logs  Photographs including date and GIS information  Topographic/Aerial maps  Laboratory data including chain of custody			

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

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I hereby certify that the information given above is true and complete to the regulations all operators are required to report and/or file certain release not public health or the environment. The acceptance of a C-141 report by the 6 failed to adequately investigate and remediate contamination that pose a thru addition, OCD acceptance of a C-141 report does not relieve the operator of and/or regulations.	DCD does not relieve the operator of liability should their operations have eat to groundwater, surface water, human health or the environment. In
Printed Name:	_ Title:
Signature: Sheldon Niton	Date:
email:	Telephone:
OCD Only	
Received by:	Date:

Received by OCD: 4/5/2021 4:27:47 PM Form C-141 State of New Mexico Page 6 Oil Conservation Division

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# Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: Each of the following it	tems must be included in the closure report.
A scaled site and sampling diagram as described in 19.15.29.1	1 NMAC
Photographs of the remediated site prior to backfill or photos must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate ODC	C District office must be notified 2 days prior to final sampling)
☐ Description of remediation activities	
and regulations all operators are required to report and/or file certain may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and renhuman health or the environment. In addition, OCD acceptance of compliance with any other federal, state, or local laws and/or regular restore, reclaim, and re-vegetate the impacted surface area to the conformation and the conformation of the October 19.15.29.13 NMAC including notification to the October 19.15.29.13 NMAC including notification to the October 20.15.29.13 NMAC including notification to the O	ntions. The responsible party acknowledges they must substantially nditions that existed prior to the release or their final land use in ICD when reclamation and re-vegetation are complete.  Title:
email:	Telephone:
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible or regulations.
Closure Approved by:	Date:
Printed Name:	Title:

# Remediation Summary & Soil Closure Request

## COG Operating, LLC Huckleberry State Com 507H

Lea County, New Mexico
Unit Letter D, Section 27, Township 21 South, Range 33 East
Latitude 32.4566 North, Longitude 103.5652 West
NMOCD Reference No. NRM2030929244

Prepared By:

Etech Environmental & Safety Solutions, Inc.

3100 Plains Highway Lovington, New Mexico 88260

Ben J. Arguijo

Joel W. Lowry



Midland • San Antonio • Lubbock • Lovington • Lafayette

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PROJECT INFORMATION	1.0
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CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE	3.0
REMEDIATION ACTIVITIES SUMMARY	<b>4.0</b>
RESTORATION, RECLAMATION & RE-VEGETATION PLAN	5.0
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LIMITATIONS	7 <b>.</b> 0
DISTRIBUTION	<b>8.0</b>

#### **FIGURES**

Figure 1 - Topographic Map

Figure 2 - Aerial Proximity Map

Figure 3 - Site & Sample Location Map

#### **TABLES**

Table 1 - Concentrations of BTEX, TPH & Chloride in Soil

#### **APPENDICES**

Appendix A - Depth to Groundwater Information

Appendix B - Field Data & Soil Profile Logs

Appendix C - Laboratory Analytical Reports

Appendix D - Photographic Log

## 1.0 PROJECT INFORMATION

Etech Environmental & Safety Solutions, Inc. (Etech), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Summary & Soil Closure Request* for the release site known as the Huckleberry State Com 507H (henceforth, "Site"). Details of the release are summarized below:

			on of Release Sou		
Latitude:		32.4566	Longitude:	-103.5652	
		Provide	ed GPS are in WGS84 format		
Site Name:		erry State Com 507H	Site Type:	Tank Battery	
Date Release Dis	covered:		API # (if applica	ble): 30-025-45209	
Unit Letter	Section	Township	Range	County	
D	27	21S	33E	Lea	
Surface Owner: [	State		X Private (Name of R		
X Crude Oil	Vo	lume Released (bbls)	1	Volume Recovered (bbls) 0	
Produced W	ater Vo	lume Released (bbls)		Volume Recovered (bbls)	
	<b>I</b>	ne concentration of total of S) in the produced water		Yes No X N/A	
Condensate	Condensate Volume Released (bbls)			Volume Recovered (bbls)	
Natural Gas	Gas Volume Released (Mcf)			Volume Recovered (Mcf)	
Other (desc	cribe) Volume/Weight Released			Volume/Weight Recovered	
	fire on the j	oad from the gas lift company standing fluid.	pressor. The fire burn	ed a plastic slop tank. No fluid was recovered	
		Ir	nitial Response		
X The source of	of the releas	e has been stopped.			
X The impacted	l area has b	een secured to protect hum	an health and the envi	ronment.	
X Release mate	erials have l	been contained via the use	of berms or dikes, abs	orbent pad, or other containment devices	
<del></del>					

Previously submitted portions of the NMOCD Form C-141 are available on the NMOCD Imaging System.

#### 2.0 SITE CHARACTERIZATION

A search of groundwater databases maintained by the New Mexico Office of the State Engineer (NMOSE) and United States Geological Survey (USGS) was conducted in an effort to determine the horizontal distance to known water sources within a half-mile radius of the Site. Probable groundwater depth was determined using data generated by numeric models based on available water well data and published information. Depth to groundwater information is provided as Appendix A.

What is the shallowest depth to groundwater beneath the area affected by the release?	5	70'
Did the release impact groundwater or surface water?	Yes	X No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	Yes	X No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark?	Yes	X No
Are the lateral extents of the release within 300 feet of any occupied permanent residence, school, hospital, institution or church?	Yes	X No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	Yes	X No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	Yes	X No
Are the lateral extents of the release within the incorporated municipal boundaries or within a defined municipal fresh water well field?	Yes	X No
Are the lateral extents of the release within 300 feet of a wetland?	Yes	X No
Are the lateral extents of the release overlying a subsurface mine?	Yes	X No
Are the lateral extents of the release overlying an unstable area such as karst geology?	Yes	X No
Are the lateral extents of the release within a 100-year floodplain?	Yes	X No
Did the release impact areas not on an exploration, development, production or storage site?	X Yes	No No

NMOCD Siting Criteria data was gathered from available resources including Bureau of Land Management (BLM) and Fish & Wildlife Services (FWS) shapefiles; topographic maps; NMOSE and USGS databases; and aerial imagery. The results are depicted in Figures 1, 2, 4, and 5.

### 3.0 CLOSURE CRITERIA FOR SOILS IMPACTED BY A RELEASE

Based on the volume and nature of the release, inferred depth to groundwater, and NMOCD Siting Criteria, the NMOCD Closure Criteria and NMOCD Reclamation Standard for the Site are as follows:

Probable Depth to Groundwater	Constituent	Laboratory Analytical Method	Closure Criteria*†	Reclamation Standard*‡
	Chloride (Cl-)	EPA 300.0 or SM4500 Cl B	20,000	600
	Total Petroleum Hydrocarbons (TPH)	EPA SW-846 Method 8015M Ext	2,500	100
570'	Diesel Range Organics + Gas Range Organics (DRO + GRO)	EPA SW-846 Method 8015M	1,000	-
	Benzene	EPA SW-846 Methods 8021b or 8260b	10	10
	Benzene, Toluene, Ethylbenzene, Total Xylenes (BTEX)	EPA SW-846 Methods 8021b or 8260b	50	50

<sup>\*</sup> Measured in milligrams per kilogram (mg/kg)

<sup>†</sup> Table I, Section 19.15.29.12 of the New Mexico Administrative Code (NMAC).

<sup>‡</sup> The NMOCD Reclamation Standard applies only to the top 4' of soil in non-production areas. Section 19.15.29.13 D.(1) NMAC.

#### 4.0 REMEDIATION ACTIVITIES SUMMARY

On November 17, 2020, COG commenced remediation activities the Site. In accordance with NMOCD regulatory guidelines, impacted soil affected above the NMOCD Closure Criteria was excavated and stockpiled on-site, pending transfer to an NMOCD-approved surface waste facility for disposal. The floor and sidewalls of the excavation were advanced until field observations suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standard.

Based on field observations, a total of 13 confirmation soil samples (B-1 through B-11, SW-1, and SW-2) were collected from the base and sidewalls of the excavation. The soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Reclamation Standard, with the exceptions of samples B-1 (521 mg/kg TPH), B-4 (1,430 mg/kg Cl-), B-6 (124 mg/kg TPH), and SW-2 (158 mg/kg TPH).

In January 2021, COG contracted Etech to assume remediation activities for the release.

On January 27, 2021, Etech commenced remediation activities at the Site. Impacted soil in the areas characterized by sample points B-1, B-4, B-6, and SW-2 was excavated until field observations and field test results suggested BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and/or NMOCD Reclamation Standard. After excavation activities were completed, four (4) additional confirmation soil samples (B-1, B-4, B-6, and SW-2) were collected from the base and sidewalls of the excavation. The soil samples were submitted to a certified commercial laboratory for analysis of BTEX, TPH, and chloride. Laboratory analytical results indicated BTEX, TPH, and chloride concentrations were below the applicable NMOCD Closure Criteria and NMOCD Remediation Standard in each of the submitted soil samples.

A "Site & Sample Location Map" is provided as Figure 3. Soil chemistry data is summarized in Table 1. Field data and soil profile logs are provided in Appendix B. Laboratory analytical reports are provided in Appendix C. General photographs of the Site are provided in Appendix D.

The final dimensions of the excavated area were approximately 49 feet in length, 24 to 36 feet in width, and three (3) inches to 1.5 feet in depth. During the course of remediation activities, approximately 60 cubic yards of impacted soil were transported to an NMOCD-approved surface waste facility for disposal.

#### 5.0 RESTORATION, RECLAMATION & RE-VEGETATION PLAN

Upon receiving laboratory analytical results from confirmation soil samples, excavated areas were backfilled with locally sourced, non-impacted, "like" material placed at or near original relative positions. The affected area was contoured and compacted to fit the needs of the facility and achieve erosion control, stability, and/or preservation of surface water flow to the extent practicable. Affected areas not on the production pad will be reseeded with an agency and/or landowner-approved seed mixture free of noxious weeds during the first favorable growing season following closure of the Site.

### 6.0 SOIL CLOSURE REQUEST

Remediation activities were conducted in accordance with applicable NMOCD regulations. Impacted soil affected above the NMOCD Closure Criteria and/or NMOCD Reclamation Standard was excavated and transported to an NMOCD-approved disposal facility. Laboratory analytical results from confirmation soil samples indicate in-situ concentrations of BTEX, TPH, and chloride are below the NMOCD Closure Criteria and NMOCD Reclamation Standard.

Based on laboratory analytical results and field activities conducted to date, Etech recommends COG provide copies of this *Remediation Summary & Soil Closure Request* to the appropriate agencies and request closure be granted to the Site.

Released to Imaging: 7/22/2021 9:23:46 AM

#### 7.0 LIMITATIONS

Etech Environmental & Safety Solutions, Inc., has prepared this *Remediation Summary & Soil Closure Request* to the best of its ability. No other warranty, expressed or implied, is made or intended. Etech has examined and relied upon documents referenced in the report and on oral statements made by certain individuals. Etech has not conducted an independent examination of the facts contained in referenced materials and statements. Etech has presumed the genuineness of these documents and statements and that the information provided therein is true and accurate. Etech has prepared the report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Etech notes that the facts and conditions referenced in this report may change over time, and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of COG Operating, LLC. Use of the information contained in this report is prohibited without the consent of Etech and/or COG Operating, LLC.

## 8.0 DISTRIBUTION

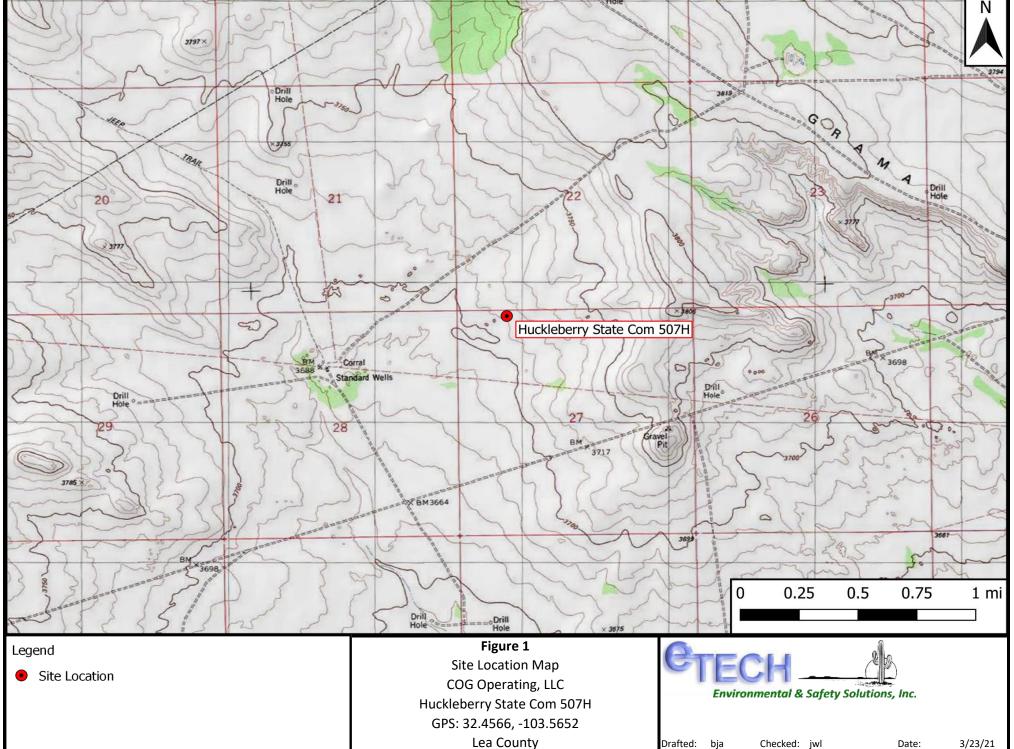
COG Operating, LLC 600 West Illinois Avenue Midland, TX 79701

New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division, District 1 1220 South St. Francis Drive Santa Fe, NM 87505

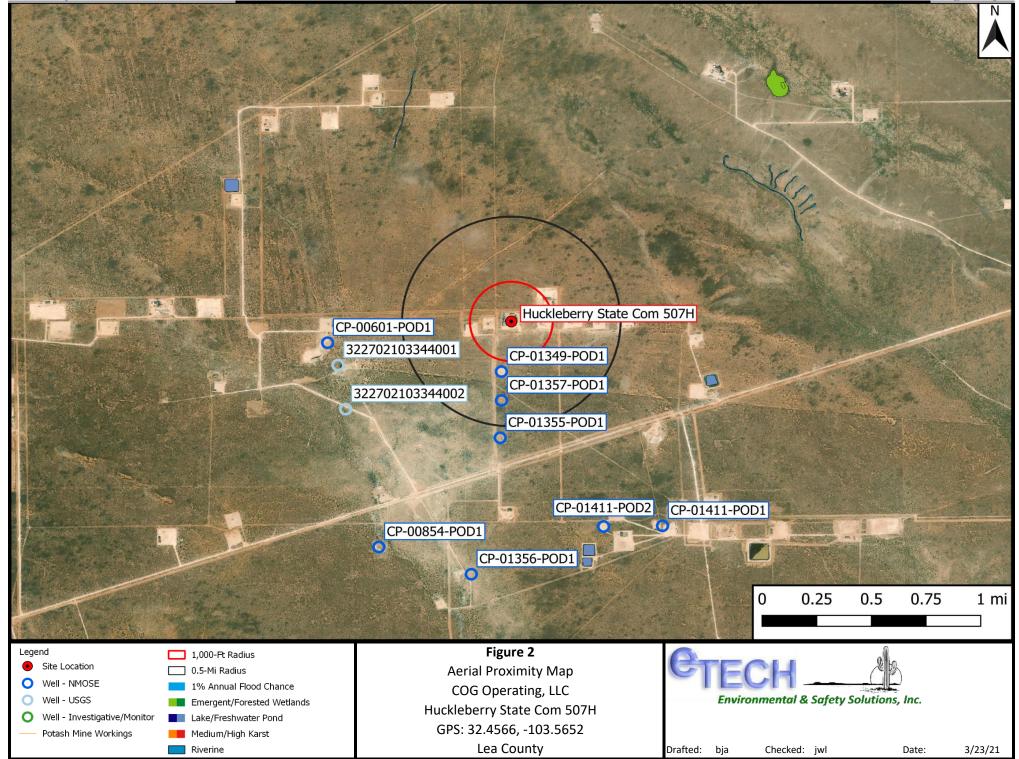
(Electronic Submission)

# Figure 1 Topographic Map

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# Figure 2 Aerial Proximity Map



# Figure 3 Site & Sample Location Map



# Table 1 Concentrations of BTEX, TPH & Chloride in Soil

## Attachment 3

### CONCENTRATIONS OF BTEX, TPH & CHLORIDE IN SOIL

## COG Operating, LLC

## **Huckleberry State Com 507H**

#### NMOCD Ref. #: NRM2030929244

	NMOCD Ref. #: NRM2030929244											
NMC	OCD Closure C	riteria		10	50	-	-	1,000	-	2,500	20,000	
NMOCI	) Reclamation	Standard		10	50	-	-	•	-	100	600	
				SW 840	6 8021B	SW 846 8015M Ext.					4500 Cl	
Sample ID	Date	Depth	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>36</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>36</sub> (mg/kg)	Chloride (mg/kg)	
B-1	11/17/2020	3"	Excavated	< 0.00199	< 0.00199	< 50.2	325	325	196	521	361	
B-2	11/17/2020	3"	In-Situ	< 0.00200	< 0.00200	<49.8	<49.8	<49.8	<49.8	<49.8	142	
B-3	11/17/2020	3"	In-Situ	< 0.00199	< 0.00199	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	590	
B-4	11/17/2020	3"	Excavated	< 0.00200	< 0.00200	< 50.2	< 50.2	< 50.2	< 50.2	< 50.2	1,430	
B-5	11/17/2020	3"	In-Situ	< 0.00199	< 0.00199	< 50.1	< 50.1	< 50.1	< 50.1	< 50.1	390	
B-6	11/17/2020	3"	Excavated	< 0.00200	0.0556	<49.9	124	124	<49.9	124	337	
B-7	11/17/2020	3"	In-Situ	< 0.00198	< 0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	23.6	
B-8	11/17/2020	3"	In-Situ	< 0.00200	< 0.00200	< 50.1	< 50.1	< 50.1	< 50.1	< 50.1	42.4	
B-9	11/17/2020	3"	In-Situ	< 0.00201	< 0.00201	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	62.4	
B-10	11/17/2020	3"	In-Situ	< 0.00200	< 0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	22.6	
B-11	11/17/2020	3"	In-Situ	< 0.00202	< 0.00202	<49.8	<49.8	<49.8	<49.8	<49.8	15.9	
SW-1	11/17/2020	3"	In-Situ	< 0.00201	< 0.00201	<49.9	89.1	89.1	<49.9	89.1	489	
SW-2	11/17/2020	3"	Excavated	< 0.00198	< 0.00198	< 50.2	98.0	98.0	59.5	158	95.5	
B1	1/27/2021	1.5'	In-Situ	< 0.00200	< 0.00200	<50.0	< 50.0	< 50.0	< 50.0	< 50.0	365	
B4	1/27/2021	6"	In-Situ	< 0.00200	< 0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	285	
B6	1/27/2021	6"	In-Situ	< 0.00198	< 0.00198	<49.8	<49.8	<49.8	<49.8	<49.8	65.7	
SW2	1/27/2021	1.5'	In-Situ	< 0.00200	< 0.00200	<49.9	<49.9	<49.9	<49.9	<49.9	85.2	

# Appendix A Depth to Groundwater Information

575 feet



# 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,

(quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed)

(quarters are smallest to largest) (NAD83 UTM in meters)

**POD** 

Sub-Q Q QWater Code basin County 64 16 4 Sec Tws Rng  $\mathbf{X}$ Y DistanceDepthWellDepthWater Column **POD Number** CP 01349 POD1 CP LE 2 3 1 27 21S 634782 3591569 470 1188 616 CP 01357 POD1 CP LE 4 3 1 27 21S 33E 634782 3591347 686 1286 578 708

Average Depth to Water:

572 feet Minimum Depth:

(In feet)

Maximum Depth: 578 feet

**Record Count:** 2

**UTMNAD83 Radius Search (in meters):** 

**Easting (X):** 634916.73 **Radius:** 804.67 **Northing (Y):** 3592020.72

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.

1/7/21 7:52 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER



# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

634782

Well Tag POD Number Q64 Q16 Q4 Sec Tws Rng

CP 01349 POD1 2 3 1 27 21S 33E

X Y

3591569

**Driller License:** 421 **Driller Company:** GLENN'S WATER WELL SERVICE

Driller Name: GLENN, CLARK A."CORKY"

**Drill Start Date:** 07/12/2014 **Drill Finish Date:** 07/18/2014 **Plug Date:** 

**Log File Date:** 08/04/2014 **PCW Rcv Date:** 04/27/2017 **Source:** Artesian

Pump Type: SUBMER Pipe Discharge Size: 3 Estimated Yield:

Casing Size: 7.00 Depth Well: 1188 feet Depth Water: 572 feet

Water Bearing Stratifications: Top Bottom Description

990 1188 Sandstone/Gravel/Conglomerate

Casing Perforations: Top Bottom

721 1188

Meter Number:18275Meter Make:BLANCETTMeter Serial Number:092413719Meter Multiplier:1.0000

Number of Dials: 9 Meter Type: Diversion

**Unit of Measure:** Barrels 42 gal. **Return Flow Percent:** 

Usage Multiplier: Reading Frequency: Monthly

\_\_\_\_\_

#### **Meter Readings (in Acre-Feet)**

Read Da	ite Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
06/02/20	15 2015	616318	A	ap	beginning water report	0
06/27/20	15 2015	654758	A	ap		49.547
07/31/20	15 2015	654758	A	ap		0
08/31/20	15 2015	658147	A	ap		4.368
09/30/20	15 2015	658147	A	ap		0
10/31/20	15 2015	658147	A	ap		0
11/30/20	15 2015	658147	A	ap		0
04/01/20	16 2016	0	A	ap	meter was reset	0
04/30/20	16 2016	56	A	ap		0.072
06/30/20	16 2016	45448	A	ap		58.507
07/27/20	16 2016	93651	A	ap		62.130
08/04/20	16 2016	0	A	ap		0
08/04/20	16 2016	93651	A	ap	replacing with new meter	0
09/01/20	16 2016	59651	A	ap		768.861
09/30/20	16 2016	59685	A	ap		0.438
10/31/20	16 2016	59685	A	ap		0
11/29/20	16 2016	123327	A	ap		820.303
12/31/20	16 2016	202400	A	ap		1019.198
02/01/20	17 2017	222525	A	ap		259.398
02/27/20	17 2017	0	A	ap	reset meter again second time	0

02/27/2017 2	2017	227465	A	ap		63.673
	2017	4377	Α	ap		56.417
	2017	63670	Α	ap		764.247
05/01/2017 2	2017	110035	A	ap		597.614
05/31/2017 2	2017	121714	A	ap		150.534
07/31/2017 2	2017	179828	A	ap		749.050
10/31/2017 2	2017	212568	A	ap		421.997
11/30/2017 2	2017	212568	A	ap		0
11/30/2017 2	2017	0	A	ap	new meter	0
12/30/2017 2	2017	381088	A	ap		4911.968
01/30/2018 2	2018	437540	A	ap		727.628
02/28/2018 2	2018	489981	A	ap		675.929
03/30/2018 2	2018	547614	A	ap		742.851
04/30/2018 2	2018	599646	A	ap		670.657
06/01/2018 2	2018	653059	A	ap		688.458
06/29/2018 2	2018	705152	A	ap		671.444
07/31/2018 2	2018	740396	A	ap		454.271
08/30/2018 2	2018	797263	A	ap		732.977
09/30/2018 2	2018	846832	A	ap		638.911
11/30/2018 2	2018	954599	A	ap		1389.044
01/02/2019 2	2018	1007303	A	RPT		6.793
	2019	1020346	A	RPT		1.681
	2019	1424822	A	RPT		52.134
	2019	1479315	A	RPT		7.024
	2019	1532079	A	RPT		6.801
	2019	1594691	A	RPT		8.070
	2019	1649180	A	RPT		7.023
	2019	1680307	A	RPT		4.012
	2020	1725618	A	RPT		5.840
	2020	1769757	A	RPT		5.689
	2020	1795050	A	RPT		3.260
	2020	1795050	A	RPT		0
	2020	1827737	A	RPT		4.213
	2020	1890759	A	RPT		8.123
	2020	1911876	A	RPT		2.722
	2020	1921973	A	RPT	,	1.301 0 X
	2020 2020	1921973 1936489	A A	WEE WEE		1.871 X
	2020	1985989	A	WEE		6.380 X
12/31/2020 2		1703707	7.1	···	,	0.300 1
**YTD Meter	Amounts:	Year		Amount		
		2015		53.915		
		2016		2729.509		
		2017		7974.898		
		2018		7398.963		
		2019		86.745		
		2020		39.399		

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# New Mexico Office of the State Engineer

# **Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

Well Tag **POD Number**  Q64 Q16 Q4 Sec Tws Rng

X Y

CP 01357 POD1

3 1 27 21S 33E

634782 3591347

**Driller License:** 421 **Driller Company:** 

GLENN'S WATER WELL SERVICE

**Driller Name:** 

GLENN, CLARK A."CORKY"

**Drill Start Date:** 

08/16/2014

**Drill Finish Date:** 

08/26/2014

**Plug Date:** 

Source:

Artesian

Log File Date:

09/10/2014

**PCW Rcv Date:** 

**Depth Well:** 

04/27/2017

**Estimated Yield:** 

**Pump Type: Casing Size:**  **SUBMER** 

6.37

Pipe Discharge Size:

945

1286 feet

3

**Depth Water:** 

578 feet

Water Bearing Stratifications:

Top Bottom Description

960 Sandstone/Gravel/Conglomerate

960 Shale/Mudstone/Siltstone

1077 Sandstone/Gravel/Conglomerate

1215 1286 Shale/Mudstone/Siltstone

**Casing Perforations:** 

Top Bottom

846 1286

**Meter Number:** 

18278

Meter Make:

**BLANCETT** 

Meter Serial Number: 002514700

**Meter Multiplier:** 

1.0000

**Number of Dials:** 

**Meter Type:** 

Diversion

**Unit of Measure: Usage Multiplier:**  Barrels 42 gal.

**Return Flow Percent: Reading Frequency:** 

Monthly

**Meter Readings (in Acre-Feet)** 

Read Date Mtr Reading Flag

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount Online
06/03/2015	2015	620282	A	ap	beginning meter reading	0
06/27/2015	2015	648079	A	ap		358.285
07/31/2015	2015	648079	A	ap		0
08/21/2015	2015	678838	A	ap		396.463
09/30/2015	2015	679417	A	ap		7.463
10/30/2015	2015	777255	A	ap		1261.066
11/30/2015	2015	798886	A	ap		278.809
04/30/2016	2016	984569	A	ap		2393.329
06/30/2016	2016	1124000	A	ap		1797.172
07/31/2016	2016	1199233	A	ap		969.703
09/01/2016	2016	1273938	A	ap		962.897
09/30/2016	2016	1304197	A	ap		390.018
10/31/2016	2016	1352466	A	ap		622.155
11/29/2016	2016	1416500	A	ap		825.355
12/31/2016		1496320	A	ap		1028.826

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Received by OCD 04/5/2021-4:27647 PM	1526044	A	ap
03/01/2017 2017	1526818		ap
03/31/2017 2017	1549606		ap
05/01/2017 2017	1596745		ap
05/31/2017 2017	1609365		ap
07/31/2017 2017	1675457		ap
10/31/2017 2017	1782654		ap
11/30/2017 2017	1866815		
12/30/2017 2017	1939812		ap
01/30/2018 2018	2006016		ap
			ap
02/28/2018 2018	2071063		ap
03/30/2018 2018	2134697		ap
04/30/2018 2018	2198100		ap
06/01/2018 2018	2264810		ap
06/29/2018 2018	2327836		ap
07/31/2018 2018	2408117		ap
08/30/2018 2018	2477917		ap
09/30/2018 2018	2536539	A	ap
11/30/2018 2018	2614905	A	ap
01/02/2019 2018	2676128	A	RPT
02/01/2019 2019	2690452	A	RPT
08/01/2019 2019	3102120	A	RPT
09/01/2019 2019	3143282	A	RPT
09/30/2019 2019	3237244	A	RPT
10/31/2019 2019	3279628		RPT
11/30/2019 2019	3343068		RPT
12/31/2019 2019	3380700		RPT
02/01/2020 2020	3404021	A	RPT
03/01/2020 2020	3424112		RPT
04/01/2020 2020	3461970		RPT
05/01/2020 2020	3461970		RPT
06/01/2020 2020	3474270		RPT
08/01/2020 2020	3485254		RPT
09/01/2020 2020	3495334		RPT
10/01/2020 2020	3495334	A	RPT
**YTD Meter Amour	ıts: Year		Amount
	2015		2302.086
	2016		8989.455
	2017		5716.312
	2018		8709.385
	2019		90.815
	2020		14.776

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# WELL RECORD & LOG

# STATE ENGINEER OFFICE

## OFFICE OF THE STATE ENGINEER

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2014 SEP 10 PM 2: 15

				<del></del>			<del></del>			
	1		ELL NUMBER)	~ <sub>1</sub> .			OSE FILE NU	MBER(S)		
O	CP-1349	•		<del>D 09/09/1</del> 4 * * *						
AT	1	ER NAME(S					PHONE (OPT)	•		
00	Merchan	its/Glenn	n's Water Well Sen	vice, Inc.			575-398-2424			
LL	1 '		G ADDRESS	<del>"</del>			CITY		STATE	ZIP
ÆL	P.O. Box	692					Tatum		NM 8826	7
<b>5</b>			DEGREE	S MINUTES	SECOND	10	l			
Ş	WELL		32	27	11.3		* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
AL	LOCATION G	1.20	TITUDE		<del></del>	. N		QUIRED: WGS 84	THOI ABLCOND	
GENERAL AND WELL LOCATION	D MOAT)	LO LO	NGITUDE 103	33	57.7	W	DATONIKE	QOIGED. WG3 64		
i i	DESCRIPTIO	N RELATING	WELL LOCATION TO STREE	T ADDRESS AND COMMO	N LANDMARKS - PLS	S (SECTION, T	OWNSHJIP, RANG	GE) WHERE AVAILABLE		
<u> </u>	NE1/4SV	/1/4NW1	/4 Section 27, To	wnship 21 South,	Range 33 Eas	t on Merc	hants Lives	stock Land		
-	LICENSE N	UMBER	NAME OF LICENSED	DRILLER				NAME OF WELL DR	ILLING COMPANY	
	WD 421		Corky Glenn					Glenn's Water	Well Service, Inc.	
	DRILLING S	TARTED	DRILLING ENDED	DEPTH OF COMPLETE	D WELL (FT)	BORE HO	LE DEPTH (FT)	DEPTH WATER FIR	ST ENCOUNTERED (FT)	
	07/12/14	ŀ	07/18/14	1,188'		1,188'		990'		
		1	-					STATIC WATER LEV	VEL IN COMPLETED WE	LL (FT)
7	COMPLETE	D WELL IS:	( ARTESIAN	C DRY HOLE C	ONFINED)		572'			
TIO	DRILLING FLUID: AIR MUD ADDITIVES – SPECIFY:									
ZW.	DRILLING N	METHOD:	© ROTARY	C HAMMER C	CABLE TOOL	C. OTHE	R – SPECIFY:	<del>-</del> -		
Ę.				CASING MATER	···· ····	T			1	<del></del>
DRILLING & CASING INFORMATION	DEPTH (feet bgl)  FROM TO DIAM			GRAI		1	ASING	CASING	CASING WALL	SLOT
	FROM TO DIAM (inches)		(include each cas		1	NECTION YPE	INSIDE DIAM. (inches)	THICKNESS (inches)	SIZE (inches)	
AS					note sections of screen)			(inches)	(meries)	
ઝ	0'	40'	20"	16"		None		15 1/2"	.250	ļ
SE	0'	754'	14 3/4"	9 5/8"		Thread		8.921"	36 lbs.	none
TT.	721'	1,188'	8 3/4"	7" (467' Total)		Thread	& Collar	6.366"	23 lbs.	1/8"
DR				259.93' perfora						
2.				on bottom of li	ner					
:										
1										
	DEPTH	(feet bgl)	BORE HOLE	LIST ANN	ULAR SEAL MA	ATERIAL A	ND	AMOUNT	метно	D OF
13	FROM	ТО	DIAM. (inches)		CK SIZE-RANG			(cubic feet)	PLACEN	
RE	0'	40'	20"	Cemented				2 yds.	Top Pour	
TE		754'		Float and shoe	comported to	nurfa co		l'	1	
M	0	/34	14 3/4"	rioat and snoe	cemented to :	suriace		777	Circulated	
ÅR										
15										
ANNULAR MATERIAL										
3.7										
FOR	OSE INTER	NAL USE					WR-2	0 WELL RECORD	& LOG (Version 06/0	8/2012)
	NUMBER	10	1349		POD NUMBER	1		NUMBER (	481-10	
	ATION (	V 01	<i>v</i>		_	<del>-                                    </del>		<del>کر ک</del>	PAGE	1 OF 2
L		<u> </u>		219	>. 33 <u>E</u>	d	<u> </u>		11100	. 0. 2

	DEPTH (	fact hall				EGTIMATES			
	FROM	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)			
	0	4'	4'	Cond	0 V 0 N	ZONES (gpiii)			
	4'	ļ		Sand	CYGN				
	4 19'	19' 35'	15' 16'	Caliche Sand & Clay	C Y 6 N				
					C Y © N				
	35'	122'	87'	Red Clay	CY 6 N				
	122'	145'	23'	Sandy Red Clay	CYGN				
TT	145'	417'	272'	Red & Brown Clay	CYGN				
WE	417'	720'	303'	Brown & Red Shale (some clay)	CYGN				
ō	720'	742'	22'	Red, Brown & Blue Clay	C Y @ N				
	742'	753'	11'	Brown Shale & Brown Sandrock	C Y © N				
) is	753'	805'	52'	Red & Blue Clay	$C^{Y} \bullet^{N}$				
07	805'	837'	32'	Brown & Red Shale (some sandrock)	CY 6 N				
GEO	837'	885'	48'	Brown Sandrock & Shale	CY 6 N				
Š	885'	990'	105'	Red & Brown Shale (some sandrock)	CY 6 N				
4. HYDROGEOLOGIC LOG OF WELL	990'	1188'	198'	Watersand (Brown Sandrock)	● Y C N				
4,	<u> </u>				$C^{Y}C^{N}$				
					$C^{Y}C^{N}$				
					CY+CN				
					$C^{Y} \cdot C^{N}$	-			
<i></i>	· · · · · · · · · · · · · · · · · · ·	-	· · · · · · · · · · · · · · · · · · ·		$C^{Y} \cap N$				
					CYCN				
:				4	$C^{Y}$				
	METHOD (	JSED TO ES	TIMATE YIELD	O OF WATER-BEARING STRATA: PUMP TO	OTAL ESTIMATED				
	C AIR LIF	T (	BAILER C	OTHER - SPECIFY:	VELL YIELD (gpm):				
7	WELL TES			ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLU ME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER					
NOIS	MICCELLA	NEOUE IN	ORMATION:			·			
ZRV]		drilled wi							
	754' to 1,	188' drille	d with air and	foam.					
TEST; RIG SUPERV									
T; F	·								
	PRINT NAM	ME(S) OF DI	RILL RIG SUPEI	RVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTI	RUCTION OTHER TH	IAN LICENSEE:			
ે જે									
	THE LDIDE	Delevier	ICDCDV CCDTII	THE THAT TO THE DEST OF HIS ON HED VAIONALEDGE AND DELIEF	THE PODECODIC IS	LA TRUE AND			
<b>E</b>	CORRECT	RECORD O	F THE ABOVE I	FIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL REC					
TUF	AND THE	PERMIT HO	LDER WITHIN	20 DAYS AFTER COMPLETION OF WELL DRILLING:					
SIGNATURE	A	0	100	A 1	-/./				
6. SIC	for	by A	tem	CONKY G-/ENM	7/9/14				
	0	SIGNAT	URE OF DRILLI	ER / PRINT SIGNEE NAME	DATE				
FOI	FOR OSE INTERNALUSE WE 20 WELL DECORD & LOC (Vargion 06/08/2012)								

POD NUMBER

TRN NUMBER 5486

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FILE NUMBER

LOCATION

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# WELL RECORD & LOG

## OFFICE OF THE STATE ENGINEER

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STATE ENGINEER OFFICE POSTIFICAL METHOD 48 2014 MIS -4 MI 10: 48

	CP - 1349	•				DHONE (OPE	ONAL					
CAI			ock/Glenn's Water	Well Servcie Inc		PHONE (OPTIONAL) (575)398-2424						
P	WELL OWN			Tren servere, me.		CITY STATE ZIP						
WELL	P.O. Box					Tatum		NM 882				
GENERAL AND WELL LOCATION	WELL LOCATIO (FROM GI		DEGREES 103	MINUTES SECOND 27 11.3 33 37.7	N W	* ACCURACY REQUIRED: ONE TENTH OF A SECOND  * DATUM REQUIRED: WGS 84						
Z		roi	NGITUDE 103									
1. GE	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHUIP, RANGE) WHERE AVAILABLE  NE/SW/NW Sec. 27, T21S, R33E on Merchants Livestock Land											
	LICENSE NU	JMBER	NAME OF LICENSED	DRILLER			NAME OF WELL DR	RILLING COMPANY	· 1000			
	WD 421		Corky Glenn				Glenn's Water \	Well Service, Inc.				
	DRILLING S 7/12/14	I .		DEPTH OF COMPLETED WELL (FT)	BORE HO 1188'	LE DEPTH (FT)	990'	ST ENCOUNTERED (F				
<u>z</u>	COMPLETE	D WELL IS:	• ARTESIAN	C DRYHOLE C SHALLOW (UNC	ONFINED)		STATIC WATER LE	VEL IN COMPLETED W	ÆLL (FT)			
2	DRILLING FLUID: AIR C MUD ADDITIVES - SPECIFY:											
	DRILLING METHOD: FOTARY CHAMMER CABLE TOOL OTHER - SPECIFY:											
DRILLING & CASING INFORMATION	DEPTH	(feet bgl)	BORE HOLE	CASING MATERIAL AND/OR		CDIC	CASING	CASING WALL	g or			
	FROM	ТО	DIAM (inches)	GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE		INSIDE DIAM. (inches)	THICKNESS (inches)	SLOT SIZE (inches			
Č	0'	40'	20"	16"	none	· <del></del>	15 1/2'	.250				
١	0,	754'	14 3/4"	9 5/8"	Thread	and collar	.352	36 lbs.	none			
DKILLE	721'	1188'	8 3/4"	7"	Thread	and collar	6.5"	23 lbs.	1/8"			
7.												
_	DEPTH	(feet bgl)	BORE HOLE	LIST ANNULAR SEAL M			AMOUNT		OD OF			
IAL	FROM	TO	DIAM. (inches)	GRAVEL PACK SIZE-RANC	E BY INTE	RVAL	(cubic feet)		EMENT			
Ę	0'	40'	20"	Cemented	:		2 yds.	Top Pour				
ANNULAK MATEKIAL	0,	754'	14 3/4"	Float and shoe cemented to	surface		740	Circulated	l 			
3. ANNUL												
•												

LOCATION

W.E.	DEPELL	C- (1-1)				3
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	DEPTH (	TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES/NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
y.	0'	4'	4'	Sand	CY © N	
ign -	4'	19'	15'	Caleche	CY @ N	
	19'	35'	16'	Sand & Clay	CYGN	
1.5. ·	35'	122'	87'	Red Sand	CY © N	
N I	122'	145'	23'	Sandy Red Clay	CYGN	
	145'	417'	272'	Red & Brown Clay	CYON	
4. HYDROGEOLOGIC LOG OF WELL	417'	720'	303'	Brown & Red Shale (some clay)	C Y © N	
OF	720'	742'	22'	Red, Brown & Blue Clay	CY @ N	
50	742'	753'	11'	Brown Shale & Brown Sandrock	C Y © N	
101	753'	805'	52'	Red & Blue Clay	CY © N	
903	805'	837'	32'	Brown & Red Shale (some sandrock)	CY © N	
[O]:	837'	885'	48'	Brown Sandrock & Shale	CY 6 N	
ROC	855'	990'	105'	Red & Brown Shale (some sandrock)	CY 6 N	
Q H	990'	1188'	198'	Watersand(Brown sandrock)	€ Y C N	
1 1		· · · · · · · · · · · · · · · · · · ·			CY CN	···
					$C^{Y}C^{N}$	· · · · · · · · · · · · · · · · · ·
					C Y O N	
1					CY CN	······································
\$\frac{1}{1}					C Y C N	
					CYCN	
0,0					CYCN	
	METHOD (	JSED TO ES	STIMATE YIELD	- · · · · · · · · · · · · · · · · · · ·	OTAL ESTIMATED	
	C AIR LIF	т С	BAILER C	OTHER – SPECIFY:	WELL YIELD (gpm):	50
z	WELL TES			ACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER		
ISION	MISCELLA	NEOUS IN	FORMATION:	· Best		A. I regarded
ERV	MISCELLA	INECOS INI	OKWATION.			
TEST; RIG SUPERVIS	0'	to 754' dr	illed with mud	d. 754' to 1188' drilled with air and foam.		
EST	PRINT NAM	ME(S) OF D	RILL RIG SUPE	RVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONST	RUCTION OTHER TH	AN LICENSEE:
S. 1						
SIGNATURE	CORRECT	RECORD O	F THE ABOVE I	FIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL REC 20 DAYS AFTER COMPLETION OF WELL DRILLING:		
	Pos	Res	Hom	Conky Glens 8	1/14	
9	-000	SIGNAT	URE OF DRILLE	ER / PRINT SIGNEE NAME	DATE	
FOI	OSE INITED	NIAL LION	A*	Win do week	7.5	

POD NUMBER

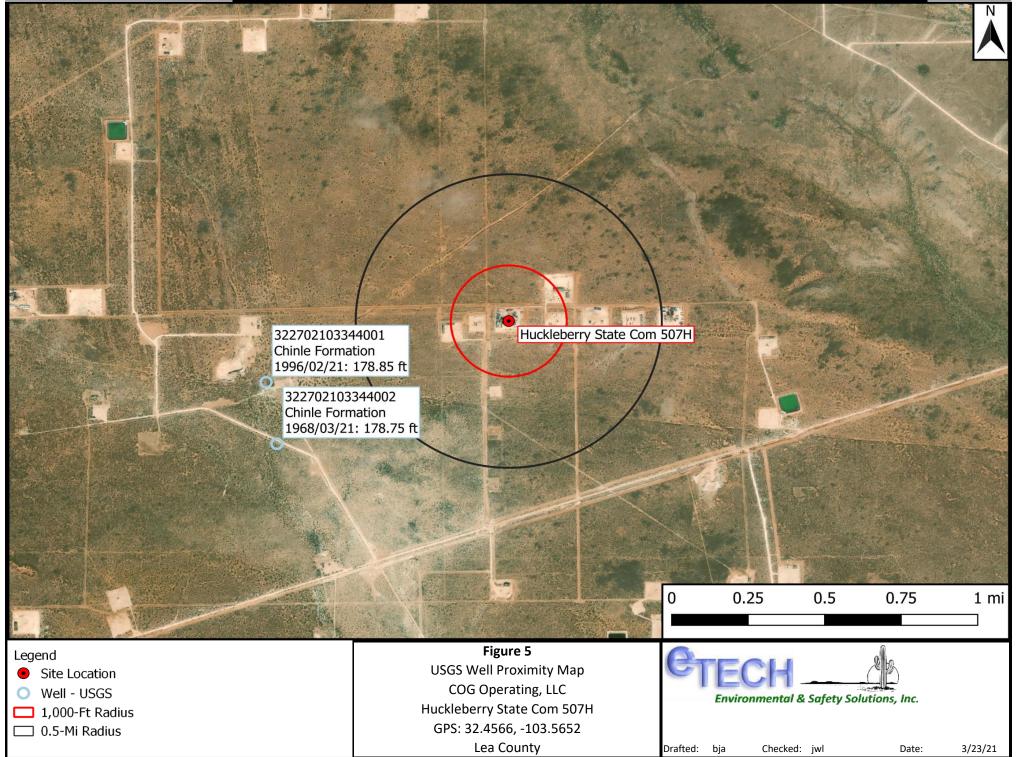
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FILE NUMBER

LOCATION

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TRN NUMBER 548479





**National Water Information System: Web Interface** 

**USGS** Water Resources

USGS Home Contact USGS Search USGS

Data Category:		Geographic Area:		
Groundwater	~	United States	~	GO

#### Click to hideNews Bulletins

- Introducing The Next Generation of USGS Water Data for the Nation
- Full News

Groundwater levels for the Nation

\* IMPORTANT: Next Generation Station Page

#### Search Results -- 1 sites found

Agency code = usgs site\_no list =

• 322702103344001

#### Minimum number of levels = 1

Save file of selected sites to local disk for future upload

#### USGS 322702103344001 21S.33E.28.12443

Lea County, New Mexico
Latitude 32°27'13", Longitude 103°34'42" NAD27
Land-surface elevation 3,688.00 feet above NGVD29
The depth of the well is 224 feet below land surface.
This well is completed in the Other aquifers (N99990THER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

#### **Output formats**

Table of data					
Tab-separated data					
Graph of data					
Reselect period					
		Water			

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1971-02-04		D	72019	178.62			1	Z			Α
1972-09-22		D	72019	178.60			1	Z			А
1976-12-16		D	72019	178.86			1	Z			Α
1981-03-10		D	72019	184.67			1	Z			А
1986-03-20		D	72019	179.24			1	Z			Α
1991-04-19		D	72019	179.10			1	Z			А
1996-02-21		D	72019	178.85			1	S			Α

#### Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	S	Steel-tape measurement.
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	А	Approved for publication Processing and review completed.

Questions about sites/data?
Feedback on this web site
Automated retrievals
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Data Tips
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<u>U.S. Department of the Interior | U.S. Geological Survey</u> **Title: Groundwater for USA: Water Levels** 

URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: <u>USGS Water Data Support Team</u> Page Last Modified: 2021-03-22 17:45:38 EDT

0.33 0.3 nadww01





**National Water Information System: Web Interface** 

**USGS** Water Resources

USGS Home Contact USGS Search USGS

Data Category:		Geographic Area:		
Groundwater	~	United States	~	GC

Click for News Bulletins

Groundwater levels for the Nation

\* IMPORTANT: Next Generation Station Page

Search Results -- 1 sites found

Agency code = usgs site no list =

• 322702103344002

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

#### USGS 322702103344002 21S.33E.28.12443A

Lea County, New Mexico
Latitude 32°27'02", Longitude 103°34'40" NAD27
Land-surface elevation 3,680 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

**Output formats** Table of data Tab-separated data Graph of data Reselect period Water ? Water level, level, ? Waterfeet Referenced feet Water-**Date** Time level above vertical **Parameter** below **Method of** Measuring Source of level datespecific datum **Status** code land measurement measurement agency approval vertical time surface status accuracy datum 72019 Z 1968-03-21 D 72019 178.75

#### Explanation

Section	Code	Description			
Water-level date-time accuracy	D	Date is accurate to the Day			
Parameter code	62610	Groundwater level above NGVD 1929, feet			
Parameter code	62611	Groundwater level above NAVD 1988, feet			
Parameter code	72019	Depth to water level, feet below land surface			
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988			
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929			
Status	1	Static			
Method of measurement	Z	Other.			
Measuring agency		Not determined			
Source of measurement		Not determined			
Water-level approval status	Α	Approved for publication Processing and review completed.			

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Title: Groundwater for USA: Water Levels

URL: https://nwis.waterdata.usgs.gov/nwis/gwlevels?

Page Contact Information: <u>USGS Water Data Support Team</u>

Page Last Modified: 2021-03-22 17:50:08 EDT

0.34 0.29 nadww02



# Appendix B Field Data & Soil Profile Logs



# Sample Log

Date:	1127/21

Project: Huckleberry State Com 507

 Project Number:
 13460
 Latitude:
 32.45719
 Longitude:
 -103.56453

Sample ID	PID/Odor	Chloride Conc.	GPS
B1 suface B4 suface B6 suface	none	628	
34 Sulface	none	412	
B6 Sin face	none	148	
5W2	none	148	
131@16" 134 sw face 136 Sw2	none	364	
134 scul face	none	412	
136	none	148	
SW2	none	120	

Sample Point = SP #1 @ ## etc

Floor = FL #1 etc

Sidewall = SW #1 etc

Test Trench = TT #1 @ ##

Refusal = SP #1 @ 4'-R

Soil Intended to be Deferred = SP #1 @ 4' In-Situ

Resamples= SP #1 @ 5b or SW #1b

Stockpile = Stockpile #1

GPS Sample Points, Center of Comp Areas



# **Soil Profile**

	, , , , , , , , , , , , , , , , , , , ,				Date: //	27/21
Project: Hu	ckleberry State	e Com 507				
Project Number:		13460	Latitude:	32.45719	Longitude:	-103.56453
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# Appendix C Laboratory Analytical Reports



# **Certificate of Analysis Summary 678177**

COG Operating LLC, Artesia, NM

Project Name: Huckleberry St. 507

Project Id: Contact:

Sheldon Hitchcock

**Project Location:** 

Lea Count, New Mexico

**Date Received in Lab:** Tue 11.17.2020 15:05

**Report Date:** 11.19.2020 11:10

Project Manager: Jessica Kramer

	Lab Id:	678177-0	001	678177-0	002	678177-0	003	678177-0	004	678177-0	005	678177-0	)06
Analysis Requested	Field Id:	B-1		B-2		B-3		B-4		B-5		SW-1	
Anaiysis Kequesiea	Depth:												
	Matrix:	SOIL	,	SOIL		SOIL		SOIL		SOIL		SOIL	,
	Sampled:	11.17.2020	10:50	11.17.2020	10:52	11.17.2020	10:54	11.17.2020	10:56	11.17.2020	10:58	11.17.2020	11:20
BTEX by EPA 8021B	Extracted:	11.17.2020	16:30	11.17.2020	16:30	11.17.2020	16:30	11.17.2020	16:30	11.17.2020	16:30	11.17.2020	16:30
	Analyzed:	11.17.2020	22:18	11.17.2020	22:46	11.17.2020	23:15	11.18.2020	00:34	11.18.2020	01:03	11.18.2020	01:32
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00201	0.00201
Toluene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00201	0.00201
Ethylbenzene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00201	0.00201
m,p-Xylenes		< 0.00398	0.00398	< 0.00399	0.00399	< 0.00398	0.00398	< 0.00399	0.00399	< 0.00398	0.00398	< 0.00402	0.00402
o-Xylene		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00201	0.00201
Total Xylenes		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00201	0.00201
Total BTEX		< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00200	0.00200	< 0.00199	0.00199	< 0.00201	0.00201
Chloride by EPA 300	Extracted:	11.17.2020	16:55	11.17.2020 16:55		11.17.2020 16:55 11.17.2020 16		16:55	11.17.2020 16:55		11.17.2020 16:55		
	Analyzed:	11.18.2020	19:27	11.18.2020	19:44	11.18.2020	19:50	11.18.2020	19:56	11.18.2020	20:02	11.18.2020	20:08
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		361	9.94	142	9.90	590	9.90	1430	50.2	390	9.96	489	10.1
TPH By SW8015 Mod	Extracted:	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:00
	<b>Analyzed:</b> 11.17.2020 18:18 11.17.2020 18:38		18:38	11.17.2020	18:58	11.17.2020	19:18	11.17.2020	19:38	11.17.2020	19:58		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		< 50.2	50.2	<49.8	49.8	< 50.0	50.0	< 50.2	50.2	< 50.1	50.1	<49.9	49.9
Diesel Range Organics		325	50.2	<49.8	49.8	< 50.0	50.0	< 50.2	50.2	< 50.1	50.1	89.1	49.9
Motor Oil Range Hydrocarbons (MRO)		196	50.2	<49.8	49.8	< 50.0	50.0	< 50.2	50.2	< 50.1	50.1	<49.9	49.9
Total TPH		521	50.2	<49.8	49.8	< 50.0	50.0	< 50.2	50.2	< 50.1	50.1	89.1	49.9

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Vramer



# **Analytical Report 678177**

for

# **COG Operating LLC**

**Project Manager: Sheldon Hitchcock** 

**Huckleberry St. 507** 

11.19.2020

Collected By: Client

#### 1089 N Canal Street Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.19.2020

Project Manager: Sheldon Hitchcock

COG Operating LLC 2407 Pecos Avenue Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): 678177

Huckleberry St. 507

Project Address: Lea Count, New Mexico

#### **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 Eurofins Xenco, LLC Report Number(s) 678177. 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 Eurofins Xenco, LLC. 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. 678177 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

# **Sample Cross Reference 678177**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
B-1	S	11.17.2020 10:50		678177-001
B-2	S	11.17.2020 10:52		678177-002
B-3	S	11.17.2020 10:54		678177-003
B-4	S	11.17.2020 10:56		678177-004
B-5	S	11.17.2020 10:58		678177-005
SW-1	S	11.17.2020 11:20		678177-006

Xenco

#### **CASE NARRATIVE**

Client Name: COG Operating LLC Project Name: Huckleberry St. 507

Project ID: Report Date: 11.19.2020 Work Order Number(s): 678177 Date Received: 11.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

# **Certificate of Analytical Results 678177**

#### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-1 Matrix:

Date Received:11.17.2020 15:05

Lab Sample Id: 678177-001

Soil Date Collected: 11.17.2020 10:50

Seq Number: 3142698

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst:

MAB

Date Prep: 11.17.2020 16:55 % Moisture: Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	361	9.94	mg/kg	11.18.2020 19:27		1

Analytical Method: TPH By SW8015 Mod

Tech: MAB

CACAnalyst: Seq Number: 3142569

Date Prep: 11.17.2020 16:00 % Moisture:

Prep Method: SW8015P

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	< 50.2	50.2		mg/kg	11.17.2020 18:18	U	1
Diesel Range Organics	C10C28DRO	325	50.2		mg/kg	11.17.2020 18:18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	196	50.2		mg/kg	11.17.2020 18:18		1
Total TPH	PHC635	521	50.2		mg/kg	11.17.2020 18:18		1
Surrogate	(	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	124	%	70-135	11.17.2020 18:18
o-Terphenyl	84-15-1	114	%	70-135	11.17.2020 18:18

Date Received:11.17.2020 15:05

Wet Weight



# **Certificate of Analytical Results 678177**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-1 Matrix: Soil

Lab Sample Id: 678177-001 Date Collected: 11.17.2020 10:50

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 11.17.2020 16:30 % Moisture: Basis:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199	mg/kg	11.17.2020 22:18	U	1
Toluene	108-88-3	< 0.00199	0.00199	mg/kg	11.17.2020 22:18	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199	mg/kg	11.17.2020 22:18	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398	mg/kg	11.17.2020 22:18	U	1
o-Xylene	95-47-6	< 0.00199	0.00199	mg/kg	11.17.2020 22:18	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199	mg/kg	11.17.2020 22:18	U	1
Total BTEX		< 0.00199	0.00199	mg/kg	11.17.2020 22:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	112	%	70-130	11.17.2020 22:18	
1,4-Difluorobenzene	540-36-3	103	%	70-130	11.17.2020 22:18	

Xenco

# **Certificate of Analytical Results 678177**

#### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-2 Matrix:

Date Received:11.17.2020 15:05

Lab Sample Id: 678177-002

Soil Date Collected: 11.17.2020 10:52

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst:

Date Prep: 11.17.2020 16:55 % Moisture: Basis:

Seq Number: 3142698

Wet Weight

**Analysis Date Parameter** Cas Number Result RLUnits Flag Dil Chloride 16887-00-6 142 11.18.2020 19:44 9.90 mg/kg

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

CAC Analyst: Seq Number: 3142569 Date Prep: 11.17.2020 16:00 % Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8		mg/kg	11.17.2020 18:38	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8		mg/kg	11.17.2020 18:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	11.17.2020 18:38	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	11.17.2020 18:38	U	1
Surrogate	(	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	120	%	70-135	11.17.2020 18:38
o-Terphenyl	84-15-1	116	%	70-135	11.17.2020 18:38

# **Certificate of Analytical Results 678177**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: **B-2**  Matrix: Soil

Date Received:11.17.2020 15:05

Lab Sample Id: 678177-002

Date Collected: 11.17.2020 10:52

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

% Moisture:

MAB Analyst:

Date Prep: 11.17.2020 16:30

Basis: Wet Weight

Seq Number:	3142571
ord i turnour.	

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	11.17.2020 22:46	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	11.17.2020 22:46	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	11.17.2020 22:46	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	11.17.2020 22:46	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	11.17.2020 22:46	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	11.17.2020 22:46	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	11.17.2020 22:46	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	99	%	70-130	11.17.2020 22:46		
4-Bromofluorobenzene		460-00-4	107	%	70-130	11.17.2020 22:46		

# Certificate of Analytical Results 678177

#### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-3

Matrix: Soil

Date Received:11.17.2020 15:05

Lab Sample Id: 678177-003

Date Collected: 11.17.2020 10:54

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:
Analyst:

MAB MAB

Date Prep:

11.17.2020 16:55

% Moisture:

Basis:

Wet Weight

Seq Number: 3142698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	590	9.90	mg/kg	11.18.2020 19:50		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

Analyst: CAC Seq Number: 3142569 Date Prep: 11.17.2020 16:00

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	< 50.0	50.0		mg/kg	11.17.2020 18:58	U	1
Diesel Range Organics	C10C28DRO	< 50.0	50.0		mg/kg	11.17.2020 18:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	11.17.2020 18:58	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	11.17.2020 18:58	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	113	%	70-135	11.17.2020 18:58
o-Terphenyl	84-15-1	110	%	70-135	11.17.2020 18:58

Wet Weight

# **Certificate of Analytical Results 678177**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-3 Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678177-003 Date Collected: 11.17.2020 10:54

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 11.17.2020 16:30 % Moisture: Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	11.17.2020 23:15	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	11.17.2020 23:15	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	11.17.2020 23:15	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	11.17.2020 23:15	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	11.17.2020 23:15	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	11.17.2020 23:15	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	11.17.2020 23:15	U	1
Surrogate	C	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1.4.75'01 1	۶	10.26.2	100	0/	70 120	11 17 2020 22 15		

# Certificate of Analytical Results 678177

#### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: **B-4** 

Matrix: Soil

Date Received:11.17.2020 15:05

Lab Sample Id: 678177-004

Date Collected: 11.17.2020 10:56

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:
Analyst:

MAB

MAB

Date Prep: 11.17.2020 16:55

% Moisture:

Basis:

Wet Weight

Seq Number: 3142698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1430	50.2	mg/kg	11.18.2020 19:56		5

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

Analyst: CAC Seq Number: 3142569 Date Prep: 11.17.2020 16:00

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	< 50.2	50.2		mg/kg	11.17.2020 19:18	U	1
Diesel Range Organics	C10C28DRO	< 50.2	50.2		mg/kg	11.17.2020 19:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.2	50.2		mg/kg	11.17.2020 19:18	U	1
Total TPH	PHC635	< 50.2	50.2		mg/kg	11.17.2020 19:18	U	1
Surrogate	(	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>
1-Chlorooctane	111-85-3	126	%	70-135	11.17.2020 19:18
o-Terphenyl	84-15-1	100	%	70-135	11.17.2020 19:18

Date Received:11.17.2020 15:05

Wet Weight



# **Certificate of Analytical Results 678177**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-4 Matrix: Soil

Lab Sample Id: 678177-004 Date Collected: 11.17.2020 10:56

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200	mg/kg	11.18.2020 00:34	U	1
Toluene	108-88-3	< 0.00200	0.00200	mg/kg	11.18.2020 00:34	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200	mg/kg	11.18.2020 00:34	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399	mg/kg	11.18.2020 00:34	U	1
o-Xylene	95-47-6	< 0.00200	0.00200	mg/kg	11.18.2020 00:34	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200	mg/kg	11.18.2020 00:34	U	1
Total BTEX		< 0.00200	0.00200	mg/kg	11.18.2020 00:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	11.18.2020 00:34	
1,4-Difluorobenzene	540-36-3	95	%	70-130	11.18.2020 00:34	

Xenco

# **Certificate of Analytical Results 678177**

#### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-5

Matrix: Soil

Date Received:11.17.2020 15:05

Prep Method: E300P

Lab Sample Id: 678177-005

Date Collected: 11.17.2020 10:58

Analytical Method: Chloride by EPA 300

11.17.2020 16:55

Tech: MAB

MAB Date Prep:

% Moisture:

Basis:

Seq Number: 3142698

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 390
 9.96
 mg/kg
 11.18.2020 20:02
 1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

Analyst:

MAB

Analyst: CAC Seq Number: 3142569

Date Prep: 11.17.2020 16:00

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1		mg/kg	11.17.2020 19:38	U	1
Diesel Range Organics	C10C28DRO	< 50.1	50.1		mg/kg	11.17.2020 19:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	11.17.2020 19:38	U	1
Total TPH	PHC635	<50.1	50.1		mg/kg	11.17.2020 19:38	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	Number % Recovery		Limits	Analysis Date
1-Chlorooctane	111-85-3	114	%	70-135	11.17.2020 19:38
o-Terphenyl	84-15-1	108	%	70-135	11.17.2020 19:38

B-5

Date Received:11.17.2020 15:05

Wet Weight



# **Certificate of Analytical Results 678177**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: Matrix: Soil

Lab Sample Id: 678177-005 Date Collected: 11.17.2020 10:58

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

% Moisture: MAB Analyst: Date Prep: 11.17.2020 16:30 Basis:

Parameter	Cas Number	ber Result RL			Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00199	0.00199		mg/kg	11.18.2020 01:03	U	1
Toluene	108-88-3	< 0.00199	0.00199		mg/kg	11.18.2020 01:03	U	1
Ethylbenzene	100-41-4	< 0.00199	0.00199		mg/kg	11.18.2020 01:03	U	1
m,p-Xylenes	179601-23-1	< 0.00398	0.00398		mg/kg	11.18.2020 01:03	U	1
o-Xylene	95-47-6	< 0.00199	0.00199		mg/kg	11.18.2020 01:03	U	1
Total Xylenes	1330-20-7	< 0.00199	0.00199		mg/kg	11.18.2020 01:03	U	1
Total BTEX		< 0.00199	0.00199		mg/kg	11.18.2020 01:03	U	1
Surrogate	Ca	s Number	% Recovery	Units	Limits	Analysis Date	Flag	

# **Certificate of Analytical Results 678177**

#### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: **SW-1**  Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678177-006

Date Collected: 11.17.2020 11:20

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

% Moisture:

Analyst:

MAB

Date Prep: 11.17.2020 16:55

Basis: Wet Weight

Seq Number: 3142698

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	489	10.1	mg/kg	11.18.2020 20:08		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

CACAnalyst: Seq Number: 3142569 Date Prep: 11.17.2020 16:00 % Moisture:

Basis:

Parameter	Cas Number	Result RL		Units	Analysis Date	Flag	Dil	
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9		mg/kg	11.17.2020 19:58	U	1
Diesel Range Organics	C10C28DRO	89.1	49.9		mg/kg	11.17.2020 19:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	11.17.2020 19:58	U	1
Total TPH	PHC635	89.1	49.9		mg/kg	11.17.2020 19:58		1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	120	%	70-135	11.17.2020 19:58
o-Terphenyl	84-15-1	96	%	70-135	11.17.2020 19:58

Wet Weight

# **Certificate of Analytical Results 678177**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: SW-1 Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678177-006 Date Collected: 11.17.2020 11:20

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 11.17.2020 16:30 % Moisture: Basis:

Parameter	Cas Number	ber Result RL		Units	Analysis Date	Flag	Dil	
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	11.18.2020 01:32	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	11.18.2020 01:32	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	11.18.2020 01:32	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	11.18.2020 01:32	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	11.18.2020 01:32	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	11.18.2020 01:32	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	11.18.2020 01:32	U	1
Surrogate	Ca	s Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	Fla
4-Bromofluorobenzene	460-00-4	110	%	70-130	11.18.2020 01:32	
1,4-Difluorobenzene	540-36-3	102	%	70-130	11.18.2020 01:32	



# **Flagging Criteria**

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

**BRL** Below Reporting Limit. **ND** Not Detected.

**RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

SMP Client Sample BLK Method Blank

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

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

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

#### **QC Summary** 678177

#### **COG Operating LLC**

Huckleberry St. 507

LCSD

Result

279

Analytical Method: Chloride by EPA 300

Seq Number: 3142698

Matrix: Solid

300

E300P Prep Method:

Date Prep: 11.17.2020

7715394-1-BLK LCS Sample Id: MB Sample Id:

7715394-1-BKS

LCSD Sample Id: 7715394-1-BSD

mg/kg

mg/kg

**Parameter** 

Chloride

MB Spike Result Amount <10.0

LCS LCS Result %Rec

279

LCSD %Rec

93

Limits %RPD

0

90-110

RPD Units Limit 20

Prep Method:

20

Prep Method:

Analysis Date

11.18.2020 18:39

Flag

Analytical Method: Chloride by EPA 300

Seq Number: 3142698 Parent Sample Id:

678175-004

Matrix: Soil MS Sample Id:

93

678175-004 S

Date Prep: 11.17.2020

MSD Sample Id: 678175-004 SD

E300P

**Parameter** 

Chloride

Parent Spike Result Amount 62.4 197

MS MS Result %Rec 279 110

MSD Result 279

MSD Limits %Rec 110 90-110 %RPD RPD Limit

0

Units

Analysis Flag Date

11.18.2020 18:57

Analytical Method: Chloride by EPA 300

Seq Number:

3142698 678179-001

Matrix: Soil MS Sample Id: 678179-001 S

MS

Limits

E300P Date Prep: 11.17.2020

MSD Sample Id: 678179-001 SD

**Parameter** 

Chloride

Parent Sample Id:

Spike **Parent** Result Amount 2260 200

MS Result %Rec 2470

MSD Result 105 2480

**MSD** %Rec 110 90-110

**RPD** %RPD Limit 20 0

Units

Analysis Flag Date 11.18.2020 20:20

Flag

Flag

Analytical Method: TPH By SW8015 Mod

Seq Number:

3142569

Matrix: Solid

Prep Method:

SW8015P

Date Prep: 11.17.2020

mg/kg

MB Sample Id:

7715398-1-BLK

LCS Sample Id: 7715398-1-BKS LCSD Sample Id: 7715398-1-BSD

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Date Result Amount %Rec Result %Rec 11.17.2020 11:28 Gasoline Range Hydrocarbons 974 97 97 35 < 50.0 1000 966 70-135 mg/kg 11.17.2020 11:28 1070 107 1070 70-135 0 35 Diesel Range Organics < 50.0 1000 107 mg/kg

LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 11.17.2020 11:28 1-Chlorooctane 105 133 133 70-135 % 11.17.2020 11:28 o-Terphenyl 105 102 102 70-135 %

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142569

Motor Oil Range Hydrocarbons (MRO)

Matrix: Solid

MB Sample Id: 7715398-1-BLK

Prep Method:

SW8015P

Date Prep: 11.17.2020

**Parameter** 

MBResult < 50.0

Units

mg/kg

Analysis

Date 11.17.2020 11:08

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result

= MS/LCS Result = MSD/LCSD Result MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

Flag

Flag

SW8015P

Prep Method:

# QC Summary 678177

#### **COG Operating LLC**

Huckleberry St. 507

Analytical Method: TPH By SW8015 Mod

 Seq Number:
 3142569
 Matrix:
 Soil
 Date Prep:
 11.17.2020

 Percent Segregals Like
 677883-028
 MSD Sample Like
 677883-028

Parent Sample Id: 677883-028 MS Sample Id: 677883-028 S MSD Sample Id: 677883-028 SD RPD **Parent** Spike MS MS MSD Limits %RPD Units Analysis MSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date

< 50.3 1010 1080 107 112 70-135 4 35 11.17.2020 12:28 Gasoline Range Hydrocarbons 1120 mg/kg 11.17.2020 12:28 1010 70-135 mg/kg Diesel Range Organics < 50.3 1130 112 1050 105 7 35

MS **MSD** Limits Units MS Analysis MSD **Surrogate** %Rec Flag Flag Date %Rec 11.17.2020 12:28 1-Chlorooctane 109 107 70-135 % 11.17.2020 12:28 o-Terphenyl 104 116 70-135 %

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Prep Method: SW5035A

 Seq Number:
 3142571
 Matrix:
 Solid
 Date Prep:
 11.17.2020

 MB Sample Id:
 7715391-1-BLK
 LCS Sample Id:
 7715391-1-BKS
 LCSD Sample Id:
 7715391-1-BSD

Parameter	MB	Spike	LCS	LCS	LCSD	LCSD	Limits	%RPD	RPD	Units	Analysis
	Result	Amount	Result	%Rec	Result	%Rec			Limit		Date
Benzene	< 0.00200	0.100	0.0943	94	0.0960	96	70-130	2	35	mg/kg	11.17.2020 17:36
Toluene	< 0.00200	0.100	0.0887	89	0.0889	89	70-130	0	35	mg/kg	11.17.2020 17:36
Ethylbenzene	< 0.00200	0.100	0.0937	94	0.0919	92	71-129	2	35	mg/kg	11.17.2020 17:36
m,p-Xylenes	< 0.00400	0.200	0.190	95	0.189	95	70-135	1	35	mg/kg	11.17.2020 17:36
o-Xylene	< 0.00200	0.100	0.0943	94	0.0947	95	71-133	0	35	mg/kg	11.17.2020 17:36

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		99		101		70-130	%	11.17.2020 17:36
4-Bromofluorobenzene	112		105		108		70-130	%	11.17.2020 17:36

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

 Seq Number:
 3142571
 Matrix:
 Soil
 Date Prep:
 11.17.2020

 Parent Sample Id:
 678175-001
 MS Sample Id:
 678175-001 SD
 MSD Sample Id:
 678175-001 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	0.0917	92	0.106	106	70-130	14	35	mg/kg	11.17.2020 18:21	
Toluene	0.00532	0.100	0.0929	88	0.107	102	70-130	14	35	mg/kg	11.17.2020 18:21	
Ethylbenzene	0.00789	0.100	0.0926	85	0.109	101	71-129	16	35	mg/kg	11.17.2020 18:21	
m,p-Xylenes	0.0227	0.200	0.202	90	0.237	107	70-135	16	35	mg/kg	11.17.2020 18:21	
o-Xylene	0.0197	0.100	0.108	88	0.123	103	71-133	13	35	mg/kg	11.17.2020 18:21	

Surrogate	MS MS %Rec Flag		MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		70-130	%	11.17.2020 18:21
4-Bromofluorobenzene	110		114		70-130	%	11.17.2020 18:21

E = MSD/LCSD Result

																			6	AS	र्छ।	77 _of	Receive	
Analysis Re	equest of Chain of Custody Record																		Page	· _	1	of	by O	
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Project Name:	Huchleberry 5+507										1	1			0				od N		11	1	1:27:4	
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Invoice to:	Sheldon Hitchcock																							
Receiving Labor	atory: X en w	Sampler Na	me:	Sheld	ion	Hitch	cock			MRO)											11			
Comments:										- DRO -														
						MATRIX PRESERVATIVE METHOD			ERS (G)rab															
LAB # SAMPLE IDENTIFICATION  ( LAB USE )		YEAR: Z	020	WATER	HCL HNO <sub>3</sub>		#CONTAINERS	(C)omposite/(G)ral	TPH 8015M ( GRO	X 8021B	Chloride												0	
( ONLY )	-	DATE	TIME	§ 8	오			_		_	- 1		-	Н	+	1	-	H	+	1	$\sqcup$	4		Hold
	13-11	11/17	10:50		-	11	1	1	( (	X	X	4	-	H	+		H	+	+	+	H			_
	0-2		10:52		+	++	1	-		1	1	1		++	-	-	H	+		-	H	-		_
	<i>B</i> − 3		10:56		+	1	++	-	+	+	+	H		+	+		H	+	+		++	+		-
tree tree	B-5		10:58		+	1	11	+	11	+	1	H			+		1	+	+	1	H	+		-
	54-1		11:20		1	1		11	+	+	1			+	+			+	+		11	++		-
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Relinquished by		Received to	Dy:		Dat		ime:	2-100	)	-	-1- T-				K	RUSH	l: Sai	ne Da	y 24	hr 4	8 Hr	72 hr		
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Relinquished by	y: Date: Time:	Received to	by:		Date	te:	ime:		_	7	4-	2/	1											
												1	7	4		Specia	al Rep	ort Lin	iits or	TRRP	Repo	ort	Page	
			4							(Circ	H) HA	ND DE	LIVER	ED F	EDE)	UPS	Trac	king #:					e 61	
		ORIGINA	AL COPY								/		_	/									of I	

# **Eurofins Xenco, LLC**

# Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.17.2020 03.05.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 678177

Analyst:

Temperature Measuring device used: T\_NM\_007

Date: 11.19.2020

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		4	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping contai	ner/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?		Yes	
#6*Custody Seals Signed and dated?		Yes	
#7 *Chain of Custody present?		Yes	
#8 Any missing/extra samples?		No	
#9 Chain of Custody signed when relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	Samples received in bulk containers.
#13 Samples properly preserved?		Yes	00.110.10.
#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 headsp	ace?	N/A	

* Must be	completed for	after-hours	delivery of	samples	prior to	placing in	the i	refrigerato	16

Checklist completed by: Date: 11.17.2020 Checklist reviewed by:

Jessica Kramer

Jessica Kramer

PH Device/Lot#:



# **Certificate of Analysis Summary 678175**

COG Operating LLC, Artesia, NM

Project Name: Huckleberry St. 507

Project Id: Contact:

Grant Huckabay

Project Location:

Lea, New Mexico

**Date Received in Lab:** Tue 11.17.2020 15:05

**Report Date:** 11.19.2020 11:11

Project Manager: Jessica Kramer

	Lab Id:	678175-	001	678175-0	002	678175-0	003	678175-	004	678175-0	05	678175-0	006
Analysis Requested	Field Id:	B-6		B-7		B-8		B-9		B-10		B11	
Anaiysis Requesieu	Depth:												
	Matrix:	SOIL	_	SOIL		SOIL		SOIL	,	SOIL		SOIL	
	Sampled:	11.17.2020	10:36	11.17.2020	10:38	11.17.2020	10:40	11.17.2020	10:42	11.17.2020	10:44	11.17.2020	10:46
BTEX by EPA 8021B	Extracted:	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:30	11.17.2020	16:30	11.17.2020	16:30	11.17.2020	16:30
	Analyzed:	11.17.2020	19:41	11.17.2020	20:03	11.17.2020	20:26	11.17.2020	20:48	11.17.2020	21:10	11.17.2020	21:33
	Units/RL:	mg/kg	RL										
Benzene		< 0.00200	0.00200	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202
Toluene		0.00532	0.00200	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202
Ethylbenzene		0.00789	0.00200	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202
m,p-Xylenes		0.0227	0.00399	< 0.00397	0.00397	< 0.00399	0.00399	< 0.00402	0.00402	< 0.00401	0.00401	< 0.00403	0.00403
o-Xylene		0.0197	0.00200	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202
Total Xylenes		0.0424	0.00200	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202
Total BTEX		0.0556	0.00200	< 0.00198	0.00198	< 0.00200	0.00200	< 0.00201	0.00201	< 0.00200	0.00200	< 0.00202	0.00202
Chloride by EPA 300	Extracted:	11.17.2020	15:52	11.17.2020	15:52	11.17.2020	15:52	11.17.2020	16:55	11.17.2020	16:55	11.17.2020	16:55
	Analyzed:	11.18.2020	18:03	11.18.2020	18:09	11.18.2020	18:15	11.18.2020	18:51	11.18.2020	19:09	11.18.2020	19:15
	Units/RL:	mg/kg	RL										
Chloride		337	10.1	23.6	10.0	42.4	10.0	62.4	10.1	22.6	10.0	15.9	10.1
TPH By SW8015 Mod	Extracted:	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:00	11.17.2020	16:00
	Analyzed:	11.17.2020	17:58	11.17.2020	18:18	11.17.2020	18:38	11.17.2020	18:58	11.17.2020	19:18	11.17.2020	19:38
	Units/RL:	mg/kg	RL										
Gasoline Range Hydrocarbons		<49.9	49.9	<49.8	49.8	< 50.1	50.1	< 50.0	50.0	<49.9	49.9	<49.8	49.8
Diesel Range Organics		124	49.9	<49.8	49.8	< 50.1	50.1	< 50.0	50.0	<49.9	49.9	<49.8	49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9	<49.8	49.8	< 50.1	50.1	< 50.0	50.0	<49.9	49.9	<49.8	49.8
Total TPH		124	49.9	<49.8	49.8	<50.1	50.1	<50.0	50.0	<49.9	49.9	<49.8	49.8

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Weamer

#### Page 64 of 114

# **Certificate of Analysis Summary 678175**

COG Operating LLC, Artesia, NM

Project Name: Huckleberry St. 507

**Project Id: Contact:** 

**Project Location:** 

eurofins |

Grant Huckabay Lea, New Mexico **Date Received in Lab:** Tue 11.17.2020 15:05

**Report Date:** 11.19.2020 11:11

Project Manager: Jessica Kramer

	Lab Id:	678175-007			
Analysis Requested	Field Id:	SW-2			
	Depth:				
	Matrix:	SOIL			
	Sampled:	11.17.2020 10:48			
BTEX by EPA 8021B	Extracted:	11.17.2020 16:30			
	Analyzed:	11.17.2020 21:55			
	Units/RL:	mg/kg RL			
Benzene		<0.00198 0.00198			
Toluene		< 0.00198 0.00198			
Ethylbenzene		< 0.00198 0.00198			
m,p-Xylenes		< 0.00397 0.00397			
o-Xylene		<0.00198 0.00198			
Total Xylenes		<0.00198 0.00198			
Total BTEX		<0.00198 0.00198			
Chloride by EPA 300	Extracted:	11.17.2020 16:55			
	Analyzed:	11.18.2020 19:21			
	Units/RL:	mg/kg RL			
Chloride		95.5 10.0			
TPH By SW8015 Mod	Extracted:	11.17.2020 16:00			
	Analyzed:	11.17.2020 19:58			
	Units/RL:	mg/kg RL			
Gasoline Range Hydrocarbons		<50.2 50.2			
Diesel Range Organics		98.0 50.2			
Motor Oil Range Hydrocarbons (MRO)		59.5 50.2			
Total TPH		158 50.2	 	 	

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Warner



# **Analytical Report 678175**

for

# **COG Operating LLC**

**Project Manager: Grant Huckabay** 

**Huckleberry St. 507** 

11.19.2020

Collected By: Client

#### 1089 N Canal Street Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-23) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



11.19.2020

Project Manager: Grant Huckabay

COG Operating LLC 2407 Pecos Avenue Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): 678175

**Huckleberry St. 507** 

Project Address: Lea, New Mexico

#### **Grant Huckabay:**

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 Eurofins Xenco, LLC Report Number(s) 678175. 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 Eurofins Xenco, LLC. 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. 678175 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico



# **Sample Cross Reference 678175**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
B-6	S	11.17.2020 10:36		678175-001
B-7	S	11.17.2020 10:38		678175-002
B-8	S	11.17.2020 10:40		678175-003
B-9	S	11.17.2020 10:42		678175-004
B-10	S	11.17.2020 10:44		678175-005
B11	S	11.17.2020 10:46		678175-006
SW-2	S	11.17.2020 10:48		678175-007

#### **CASE NARRATIVE**

Client Name: COG Operating LLC Project Name: Huckleberry St. 507

Project ID: Report Date: 11.19.2020 Work Order Number(s): 678175 Date Received: 11.17.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

**Environment Testing** 

# **Certificate of Analytical Results 678175**

#### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: **B-6**  Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678175-001

Date Collected: 11.17.2020 10:36

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

% Moisture:

Analyst:

MAB Seq Number: 3142697 11.17.2020 15:52

Basis: Wet Weight

**Analysis Date Parameter** Cas Number Result RLUnits Flag Dil Chloride 16887-00-6 337 10.1 11.18.2020 18:03 mg/kg

Date Prep:

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

CAC Analyst: Seq Number: 3142566 Date Prep: 11.17.2020 16:00 % Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9		mg/kg	11.17.2020 17:58	U	1
Diesel Range Organics	C10C28DRO	124	49.9		mg/kg	11.17.2020 17:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	11.17.2020 17:58	U	1
Total TPH	PHC635	124	49.9		mg/kg	11.17.2020 17:58		1
Surrogate	C	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	107	%	70-135	11.17.2020 17:58
o-Terphenyl	84-15-1	114	%	70-135	11.17.2020 17:58

**B-6** 

Date Received:11.17.2020 15:05

Wet Weight

# **Certificate of Analytical Results 678175**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Soil

Lab Sample Id: 678175-001 Date Collected: 11.17.2020 10:36

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Matrix:

Tech: MAB

Sample Id:

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	11.17.2020 19:41	U	1
Toluene	108-88-3	0.00532	0.00200		mg/kg	11.17.2020 19:41		1
Ethylbenzene	100-41-4	0.00789	0.00200		mg/kg	11.17.2020 19:41		1
m,p-Xylenes	179601-23-1	0.0227	0.00399		mg/kg	11.17.2020 19:41		1
o-Xylene	95-47-6	0.0197	0.00200		mg/kg	11.17.2020 19:41		1
Total Xylenes	1330-20-7	0.0424	0.00200		mg/kg	11.17.2020 19:41		1
Total BTEX		0.0556	0.00200		mg/kg	11.17.2020 19:41		1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	111	%	70-130	11.17.2020 19:41		
1,4-Difluorobenzene		540-36-3	98	%	70-130	11.17.2020 19:41		



# Certificate of Analytical Results 678175

#### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-7

Seq Number: 3142697

Matrix:

Soil

Date Received:11.17.2020 15:05

Lab Sample Id: 678175-002

Date Collected: 11.17.2020 10:38

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: Analyst: MAB MAB

Date Prep:

11.17.2020 15:52

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.6	10.0	mg/kg	11.18.2020 18:09		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

Analyst: CAC Seq Number: 3142566 Date Prep:

11.17.2020 16:00

% Moisture:

Basis:

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8		mg/kg	11.17.2020 18:18	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8		mg/kg	11.17.2020 18:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	11.17.2020 18:18	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	11.17.2020 18:18	U	1
Surrogate	c	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	98	%	70-135	11.17.2020 18:18
o-Terphenyl	84-15-1	106	%	70-135	11.17.2020 18:18

Wet Weight

# **Certificate of Analytical Results 678175**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-7 Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678175-002 Date Collected: 11.17.2020 10:38

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	11.17.2020 20:03	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	11.17.2020 20:03	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	11.17.2020 20:03	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	11.17.2020 20:03	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	11.17.2020 20:03	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	11.17.2020 20:03	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	11.17.2020 20:03	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	104	%	70-130	11.17.2020 20:03		
4-Bromofluorobenzene		460-00-4	111	%	70-130	11.17.2020 20:03		

### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: **B-8** 

Matrix: Soil

Date Received:11.17.2020 15:05

Lab Sample Id: 678175-003

Date Collected: 11.17.2020 10:40

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

Analyst:

MAB

Date Prep: 11.17.2020 15:52

% Moisture:

Seq Number: 3142697

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	42.4	10.0	mg/kg	11.18.2020 18:15		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

Analyst: CAC Seq Number: 3142566 Date Prep: 11.17.2020 16:00

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	< 50.1	50.1		mg/kg	11.17.2020 18:38	U	1
Diesel Range Organics	C10C28DRO	< 50.1	50.1		mg/kg	11.17.2020 18:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.1	50.1		mg/kg	11.17.2020 18:38	U	1
Total TPH	PHC635	< 50.1	50.1		mg/kg	11.17.2020 18:38	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	97	%	70-135	11.17.2020 18:38
o-Terphenyl	84-15-1	98	%	70-135	11.17.2020 18:38

Wet Weight

# **Certificate of Analytical Results 678175**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-8 Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678175-003 Date Collected: 11.17.2020 10:40

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 11.17.2020 16:30 % Moisture: Basis:

Seq Number: 3142571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200	mg/kg	11.17.2020 20:26	U	1
Toluene	108-88-3	< 0.00200	0.00200	mg/kg	11.17.2020 20:26	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200	mg/kg	11.17.2020 20:26	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399	mg/kg	11.17.2020 20:26	U	1
o-Xylene	95-47-6	< 0.00200	0.00200	mg/kg	11.17.2020 20:26	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200	mg/kg	11.17.2020 20:26	U	1
Total BTEX		< 0.00200	0.00200	mg/kg	11.17.2020 20:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	11.17.2020 20:26	
4-Bromofluorobenzene	460-00-4	122	%	70-130	11.17.2020 20:26	

### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-9

Matrix: Soil

Date Received:11.17.2020 15:05

Lab Sample Id: 678175-004

Date Collected: 11.17.2020 10:42

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:
Analyst:

MAB MAB

Date Prep:

11.17.2020 16:55 % N

% Moisture:

Basis: Wet Weight

Seq Number: 3142698

bed rumber.

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 62.4
 10.1
 mg/kg
 11.18.2020 18:51
 1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

Analyst: CAC Seq Number: 3142566 Date Prep: 11.17.2020 16:00

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	< 50.0	50.0		mg/kg	11.17.2020 18:58	U	1
Diesel Range Organics	C10C28DRO	< 50.0	50.0		mg/kg	11.17.2020 18:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	11.17.2020 18:58	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	11.17.2020 18:58	U	1
Surrogate	C	as Number %	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	105	%	70-135	11.17.2020 18:58
o-Terphenyl	84-15-1	106	%	70-135	11.17.2020 18:58

Date Received:11.17.2020 15:05

Wet Weight

# **Certificate of Analytical Results 678175**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-9 Matrix: Soil

Lab Sample Id: 678175-004 Date Collected: 11.17.2020 10:42

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Seq Number: 3142571

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00201	0.00201		mg/kg	11.17.2020 20:48	U	1
Toluene	108-88-3	< 0.00201	0.00201		mg/kg	11.17.2020 20:48	U	1
Ethylbenzene	100-41-4	< 0.00201	0.00201		mg/kg	11.17.2020 20:48	U	1
m,p-Xylenes	179601-23-1	< 0.00402	0.00402		mg/kg	11.17.2020 20:48	U	1
o-Xylene	95-47-6	< 0.00201	0.00201		mg/kg	11.17.2020 20:48	U	1
Total Xylenes	1330-20-7	< 0.00201	0.00201		mg/kg	11.17.2020 20:48	U	1
Total BTEX		< 0.00201	0.00201		mg/kg	11.17.2020 20:48	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	115	%	70-130	11.17.2020 20:48		
1,4-Difluorobenzene		540-36-3	107	%	70-130	11.17.2020 20:48		

### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: **B-10**  Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678175-005

Date Collected: 11.17.2020 10:44

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst:

11.17.2020 16:55

% Moisture:

Seq Number: 3142698

Date Prep:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Unit	s Analysis Date	Flag	Dil
Chloride	16887-00-6	22.6	10.0	mg/k	g 11.18.2020 19:09		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

CACAnalyst: Seq Number: 3142566 Date Prep: 11.17.2020 16:00 % Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9		mg/kg	11.17.2020 19:18	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9		mg/kg	11.17.2020 19:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	11.17.2020 19:18	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	11.17.2020 19:18	U	1
Surrogate	C	as Number %	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	124	%	70-135	11.17.2020 19:18
o-Terphenyl	84-15-1	116	%	70-135	11.17.2020 19:18

Wet Weight



# **Certificate of Analytical Results 678175**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B-10 Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678175-005 Date Collected: 11.17.2020 10:44

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 11.17.2020 16:30 % Moisture: Basis:

Seq Number: 3142571

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200	mg/kg	11.17.2020 21:10	U	1
Toluene	108-88-3	< 0.00200	0.00200	mg/kg	11.17.2020 21:10	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200	mg/kg	11.17.2020 21:10	U	1
m,p-Xylenes	179601-23-1	< 0.00401	0.00401	mg/kg	11.17.2020 21:10	U	1
o-Xylene	95-47-6	< 0.00200	0.00200	mg/kg	11.17.2020 21:10	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200	mg/kg	11.17.2020 21:10	U	1
Total BTEX		< 0.00200	0.00200	mg/kg	11.17.2020 21:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	<b>Analysis Date</b>	Flag
4-Bromofluorobenzene	460-00-4	118	%	70-130	11.17.2020 21:10	
1,4-Difluorobenzene	540-36-3	106	%	70-130	11.17.2020 21:10	



### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B11

Seq Number: 3142698

Matrix: Soil

Date Received:11.17.2020 15:05

Page 79 of 114

Lab Sample Id: 678175-006

Date Collected: 11.17.2020 10:46

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

11.17.2020 16:55

% Moisture:

Analyst:

MIME

MAB Date Prep:

Basis:

sis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	15.9	10.1	mg/kg	11.18.2020 19:15		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

Analyst: CAC Seq Number: 3142566 Date Prep: 11.17.2020 16:00

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8		mg/kg	11.17.2020 19:38	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8		mg/kg	11.17.2020 19:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	11.17.2020 19:38	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	11.17.2020 19:38	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	115	%	70-135	11.17.2020 19:38
o-Terphenyl	84-15-1	114	%	70-135	11.17.2020 19:38

Wet Weight

11.17.2020 21:33

70-130

# **Certificate of Analytical Results 678175**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: B11 Matrix: Soil Date Received:11.17.2020 15:05

Lab Sample Id: 678175-006 Date Collected: 11.17.2020 10:46

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

540-36-3

Seq Number: 3142571

1,4-Difluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00202	0.00202		mg/kg	11.17.2020 21:33	U	1
Toluene	108-88-3	< 0.00202	0.00202		mg/kg	11.17.2020 21:33	U	1
Ethylbenzene	100-41-4	< 0.00202	0.00202		mg/kg	11.17.2020 21:33	U	1
m,p-Xylenes	179601-23-1	< 0.00403	0.00403		mg/kg	11.17.2020 21:33	U	1
o-Xylene	95-47-6	< 0.00202	0.00202		mg/kg	11.17.2020 21:33	U	1
Total Xylenes	1330-20-7	< 0.00202	0.00202		mg/kg	11.17.2020 21:33	U	1
Total BTEX		< 0.00202	0.00202		mg/kg	11.17.2020 21:33	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	4	460-00-4	113	%	70-130	11.17.2020 21:33		

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### COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: **SW-2**  Matrix:

Date Received:11.17.2020 15:05

Lab Sample Id: 678175-007

Soil Date Collected: 11.17.2020 10:48

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

% Moisture:

MAB Analyst:

Date Prep:

11.17.2020 16:55

Seq Number: 3142698

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	95.5	10.0	mg/kg	11.18.2020 19:21		1

Analytical Method: TPH By SW8015 Mod

Prep Method: SW8015P

Tech:

MAB

CACAnalyst: Seq Number: 3142566 Date Prep: 11.17.2020 16:00 % Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	< 50.2	50.2		mg/kg	11.17.2020 19:58	U	1
Diesel Range Organics	C10C28DRO	98.0	50.2		mg/kg	11.17.2020 19:58		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	59.5	50.2		mg/kg	11.17.2020 19:58		1
Total TPH	PHC635	158	50.2		mg/kg	11.17.2020 19:58		1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	112	%	70-135	11.17.2020 19:58
o-Terphenyl	84-15-1	106	%	70-135	11.17.2020 19:58

**SW-2** 

Date Received:11.17.2020 15:05

# **Certificate of Analytical Results 678175**

# COG Operating LLC, Artesia, NM

Huckleberry St. 507

Sample Id: Matrix: Soil

Lab Sample Id: 678175-007 Date Collected: 11.17.2020 10:48

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

% Moisture: MAB Analyst: Date Prep: 11.17.2020 16:30

Basis: Wet Weight Seq Number: 3142571

Parameter	Cas Number	r Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	11.17.2020 21:55	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	11.17.2020 21:55	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	11.17.2020 21:55	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	11.17.2020 21:55	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	11.17.2020 21:55	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	11.17.2020 21:55	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	11.17.2020 21:55	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	85	%	70-130	11.17.2020 21:55		
4-Bromofluorobenzene		460-00-4	119	%	70-130	11.17.2020 21:55		



# **Flagging Criteria**

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

**BRL** Below Reporting Limit. **ND** Not Detected.

**RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

SMP Client Sample BLK Method Blank

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

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

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

#### **QC Summary** 678175



#### **COG Operating LLC**

Huckleberry St. 507

7715393-1-BKS

Analytical Method: Chloride by EPA 300

Seq Number: 3142697

7715393-1-BLK MB Sample Id:

Matrix: Solid

LCS Sample Id:

E300P Prep Method:

Date Prep: 11.17.2020

LCSD Sample Id: 7715393-1-BSD

Date Prep:

RPD MB Spike LCS LCS Limits %RPD Units Analysis LCSD LCSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date

Chloride <10.0 300 279 93 277 92 90-110 20 11.18.2020 14:38 1 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number: 3142698

Matrix: Solid

Prep Method:

E300P 11.17.2020

MB Sample Id:

7715394-1-BLK

LCS Sample Id: 7715394-1-BKS LCSD Sample Id: 7715394-1-BSD

MB Spike LCS LCS LCSD LCSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result

11.18.2020 18:39 Chloride <10.0 300 279 93 279 93 90-110 0 20 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number: 3142697

Matrix: Soil

Prep Method: E300P

Date Prep: 11.17.2020

Parent Sample Id: 677780-023

MS Sample Id: 677780-023 S MSD Sample Id: 677780-023 SD

Spike RPD **Parent** MS MS %RPD Units MSD **MSD** Limite Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec Chloride 198 0 20 11.18.2020 17:21 28.4 247 110 247 110 90-110 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number:

3142697

Matrix: Soil

E300P

11.17.2020

Parent Sample Id: 678096-008 MS Sample Id: 678096-008 S MSD Sample Id: 678096-008 SD

RPD Parent Spike MS MS MSD **MSD** Limits %RPD Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec %Rec Result 199 11.18.2020 14:56 90-110 20 Chloride 1920 2130 106 2120 101 0 mg/kg

Analytical Method: Chloride by EPA 300

3142698 Seq Number:

Prep Method:

Prep Method:

Date Prep:

E300P 11.17.2020

Matrix: Soil Date Prep: 678175-004 S 678175-004 SD Parent Sample Id: 678175-004 MS Sample Id: MSD Sample Id:

Parent Spike MS MS Limits %RPD RPD Units Analysis MSD MSD

Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec 11.18.2020 18:57 Chloride 62.4 197 2.79 110 2.79 110 90-110 0 20 mg/kg

Analytical Method: Chloride by EPA 300

3142698 Seq Number:

Matrix: Soil

Prep Method:

Limits

E300P

Date Prep: 11.17.2020

Units

678179-001 S MSD Sample Id: 678179-001 SD MS Sample Id: Parent Sample Id: 678179-001 MS

MS

Spike %RPD RPD **MSD MSD** Analysis Flag **Parameter** Result Result Limit Date Amount %Rec %Rec Result 11.18.2020 20:20 105 20 Chloride 2260 200 2470 2480 110 90-110 0 mg/kg

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Parent

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

Flag

Flag

Flag

Flag

#### **QC Summary** 678175



#### **COG Operating LLC**

Huckleberry St. 507

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142566

MB Sample Id: 7715396-1-BLK

LCS Sample Id: 7715396-1-BKS LCSD Sample Id:

RPD MB Spike LCS LCS Limits %RPD Units Analysis LCSD LCSD **Parameter** Result Amount Result %Rec %Rec Limit Date Result 35 11.17.2020 11:28 < 50.0 1000 1160 116 1170 70-135 Gasoline Range Hydrocarbons 117 1 mg/kg 11.17.2020 11:28 1000 1020 102 1050 70-135 3 35 mg/kg Diesel Range Organics < 50.0 105

Matrix: Solid

MB MB LCS LCS LCSD Limits Units Analysis LCSD **Surrogate** %Rec Flag %Rec Flag Flag Date %Rec 11.17.2020 11:28 1-Chlorooctane 119 70-135 118 113 % 11.17.2020 11:28 o-Terphenyl 117 123 109 70-135 %

Analytical Method: TPH By SW8015 Mod

Seq Number: 3142566

Motor Oil Range Hydrocarbons (MRO)

Matrix: Solid

< 50.0

SW8015P Prep Method: Date Prep: 11.17.2020

MB Sample Id: 7715396-1-BLK

MB **Parameter** Result Units Analysis Date

SW8015P

11.17.2020

7715396-1-BSD

Prep Method:

Date Prep:

11.17.2020 11:08 mg/kg

Analytical Method: TPH By SW8015 Mod

3142566 Seq Number:

Parent Sample Id:

Seq Number:

677883-023

Matrix: Soil

677883-023 S

MS Sample Id:

Prep Method: Date Prep:

SW8015P

MSD Sample Id: 677883-023 SD

11.17.2020

Parent Spike MS MS %RPD RPD MSD MSD Limits Units Analysis **Parameter** Limit Result Amount Result %Rec Result %Rec Date 11.17.2020 12:28 Gasoline Range Hydrocarbons < 50.0 1000 1060 106 1130 70-135 35 mg/kg 113 6 11.17.2020 12:28 Diesel Range Organics < 50.0 1000 1010 101 1020 102 70-135 1 35 mg/kg

MSD MS MS Units Analysis **MSD** Limits Surrogate %Rec Flag Flag Date %Rec 11.17.2020 12:28 1-Chlorooctane 105 112 70-135 % 11.17.2020 12:28 o-Terphenyl 114 114 70-135 %

Analytical Method: BTEX by EPA 8021B

3142571

Matrix: Solid

Prep Method:

SW5035A

LCS Sample Id: MB Sample Id: 7715391-1-BLK

7715391-1-BKS

Date Prep: 11.17.2020 LCSD Sample Id: 7715391-1-BSD

LCS %RPD RPD MB LCS Units Spike Limits Analysis LCSD LCSD Parameter Result Amount Result %Rec Limit Date %Rec Result 11.17.2020 17:36 Benzene 0.0943 94 0.0960 2 35 < 0.00200 0.100 96 70-130 mg/kg 11.17.2020 17:36 Toluene < 0.00200 0.100 0.0887 89 0.0889 89 70-130 0 35 mg/kg 11.17.2020 17:36 92 2 35 Ethylbenzene < 0.00200 0.100 0.0937 94 0.0919 71-129 mg/kg 11.17.2020 17:36 95 m,p-Xylenes < 0.00400 0.200 0.190 0.18995 70-135 1 35 mg/kg 11.17.2020 17:36 o-Xylene < 0.00200 0.100 0.0943 94 0.0947 95 71-133 0 35 mg/kg

MB LCS LCSD LCS Limits Units MB **Analysis** LCSD Surrogate %Rec Flag %Rec Flag Flag Date %Rec 11.17.2020 17:36 1.4-Difluorobenzene 101 99 101 70-130 % 11.17.2020 17:36 4-Bromofluorobenzene 105 108 70-130 112 %

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result

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

# QC Summary 678175



# **COG Operating LLC**

Huckleberry St. 507

Analytical Method: BTEX by EPA 8021B

Seq Number: 3142571

Parent Sample Id: 678175-001

EPA 8021B

Matrix: Soil

Prep Method: SW5035A Date Prep: 11.17.2020

MSD Sample Id: 678175-001 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	0.0917	92	0.106	106	70-130	14	35	mg/kg	11.17.2020 18:21	
Toluene	0.00532	0.100	0.0929	88	0.107	102	70-130	14	35	mg/kg	11.17.2020 18:21	
Ethylbenzene	0.00789	0.100	0.0926	85	0.109	101	71-129	16	35	mg/kg	11.17.2020 18:21	
m,p-Xylenes	0.0227	0.200	0.202	90	0.237	107	70-135	16	35	mg/kg	11.17.2020 18:21	
o-Xylene	0.0197	0.100	0.108	88	0.123	103	71-133	13	35	mg/kg	11.17.2020 18:21	

MS Sample Id: 678175-001 S

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		102		70-130	%	11.17.2020 18:21
4-Bromofluorobenzene	110		114		70-130	%	11.17.2020 18:21

Analysis Requ	est of Chain of Custody Record																_		F	age	_	1_0	of _
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Client Name:	COG-Artesia	Site Manage	er:	Sheldon	Hi	tchco	ck						,	Circ				REQU					
Project Name:	y chieberry St. 507											1	1				lecii	y ivie		d No	11	11	11
	(county,	Project #:																					
nvoice to:	Sheldon Hitchcock																			11			
Receiving Laboratory	Xenco	Sampler Na	me:	Sheld	don	Hitc	ncock	K			MRO)												
Comments:											-DRO-												
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LAB#	SAMPLE IDENTIFICATION	YEAR: Z		WATER	5	HNO3	Щ.		# CONTAINERS	(C)omposite/(G)rat	TPH 8015M ( GRO	BTEX 8021B	Chloride										
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# **Eurofins Xenco, LLC**

# Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Acceptable Temperature Range: 0 - 6 degC

Date/ Time Received: 11.17.2020 03.05.00 PM

Air and Metal samples Acceptable Range: Ambient

Work Order #: 678175

Temperature Measuring device used: T\_NM\_007

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		4	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seals intact on shipping contai	ner/ cooler?	Yes	
#5 Custody Seals intact on sample bottles?		Yes	
#6*Custody Seals Signed and dated?		Yes	
#7 *Chain of Custody present?		Yes	
#8 Any missing/extra samples?		No	
#9 Chain of Custody signed when relinquish	ned/ received?	Yes	
#10 Chain of Custody agrees with sample la	abels/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	Samples recieved in bulk containers.
#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 headsp	ace?	N/A	

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

Analyst: PH Device/Lot#:

Checklist completed by:

Cloe Clifton

Date: 11.17.2020

Checklist reviewed by:

SICH WEATHER

Jessica Kramer

Date: 11.19.2020

#### Received by OCD: 4/5/2021 4:27:47 PM eurofins 💸 **Environment Testing**

# Certificate of Analysis Summary 686304

Etech Environmental & Safety Solution, Inc, Midland, TX

Project Name: Huckleberry St. Com 507

**Project Id:** 13460 PM

**Contact:** 

**Date Received in Lab:** Wed 01.27.2021 14:22

**Report Date:** 02.01.2021 17:12

Project Manager: Jessica Kramer **Project Location:** 

	Lab Id:	686304-0	001	686304-0	02	686304-0	003	686304-	004		
Analysis Requested	Field Id:	B1		B4		B6		SW 2			
Anaiysis Requesieu	Depth:	1.6- ft							t		
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	01.27.2021	10:50	01.27.2021	08:22	01.27.2021	08:30	01.27.2021	11:15		
BTEX by EPA 8021B	Extracted:	01.29.2021	10:33	01.29.2021	10:33	01.29.2021	10:33	01.29.2021	10:33		
	Analyzed:	01.29.2021	13:47	01.29.2021	14:10	01.29.2021	14:32	01.29.2021	14:54		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00200	0.00200		
Toluene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00200	0.00200		
Ethylbenzene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00200	0.00200		
m,p-Xylenes		< 0.00399	0.00399	< 0.00399	0.00399	< 0.00397	0.00397	< 0.00399	0.00399		
o-Xylene		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00200	0.00200		
Total Xylenes		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00200	0.00200		
Total BTEX		< 0.00200	0.00200	< 0.00200	0.00200	< 0.00198	0.00198	< 0.00200	0.00200		
Chloride by EPA 300	Extracted:	01.27.2021	16:00	01.27.2021	16:00	01.27.2021	16:00	01.27.2021	16:00		
	Analyzed:	01.27.2021	20:48	01.27.2021	20:54	01.27.2021	21:00	01.27.2021	21:17		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride	•	365	49.8	285	49.6	65.7	10.0	85.2	9.96		
TPH by SW8015 Mod	Extracted:	01.31.2021	10:00	01.31.2021	10:00	01.31.2021	10:00	01.31.2021	10:00		
SUB: T104704400-20-21	Analyzed:	01.31.2021	15:39	01.31.2021	16:42	01.31.2021	17:03	01.31.2021	17:24		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		< 50.0	50.0	<49.9	49.9	<49.8	49.8	<49.9	49.9		
Diesel Range Organics (DRO)		< 50.0	50.0	<49.9	49.9	<49.8	49.8	<49.9	49.9		
Motor Oil Range Hydrocarbons (MRO)		< 50.0	50.0	<49.9	49.9	<49.8	49.8	<49.9	49.9		
Total TPH		< 50.0	50.0	<49.9	49.9	<49.8	49.8	<49.9	49.9		

BRL - Below Reporting Limit

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

Jessica Vramer



# **Analytical Report 686304**

### for

# **Etech Environmental & Safety Solution, Inc**

**Project Manager: PM** 

Huckleberry St. Com 507 13460 02.01.2021

Collected By: Client

#### 1089 N Canal Street Carlsbad, NM 88220

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-38), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2020-014), North Carolina (681), Arkansas (20-035-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (T104704295-20-26), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18) Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24) Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21) Xenco-Carlsbad (LELAP): Louisiana (05092) Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-8) Xenco-Tampa: Florida (E87429), North Carolina (483)



02.01.2021

Project Manager: PM

**Etech Environmental & Safety Solution, Inc** 

P.O. Box 62228 Midland, TX 79711

Reference: Eurofins Xenco, LLC Report No(s): 686304

**Huckleberry St. Com 507** 

Project Address:

#### **PM**:

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 Eurofins Xenco, LLC Report Number(s) 686304. 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 Eurofins Xenco, LLC. 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. 686304 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 Eurofins Xenco, LLC to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Jessica Kramer

Jessian Vramer

Project Manager

A Small Business and Minority Company

Houston - Dallas - Midland - Tampa - Phoenix - Lubbock - San Antonio - El Paso - Atlanta - New Mexico

# **Sample Cross Reference 686304**



# Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id	Matrix	<b>Date Collected</b>	Sample Depth	Lab Sample Id
B1	S	01.27.2021 10:50	1.6 ft	686304-001
B4	S	01.27.2021 08:22		686304-002
B6	S	01.27.2021 08:30		686304-003
SW 2	S	01.27.2021 11:15	1.6 ft	686304-004

#### **CASE NARRATIVE**

Client Name: Etech Environmental & Safety Solution, Inc

Project Name: Huckleberry St. Com 507

 Project ID:
 13460
 Report Date:
 02.01.2021

 Work Order Number(s):
 686304
 Date Received:
 01.27.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

### Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id: **B1** 

Matrix: Soil Date Received:01.27.2021 14:22

Lab Sample Id: 686304-001

Date Collected: 01.27.2021 10:50

Sample Depth: 1.6 ft

Prep Method: E300P

Analytical Method: Chloride by EPA 300

Tech:

MAB

MAB Analyst: Seq Number: 3149215 Date Prep:

01.27.2021 16:00

% Moisture:

Basis:

Wet Weight

**Parameter** Cas Number Result RL Units **Analysis Date** Flag Dil Chloride 16887-00-6 49.8 01.27.2021 20:48 5 365 mg/kg

Analytical Method: TPH by SW8015 Mod

Tech:

DVM

Analyst: ARM Seq Number: 3149619

Date Prep:

01.31.2021 10:00

% Moisture:

Basis: Wet Weight

SUB: T104704400-20-21

Prep Method: SW8015P

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	< 50.0	50.0		mg/kg	01.31.2021 15:39	U	1
Diesel Range Organics (DRO)	C10C28DRO	< 50.0	50.0		mg/kg	01.31.2021 15:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	< 50.0	50.0		mg/kg	01.31.2021 15:39	U	1
Total TPH	PHC635	< 50.0	50.0		mg/kg	01.31.2021 15:39	U	1
Surrogate	C	as Number %	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-130	01.31.2021 15:39
o-Terphenyl	84-15-1	105	%	70-130	01.31.2021 15:39

Wet Weight

01.29.2021 13:47

70-130



# Certificate of Analytical Results 686304

### Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id: B1 Matrix: Soil Date Received:01.27.2021 14:22

Lab Sample Id: 686304-001 Date Collected: 01.27.2021 10:50 Sample Depth: 1.6 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

540-36-3

Seq Number: 3149409

1,4-Difluorobenzene

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	01.29.2021 13:47	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	01.29.2021 13:47	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	01.29.2021 13:47	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	01.29.2021 13:47	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	01.29.2021 13:47	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	01.29.2021 13:47	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	01.29.2021 13:47	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	124	%	70-130	01.29.2021 13:47		

93

%



### Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id: **B4** 

Matrix: Soil Date Received:01.27.2021 14:22

Lab Sample Id: 686304-002

Date Collected: 01.27.2021 08:22

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

MAB Analyst: Seq Number: 3149215

Date Prep:

01.27.2021 16:00

% Moisture:

Basis:

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	285	49.6	mg/kg	01.27.2021 20:54		5

Analytical Method: TPH by SW8015 Mod

Tech:

DVM

ARM Analyst: Seq Number: 3149619

Date Prep: 01.31.2021 10:00 % Moisture:

Basis: Wet Weight

SUB: T104704400-20-21

Prep Method: SW8015P

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	01.31.2021 16:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	01.31.2021 16:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	01.31.2021 16:42	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	01.31.2021 16:42	U	1
Surrogate	C	as Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-130	01.31.2021 16:42
o-Terphenyl	84-15-1	104	%	70-130	01.31.2021 16:42



# Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id: **B4** Matrix:

Soil Date Collected: 01.27.2021 08:22

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Date Received:01.27.2021 14:22

MAB Tech:

% Moisture:

MAB Analyst:

Date Prep: 01.29.2021 10:33

Basis: Wet Weight

Seq Number: 3149409

Lab Sample Id: 686304-002

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	01.29.2021 14:10	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	01.29.2021 14:10	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	01.29.2021 14:10	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	01.29.2021 14:10	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	01.29.2021 14:10	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	01.29.2021 14:10	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	01.29.2021 14:10	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	130	%	70-130	01.29.2021 14:10		
1,4-Difluorobenzene		540-36-3	92	%	70-130	01.29.2021 14:10		



### Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id: **B6** 

Matrix: Soil

Date Received:01.27.2021 14:22

Lab Sample Id: 686304-003

Date Collected: 01.27.2021 08:30

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech:

MAB

MAB

Date Prep: 01.27.2021 16:00

% Moisture:

Analyst:

Seq Number: 3149215

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	65.7	10.0	mg/kg	01.27.2021 21:00		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech:

DVM

Analyst: ARM Seq Number: 3149619 Date Prep: 01.31.2021 10:00

% Moisture:

Basis: Wet Weight

SUB: T104704400-20-21

Parameter	Cas Number	Result	RL		Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8		mg/kg	01.31.2021 17:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8		mg/kg	01.31.2021 17:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8		mg/kg	01.31.2021 17:03	U	1
Total TPH	PHC635	<49.8	49.8		mg/kg	01.31.2021 17:03	U	1
Surrogate	(	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date
1-Chlorooctane	111-85-3	94	%	70-130	01.31.2021 17:03
o-Terphenyl	84-15-1	106	%	70-130	01.31.2021 17:03



# Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id: **B6** Matrix: Soil Date Received:01.27.2021 14:22

Lab Sample Id: 686304-003 Date Collected: 01.27.2021 08:30

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

Analyst: MAB Date Prep: 01.29.2021 10:33 % Moisture:

Seq Number: 3149409

Basis: Wet Weight

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00198	0.00198		mg/kg	01.29.2021 14:32	U	1
Toluene	108-88-3	< 0.00198	0.00198		mg/kg	01.29.2021 14:32	U	1
Ethylbenzene	100-41-4	< 0.00198	0.00198		mg/kg	01.29.2021 14:32	U	1
m,p-Xylenes	179601-23-1	< 0.00397	0.00397		mg/kg	01.29.2021 14:32	U	1
o-Xylene	95-47-6	< 0.00198	0.00198		mg/kg	01.29.2021 14:32	U	1
Total Xylenes	1330-20-7	< 0.00198	0.00198		mg/kg	01.29.2021 14:32	U	1
Total BTEX		< 0.00198	0.00198		mg/kg	01.29.2021 14:32	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene		460-00-4	124	%	70-130	01.29.2021 14:32		
1,4-Difluorobenzene		540-36-3	91	%	70-130	01.29.2021 14:32		



### Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id: SW<sub>2</sub> Matrix: Soil Date Received:01.27.2021 14:22

Lab Sample Id: 686304-004

Date Collected: 01.27.2021 11:15

Sample Depth: 1.6 ft

Prep Method: E300P

Analytical Method: Chloride by EPA 300

MAB

MAB

Date Prep:

% Moisture: 01.27.2021 16:00

Basis:

Wet Weight

Seq Number: 3149215

**Parameter** Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 85.2 01.27.2021 21:17 9.96 mg/kg

Analytical Method: TPH by SW8015 Mod

Tech:

Tech:

Analyst:

DVM

Analyst: ARM

o-Terphenyl

Date Prep: 01.31.2021 10:00 % Moisture:

70-130

Basis: Wet Weight SUB: T104704400-20-21

01.31.2021 17:24

Prep Method: SW8015P

Seq Number: 3149619

Parameter	Cas Number	r Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9		mg/kg	01.31.2021 17:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9		mg/kg	01.31.2021 17:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9		mg/kg	01.31.2021 17:24	U	1
Total TPH	PHC635	<49.9	49.9		mg/kg	01.31.2021 17:24	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane		111-85-3	97	%	70-130	01.31.2021 17:24		

105

84-15-1

Wet Weight

01.29.2021 14:54

70-130



# Certificate of Analytical Results 686304

### Etech Environmental & Safety Solution, Inc, Midland, TX

Huckleberry St. Com 507

Sample Id: SW 2 Matrix: Soil Date Received:01.27.2021 14:22

Lab Sample Id: 686304-004 Date Collected: 01.27.2021 11:15 Sample Depth: 1.6 ft

Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A

Tech: MAB

460-00-4

Seq Number: 3149409

4-Bromofluorobenzene

Parameter	Cas Number	Result	RL		Units	<b>Analysis Date</b>	Flag	Dil
Benzene	71-43-2	< 0.00200	0.00200		mg/kg	01.29.2021 14:54	U	1
Toluene	108-88-3	< 0.00200	0.00200		mg/kg	01.29.2021 14:54	U	1
Ethylbenzene	100-41-4	< 0.00200	0.00200		mg/kg	01.29.2021 14:54	U	1
m,p-Xylenes	179601-23-1	< 0.00399	0.00399		mg/kg	01.29.2021 14:54	U	1
o-Xylene	95-47-6	< 0.00200	0.00200		mg/kg	01.29.2021 14:54	U	1
Total Xylenes	1330-20-7	< 0.00200	0.00200		mg/kg	01.29.2021 14:54	U	1
Total BTEX		< 0.00200	0.00200		mg/kg	01.29.2021 14:54	U	1
Surrogate		Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene		540-36-3	92	%	70-130	01.29.2021 14:54		

122



# **Flagging Criteria**

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

**BRL** Below Reporting Limit. **ND** Not Detected.

**RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

**DL** Method Detection Limit

NC Non-Calculable

SMP Client Sample BLK Method Blank

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

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

- + NELAC certification not offered for this compound.
- \* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

<sup>\*\*</sup> Surrogate recovered outside laboratory control limit.

#### **QC Summary** 686304



#### **Etech Environmental & Safety Solution, Inc**

Huckleberry St. Com 507

LCSD

Analytical Method: Chloride by EPA 300

Seq Number: 3149215

Matrix: Solid

E300P Prep Method:

RPD

Prep Method:

Prep Method:

Date Prep: 01.27.2021

E300P

E300P

Flag

01.31.2021 14:57

LCS Sample Id: 7720212-1-BKS LCSD Sample Id: 7720212-1-BSD MB Sample Id: 7720212-1-BLK

LCS MB Spike LCS Limits %RPD Units Analysis LCSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date

Chloride <10.0 200 214 107 211 90-110 20 01.27.2021 19:29 106 1 mg/kg

Analytical Method: Chloride by EPA 300

Seq Number: 3149215 Matrix: Soil Date Prep: 01.27.2021

686300-001 S MS Sample Id: MSD Sample Id: 686300-001 SD Parent Sample Id: 686300-001

Parent Spike MS MS MSD MSD Limits %RPD RPD Units Analysis **Parameter** Flag Result Amount Result %Rec %Rec Limit Date Result

01.27.2021 19:46 Chloride 65.8 200 259 97 262 98 90-110 20 mg/kg

Analytical Method: Chloride by EPA 300

3149215 Seq Number: Matrix: Soil Date Prep: 01.27.2021

MS Sample Id: 686304-003 S MSD Sample Id: 686304-003 SD Parent Sample Id: 686304-003

Spike **RPD Parent** MS MS %RPD Units MSD **MSD** Limite Analysis Flag **Parameter** Result Result Limit Date Amount %Rec Result %Rec

Chloride 199 107 20 01.27.2021 21:05 65.7 279 280 107 90-110 0 mg/kg

Analytical Method: TPH by SW8015 Mod

SW8015P Prep Method: 3149619 Matrix: Solid Seq Number: Date Prep: 01.31.2021

MB Sample Id: LCS Sample Id: 7720503-1-BKS LCSD Sample Id: 7720503-1-BSD 7720503-1-BLK

MB Spike LCS LCS LCSD LCSD Limits %RPD **RPD** Units Analysis **Parameter** Result Limit Date Result Amount %Rec %Rec Result Gasoline Range Hydrocarbons (GRO) 01.31.2021 14:57 91 20 < 50.0 1000 913 889 89 70-130 3 mg/kg

Diesel Range Organics (DRO) 952 95 962 70-130 20 < 50.0 1000 96 1 mg/kg LCS MBMB LCS LCSD Limits Units Analysis LCSD **Surrogate** Flag %Rec %Rec Flag Date Flag %Rec 01.31.2021 14:57

1-Chlorooctane 86 105 102 70-130 % 01.31.2021 14:57 o-Terphenyl 94 109 110 70-130 %

SW8015P Analytical Method: TPH by SW8015 Mod Prep Method:

Seq Number: 3149619 Matrix: Solid MB Sample Id: 7720503-1-BLK

MBUnits Analysis Flag **Parameter** Result Date

01.31.2021 14:36 Motor Oil Range Hydrocarbons (MRO) < 50.0 mg/kg

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result = MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

01.31.2021

Date Prep:

Flag

#### **QC Summary** 686304



Seg Number:

Parent Sample Id:

#### **Etech Environmental & Safety Solution, Inc**

Huckleberry St. Com 507

686304-001 S

95

Analytical Method: TPH by SW8015 Mod

3149619

686304-001

Matrix: Soil

MS Sample Id:

SW8015P Prep Method:

Date Prep: 01.31.2021 MSD Sample Id: 686304-001 SD

RPD **Parent** Spike MS MS Limits %RPD Units Analysis MSD MSD Flag **Parameter** Result Amount Result %Rec Result %Rec Limit Date Gasoline Range Hydrocarbons (GRO) <49.8 996 923 93 8 20 01.31.2021 16:00 1000 70-130 100 mg/kg 01.31.2021 16:00 Diesel Range Organics (DRO) <49.8 996 944 95 944 70-130 0 20 mg/kg

MS MS MSD MSD Limits Units Analysis **Surrogate** Flag Flag Date %Rec %Rec 01.31.2021 16:00 1-Chlorooctane 101 102 70-130 % 01.31.2021 16:00 o-Terphenyl 109 106 70-130 %

SW5035A Analytical Method: BTEX by EPA 8021B Prep Method: 3149409 Seq Number: Matrix: Solid Date Prep: 01.29.2021 LCS Sample Id: 7720299-1-BKS LCSD Sample Id: 7720299-1-BSD MB Sample Id: 7720299-1-BLK

MB Spike LCS LCS Limits %RPD **RPD** Units Analysis LCSD LCSD **Parameter** Result Amount Result %Rec Result %Rec Limit Date 77 01.29.2021 11:45 < 0.00200 0.100 0.0772 0.0702 9 35 Benzene 70 70-130 mg/kg 01.29.2021 11:45 Toluene < 0.00200 0.100 0.0950 95 0.0874 87 70-130 8 35 mg/kg 01.29.2021 11:45 0.100 0.106 106 0.0977 98 71-129 8 35 Ethylbenzene < 0.00200 mg/kg 01.29.2021 11:45 m,p-Xylenes < 0.00400 0.200 0.232 116 0.213 107 70-135 9 35 mg/kg 01.29.2021 11:45 < 0.00200 0.100 0.115 0.105 71-133 9 35 o-Xylene 115 105 mg/kg

Limits MB LCS LCS LCSD MB LCSD Units Analysis Surrogate %Rec Flag %Rec Flag Flag Date %Rec 01.29.2021 11:45 1,4-Difluorobenzene 91 90 88 70-130 % 125 % 01.29.2021 11:45 4-Bromofluorobenzene 120 120 70-130

SW5035A Analytical Method: BTEX by EPA 8021B Prep Method: Seg Number: 3149409 Matrix: Soil Date Prep: 01.29.2021

686304-001 MS Sample Id: 686304-001 S MSD Sample Id: 686304-001 SD Parent Sample Id:

RPD Parent Spike MS MS MSD **MSD** Limits %RPD Units Analysis Flag **Parameter** Limit Date Result Amount Result %Rec %Rec Result 01.29.2021 12:29 < 0.00200 0.100 0.0809 81 0.0873 70-130 8 35 Benzene 86 mg/kg 01.29.2021 12:29 70-130 35 Toluene < 0.00200 0.100 0.0875 88 0.0958 95 9 mg/kg Ethylbenzene 0.100 0.0768 77 0.0896 89 71-129 15 35 01.29.2021 12:29 < 0.00200 mg/kg 35 01.29.2021 12:29 m,p-Xylenes < 0.00401 0.200 0.160 80 0.186 92 70-135 15 mg/kg < 0.00200 0.100 0.0814 81 0.0958 71-133 16 35 mg/kg 01.29.2021 12:29 o-Xylene 95

MS MS MSD **MSD** Limits Units Analysis Surrogate Flag Flag Date %Rec %Rec 01.29.2021 12:29 1,4-Difluorobenzene 88 90 70-130 % 01.29.2021 12:29 4-Bromofluorobenzene 119 124 70-130 %

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

[D] = 100\*(C-A) / B $RPD = 200* \mid (C-E) \mid (C+E) \mid$ [D] = 100 \* (C) / [B]

Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

LCS = Laboratory Control Sample = Parent Result

= MS/LCS Result E = MSD/LCSD Result

MS = Matrix Spike B = Spike AddedD = MSD/LCSD % Rec

Received by OCD: 4/5/2021 4:27:47 PM



# **Chain of Custody**

Work Order No: 686304

Houston, TX (281) 240-4200, Dallas, TX (214) 902-0300, San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440, EL Paso, TX (915) 585-3443, Lubbock, TX (806) 794-1296
 Hobbs, NM (575) 392-7550, Carlsbad, NM (575) 988-3199, Phoenix, AZ (480) 355-0900
 Tampa, FL (813) 620-2000, Tallahassee, FL (850) 756-0747, Delray Beach, FL (561) 689-6701
 Atlanta, GA (770) 449-8800

							1 -/										www	.xenco	o.com Page of
Project Manager:	Joel Lowry				Bill to: (if differ	ent)	51	2/0	off	Hit	che.	och					W	ork Or	rder Comments
Company Name:	Etech Enviro	nmental &	Safety		Company Na	me:	C	0 G						_ P	rogram:	UST/PS	ST F	RF.	Brownfield RR Superfund
Address:	3100 Plains	Highway			Address:	Address:					State of Project:								
City, State ZIP:	Lovington, N	M, 88260			City, State Z	IP:								R	eporting:	Level	Le	vel 🗌	PST/US TRF Level
Phone:	575-396-237	8		Email:	Email Resu	lts to	PM@	eteche	env,co	<u>m</u> + C	lient			D	eliverabl	es: EDI		-	ADaPT Other:
Project Name:	Hudhlberry	st.com	1507	Tu	ırn Around						AN	IALYS	IS RE	QUES	Т				Preservative Codes
Project Number:	13460			Rout	ine:														HNO3: HN
Project Location				Rush	n:	ě													H2S04: H2
Sampler's Name:	spencel B	lackwoo	cd	Due	Date:	vati													HCL: HL
PO #:						esei													None: NO
SAMPLE REC	EIPT 1	emp Blank	Yes No	Wet Ice:	Yes No	s/Pr													NaOH: Na
emperature (°C):	4.0	13.8		Thermometer		] E											2		MeOH: Me
Received Intact:	Ye	) No	L	WM-00		ntai			¥	1									Zn Acetate+ NaOH: Zn
cooler Custody Sea ample Custody Se	1	-	Correction F Total Conta		4.5	r of Cont	E300	121	diffied E	900									TAT starts the day recevied by lab, if received by 4:30pm
Sample Ide	entification	Matrix	Date Sampled	Time Sampled	Depth	Numbe	Chloride	BTEX 8021	TPH Modified Ext	TPH TX									Sample Comments
31			1/27/21	10:50 Am	1'6"		1	1	1	1									
34			1/27/21		Surface		1	1	1	1									
34				8:30 Am			V	1	1	1									
Sw2				11:15 Am			1/	V	7	V									
																1			
Total 200.7 / 6		/ 6020:																	SiO2 Na Sr Tl Sn U V Zn

Total 200.7 / 6010	200.8 / 6020:	8RCRA	13PPM	Texas 11	Al Sb	As Ba	Be B	Cd	Ca Cr	Co	Cu Fe	Pb Mg	Mn N	lo Ni K	Se Ag SiO2 Na	a Sr Tl	Sn U V Zn
Circle Method(s) and	Metal(s) to be analyzed	TCL	P / SPLP	6010: 8R	CRA SI	As B	a Be	Cd C	r Co	Cu P	b Mn M	Mo Ni	Se Ag	TI U	1631 /	245.1/	7470 / 7471 : Hg

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. it assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75.00 will be applied to each project and a charge of \$5 for each sample submitted to Xenco, but not analyzed. These terms will be enforced unless previously negotiated.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Jeens Glada !	Cioe Cutto	1-27-21 422	2		
/			4		
		6	3		

# **Inter-Office Shipment**

IOS Number: 77186

Date/Time: 01.27.2021 Cloe Clifton Please send report to: Jessica Kramer Created by:

1089 N Canal Street Lab# From: Carlsbad Address: Delivery Priority:

Lab# To: Midland Air Bill No.: E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
686304-001	S	B1	01.27.2021 10:50	SW8015MOD_NM	TPH by SW8015 Mod	01.29.2021	02.10.2021	JKR	PHCC10C28 PHCC28C35	
686304-002	S	B4	01.27.2021 08:22	SW8015MOD_NM	TPH by SW8015 Mod	01.29.2021	02.10.2021	JKR	PHCC10C28 PHCC28C35	
686304-003	S	B6	01.27.2021 08:30	SW8015MOD_NM	TPH by SW8015 Mod	01.29.2021	02.10.2021	JKR	PHCC10C28 PHCC28C35	
686304-004	S	SW 2	01.27.2021 11:15	SW8015MOD_NM	TPH by SW8015 Mod	01.29.2021	02.10.2021	JKR	PHCC10C28 PHCC28C35	

#### **Inter Office Shipment or Sample Comments:**

Relinquished By: Cloe Clifton

01.27.2021 Date Relinquished:

Received By:

Jessica Kramer

GRAMER

Date Received:

01.28.2021

Cooler Temperature: 0.6



# **Eurofins Xenco, LLC**

# **Inter Office Report- Sample Receipt Checklist**

Sent To: Midland IOS #: 77186

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

Date: 01.28.2021

Temperature Measuring device used :

Sent By: Cloe Clifton **Date Sent:** 01.27.2021 03.35 PM

Sample Receipt Chec	cklist Comment				
"A *T					
#1 *Temperature of cooler(s)?	.6				
#2 *Shipping container in good condition?	Yes				
#3 *Samples received with appropriate temperature?	Yes				
#4 *Custody Seals intact on shipping container/ cooler?	Yes				
#5 *Custody Seals Signed and dated for Containers/coolers	Yes				
#6 *IOS present?	Yes				
#7 Any missing/extra samples?	No Van				
#8 IOS agrees with sample label(s)/matrix?	Yes				
#9 Sample matrix/ properties agree with IOS?	Yes Yes				
#10 Samples in proper container/ bottle? #11 Samples properly preserved?	Yes				
#11 Samples properly preserved? #12 Sample container(s) intact?	Yes				
#13 Sufficient sample amount for indicated test(s)?	Yes				
#14 All samples received within hold time?	Yes				
WITTH Campile received within field time.	100				
* Must be completed for after-hours delivery of samples prior to p	placing in the refrigerator				
NonConformance:					
Corrective Action Taken:					
Nonconformance Doc	cumentation				
Nonconformance Doc					
Contact: Contacted by :	Date:				

Jessica Kramer

# **Eurofins Xenco, LLC**

# Prelogin/Nonconformance Report- Sample Log-In

Client: Etech Environmental & Safety Solution, I

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

Date/ Time Received: 01.27.2021 02.22.00 PM

Temperature Measuring device used: T\_NM\_007

Work Order #: 686304

Sa	mple Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		3.8	
#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?		Yes	
#6*Custody Seals Signed and dated?		Yes	
#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	s/matrix?	Yes	
#11 Container label(s) legible and intact?		Yes	
#12 Samples in proper container/ bottle?		Yes	Samples received in bulk containers.
#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)?		Yes	TPH sent to Midland.
#18 Water VOC samples have zero headspace	?	N/A	

* Must be	completed for	after-hours	delivery of	samples prior	to placing in	the refrigerator
MINST DE	completed for	aitei-iioui s	uciivei v Oi	Sallibles billo	io biaciliu ili	tile lelliuelatoi

Analyst: PH Device/Lot#:

Checklist completed by:

Cloe Clifton

Date: 01.27.2021

Checklist reviewed by:

sica peamer

Date: 01.28.2021

# Appendix D Photographic Log

Photo Number:

1
Photo Direction:
Northeast
Photo Description:

Excavation



Photo Number:
2
Photo Direction:
East-Southeast
Photo Description:

Excavation



**Photo Number:** 

3

**Photo Direction:** 

Northeast

**Photo Description:** 



Excavation

**Photo Number:** 

4

**Photo Direction:** 

North

**Photo Description:** 

Remediated Area (After Backfilling & Regrading)



**Photo Number:** 

5

**Photo Direction:** 

West-Northwest

**Photo Description:** 

Remediated Area (After Backfilling & Regrading)



**Photo Number:** 

6

**Photo Direction:** 

North

**Photo Description:** 

Remediated Area (After Backfilling & Regrading)



Photo Number: 7

**Photo Direction:** North-Northeast

**Photo Description:** 

Remediated Area (After Backfilling & Regrading)



**Photo Number:** 

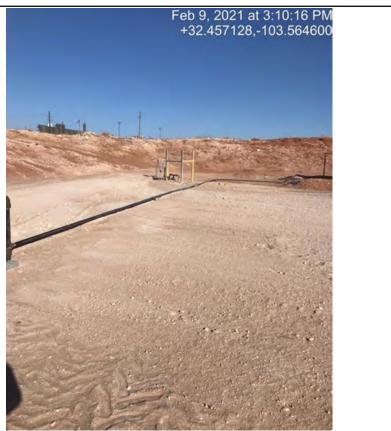
8

**Photo Direction:** 

Northeast

**Photo Description:** 

Remediated Area (After Backfilling & Regrading)



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

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 22943

#### CONDITIONS

Operator:	OGRID:
COG OPERATING LLC	229137
600 W Illinois Ave Midland, TX 79701	Action Number: 22943
	Action Type: [C-141] Release Corrective Action (C-141)

#### CONDITIONS

Created By	Condition	Condition Date
ceads	None	7/22/2021