CONCHO

October 5, 2020

Oil Conservation Division, District I
1625 N. French Drive
Hobbs, New Mexico 88240

Bureau of Land Management, CFO
620 E. Green St.
Carlsbad, NM 88220

Re: Closure Report
Tatanka Federal Com 004H (2.29.20)
Tracking#: NRM2006556242
GPS: 32.0510, -103.3312
Unit Letter P, Section 11, Township 26 South, Range 35 East
Lea County, New Mexico

To Whom it May Concern,

COG Operating, LLC (COG) is pleased to submit the following closure report in response to a release that occurred at the Tatanka Federal Com 004H, located in Unit Letter P, Section 11, Township 26 South, Range 35 East, Lea County, New Mexico. The spill site coordinates are 32.0510, -103.3312.

BACKGROUND

The release was discovered on February 29, 2020. An initial C-141 was submitted and accepted by the New Mexico Oil Conservation Division (NMOCD). The release was caused by an overflow of the heater which sent oil to the low-pressure flare and caused a flare fire. The majority of fluids were burned during the fire. The fire/release was contained to the pad. Approximately three (3) barrels of crude were released. The initial C-141 is attached in Appendix A.

GROUNDWATER AND REGULATORY

A search of a groundwater database maintained by the New Mexico Office of the State Engineer (NMOSE) was conducted to determine the average depth to groundwater. According to publish data, a water well is located in Section 13, with a reported depth of 253' below surface. The USGS also showed wells approximately 1.0 mile east of the site with reported depth to water around 220' below surface. There were no water wells within a half mile radius of the Release Site.

A risk-based evaluation and site determinations were performed in accordance to the New Mexico Oil Conservation Division (NMOCD) Rule (Title 19 Chapter 15 Part 29) for releases on oil and gas development and production in New Mexico (effective August 14, 2018). According to the site characterization evaluation, the affected area has low potential for cave and karst, and no other receptors (water wells, playas, water course, lake beds or ordinance boundaries) were located within each specific boundaries or distance from the site. The delineation and closure criteria are listed below:

General Site Characterization and Groundwater:

Site Characterization	Average Groundwater Depth (ft.)	Water well within ½ Mile
Low Karst	>100 ft	Not found

Delineation and Closure Criteria:

Remedial Action Levels (RALs)	
Chlorides	20,000 mg/kg
TPH (GRO and DRO and MRO)	2,500 mg/kg
TPH (GRO and DRO)	1,000 mg/kg
Benzene	10 mg/kg
Total BTEX	50 mg/kg

INITIAL ASSESMENT

- Three (3) auger holes (AH-1, AH-2, and AH-3) were installed at zero to one (0-1) ft bgs and one to one and a half (1-1.5) bgs to assess and evaluate the release area.

- The sample results are shown in Table 1. The analytical data shows that all samples meets NMOCD closure criteria (NMAC 19.15.29.12(E) Table I).

CLOSURE REQUEST

COG Operating, LLC respectfully requests that the New Mexico Oil Conservation Division and the Bureau of Land Management grant closure approval for the Tatanka Federal Com 004H that occurred on February 29, 2020 (Tracking # NRM2006556242). The final C-141 is attached in Appendix A.

Should you have any questions or concerns on the closure report, please do not hesitate to contact me.

Sincerely,

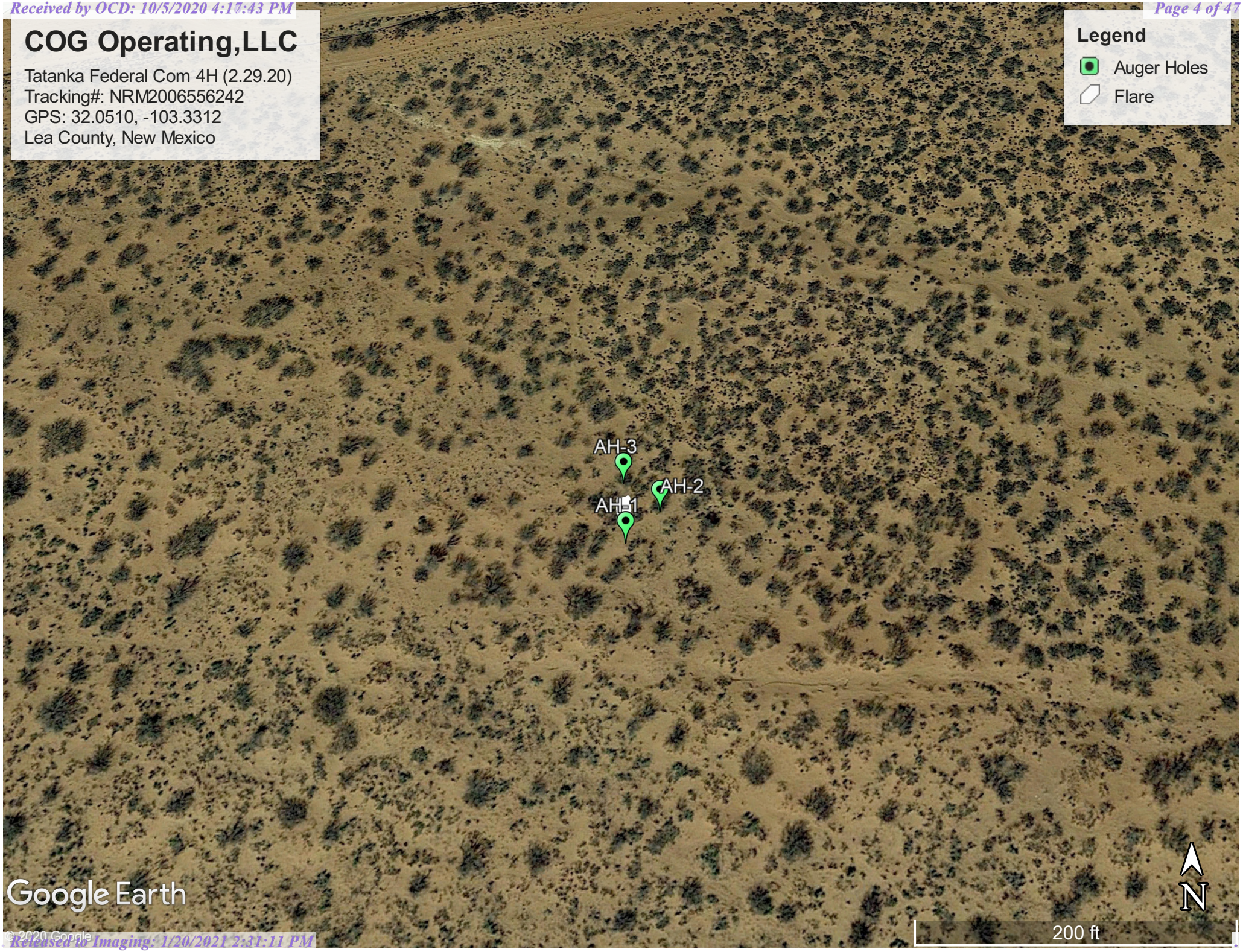
Jacqui Harris

Jacqui Harris
Senior HSE Coordinator
Jharris2@concho.com

Maps

COG Operating,LLC

Tatanka Federal Com 4H (2.29.20)
Tracking#: NRM2006556242
GPS: 32.0510, -103.3312
Lea County, New Mexico



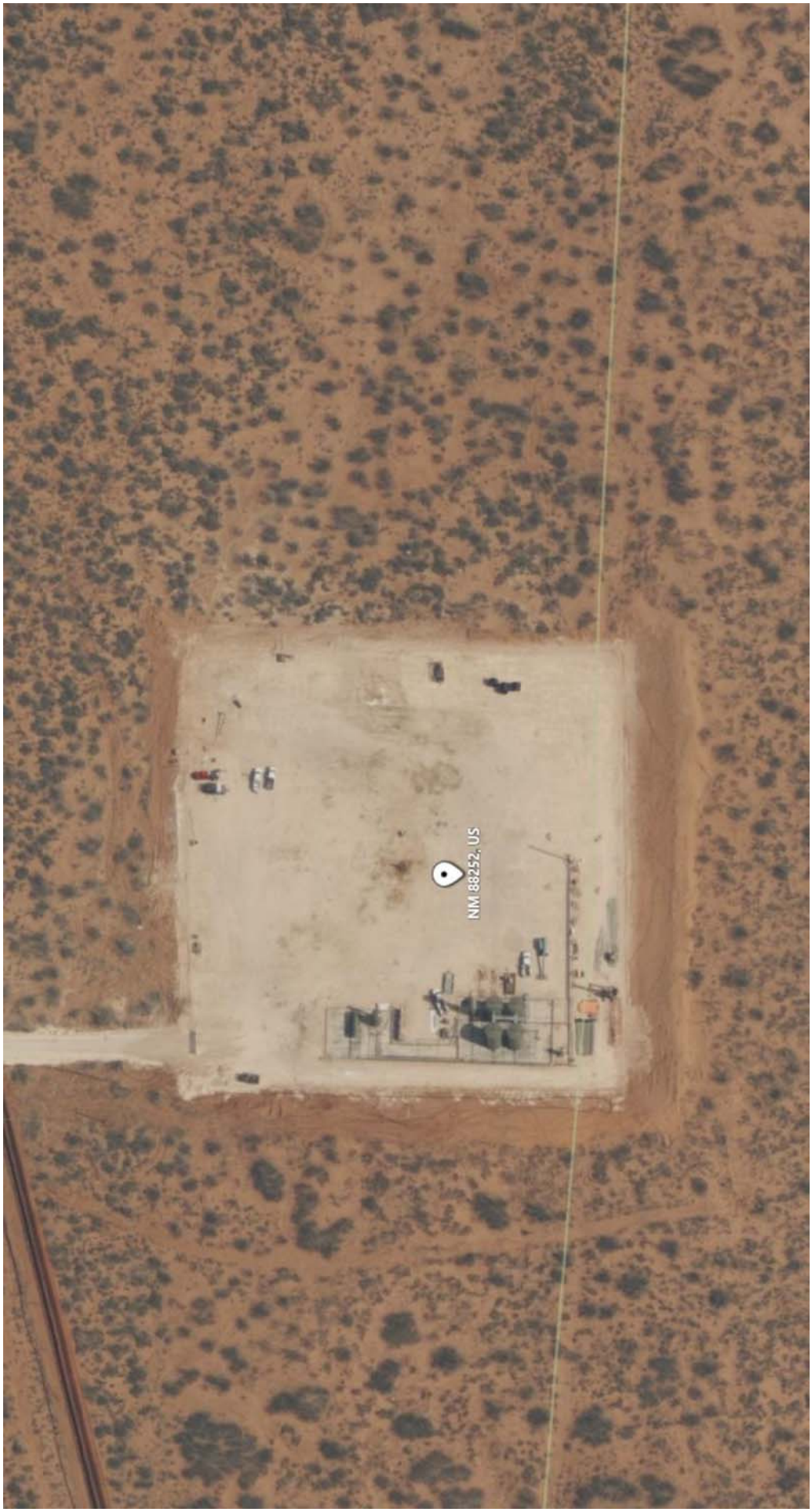

NM 88252, US

Table of Analytical Data

Table 1
COG Operating LLC.
Tatanka Federal Com 004H (2.29.20) Tracking # NRM2006556242
Lea County, New Mexico

Sample ID	Sample Date	Excavation Depth (ft)	Soil Status		TPH (mg/kg)							Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	*Total*	GRO	DRO	*Total*			
Average Depth to Groundwater (ft) - >100' (No active well within 1/2 mile)														
NMOCD RAL Limits (mg/kg)					**-**	**-**	**-**	**2,500**	**-**	**-**	**1,000**	**10**	**50**	**20,000**
AH-1 0-1'	8/4/2020	-	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	96.5
AH-1 1'-1.5'	8/4/2020	-	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	14.9
AH-2 0-1'	8/4/2020	-	X		<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	6.28
AH-2 1'-1.5'	8/4/2020	-	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<5.00
AH-3 0-1'	8/4/2020	-	X		<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<4.95
AH-3 1'-1.5'	8/4/2020	-	X		<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	7.81

(-) Not Analyzed

Photo

Photo of burned area after fire extinguished.

Appendix A

C-141

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

State of New Mexico
Energy Minerals and Natural Resources 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	OGRID
Contact Name	Contact Telephone
Contact email	Incident # *(assigned by OCD)*
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# *(if applicable)*

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (*Name:* _____)

Nature and Volume of Release

Material(s) Released (Select all that apply and attach calculations or specific justification for the volumes provided below)

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☐ Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☐ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)
Cause of Release		

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☐ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury

☐ The source of the release has been stopped.
☐ The impacted area has been secured to protect human health and the environment.
☐ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.
☐ All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Printed Name: _____ Title: _____

Signature: _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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 **not** 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 vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

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.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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 items must be included in the closure report.***

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: Jacqui Harris _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B

Site Assessment Data

COG Operating,LLC

Karst Map
Tatanka Federal Com 4H (2.29.20)
Tracking#: NRM2006556242
GPS: 32.0510, -103.3312
Lea County, New Mexico

National Flood Hazard Layer FIRMette

FEMA

103°20'11"W 32°3'19"N

103°19'33"W 32°2'49"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/5/2020 at 1:19 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
J 00005 POD1		J	LE	2	2	2	13	26S	35E	659200	3547174*	1655	601	230	371
J 00001	R	J	LE	1	1	3	18	26S	36E	659416	3546374*	2086	550	253	297
J 00001 POD3		J	LE	1	1	3	18	26S	36E	659416	3546374*	2086	550	253	297
J 00042 POD1		J	LE	3	1	3	18	26S	36E	659507	3546134	2281	710	270	440

Average Depth to Water: **251 feet**

Minimum Depth: **230 feet**

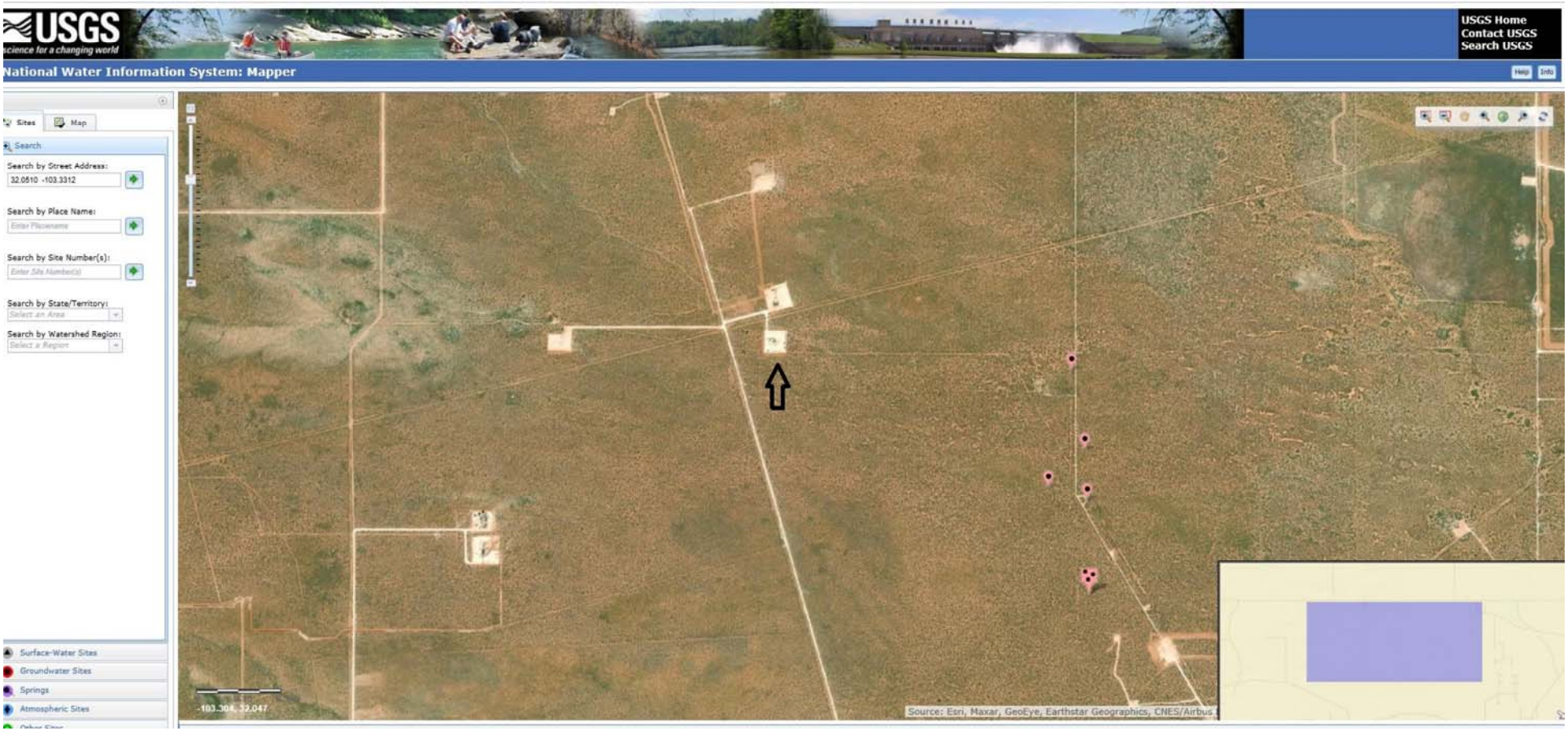
Maximum Depth: **270 feet**

Record Count: 4

UTMNAD83 Radius Search (in meters):

Easting (X): 657549.57 **Northing (Y):** 3547306.47 **Radius:** 2300

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



National Water Information System: Web Interface

USGS Water Resources

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

Click to hideNews Bulletins

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- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =
- 320245103184201

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

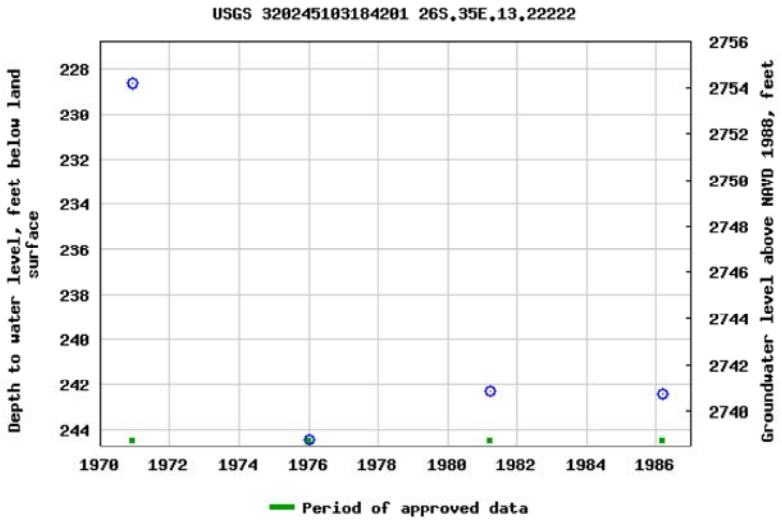
USGS 320245103184201 26S.35E.13.22222

Available data for this site: Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°02'45", Longitude 103°18'42" NAD27
Land-surface elevation 2,983 feet above NAVD88
The depth of the well is 601 feet below land surface.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site

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- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320250103184501

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

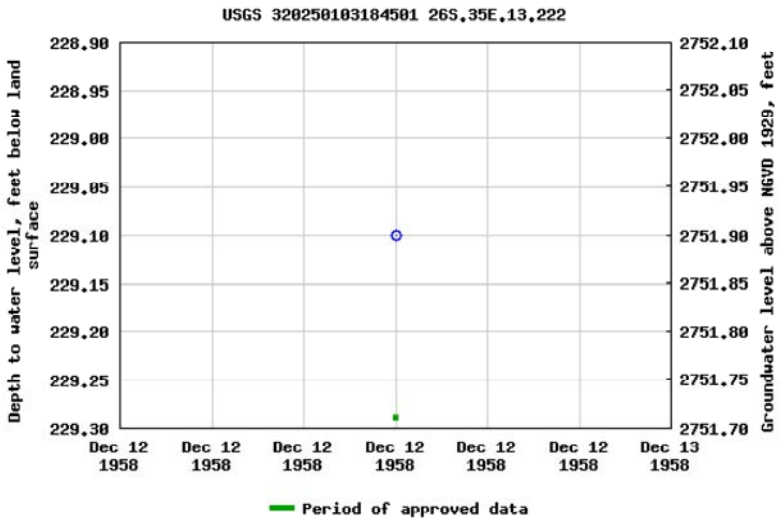
USGS 320250103184501 26S.35E.13.222

Available data for this site: Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°03'00", Longitude 103°18'45" NAD27
Land-surface elevation 2,981 feet above NGVD29

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site
Automated retrievals
Help

USGS science for a changing world

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: 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

Search Results -- 1 sites found

site_no list =

- 320238103185001

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

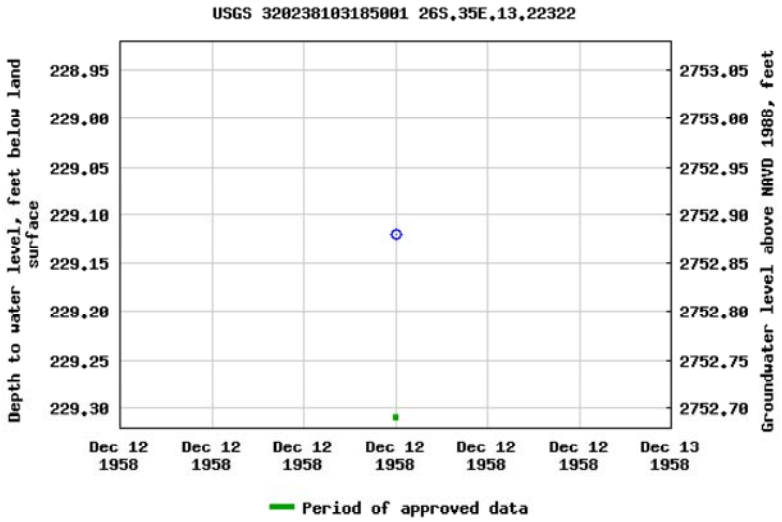
USGS 320238103185001 26S.35E.13.22322

Available data for this site: Groundwater: Field measurements | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°02'38", Longitude 103°18'50" NAD27
Land-surface elevation 2,982 feet above NAVD88
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

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



Breaks in the plot represent a gap of at least one year between field measurements.
Download a presentation-quality graph

Questions about sites/data?
Feedback on this web site

Appendix C

Analytical Reports

eurofins | Environment Testing Xenco

Certificate of Analysis Summary 669307

COG Operating LLC, Artesia, NM

Project Name: Tatanka Federal Com #4

Project Id:

Contact: Ike Tavarez

Project Location: Lea County, NM

Date Received in Lab: Thu 08.06.2020 09:23

Report Date: 08.07.2020 15:51

Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	669307-001		669307-002		669307-003		669307-004		669307-005		669307-006	
	Field Id:	AH-1 0-1'		AH-1 1'-1.5'		AH-2 0-1'		AH-2 1'-1.5'		AH-3 0-1'		AH-3 1'-1.5'	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	08.04.2020 00:00		08.04.2020 00:00		08.04.2020 00:00		08.04.2020 00:00		08.04.2020 00:00		08.04.2020 00:00	
BTEX by EPA 8021B	*Extracted:*	** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **		** ** ** **	
	Analyzed:	08.06.2020 16:35		08.06.2020 16:55		08.06.2020 17:16		08.06.2020 17:36		08.06.2020 17:57		08.06.2020 19:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00399	0.00399	<0.00399	0.00399	<0.00400	0.00400	<0.00403	0.00403	<0.00401	0.00401	<0.00402	0.00402
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	*Extracted:*	08.06.2020 12:15		08.06.2020 12:15		08.06.2020 12:15		08.06.2020 12:15		08.06.2020 12:15		08.06.2020 12:15	
	Analyzed:	08.06.2020 13:52		08.06.2020 13:58		08.06.2020 14:05		08.06.2020 14:11		08.06.2020 14:17		08.06.2020 14:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		96.5	5.05	14.9	4.96	6.28	4.99	<5.00	5.00	<4.95	4.95	7.81	4.95
TPH By SW8015 Mod	*Extracted:*	08.06.2020 11:00		08.06.2020 11:00		08.06.2020 11:00		08.06.2020 11:00		08.06.2020 11:00		08.06.2020 11:00	
	Analyzed:	08.06.2020 18:04		08.06.2020 18:25		08.06.2020 18:47		08.06.2020 19:08		08.06.2020 19:29		08.06.2020 19:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0	<49.9	49.9
Diesel Range Organics		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0	<49.9	49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0	<49.9	49.9
Total TPH		<50.0	50.0	<49.9	49.9	<49.8	49.8	<50.0	50.0	<50.0	50.0	<49.9	49.9

BRL - Below Reporting Limit

Jessica Kramer

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

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Analytical Report 669307

for

COG Operating LLC

Project Manager: Ike Tavarez

Tatanka Federal Com #4

08.07.2020

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-20-36), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054)
Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-20-25), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-17)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-22)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-20-7)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)

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08.07.2020

Project Manager: **Ike Tavarez**
COG Operating LLC
2407 Pecos Avenue
Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **669307**
Tatanka Federal Com #4
Project Address: Lea County, NM

Ike Tavarez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669307. 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. 669307 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

Jessica Kramer
Project Manager

A Small Business and Minority Company

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

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Sample Cross Reference 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 0-1'	S	08.04.2020 00:00		669307-001
AH-1 1'-1.5'	S	08.04.2020 00:00		669307-002
AH-2 0-1'	S	08.04.2020 00:00		669307-003
AH-2 1'-1.5'	S	08.04.2020 00:00		669307-004
AH-3 0-1'	S	08.04.2020 00:00		669307-005
AH-3 1'-1.5'	S	08.04.2020 00:00		669307-006

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CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Tatanka Federal Com #4

Project ID:
Work Order Number(s): *669307*

Report Date: *08.07.2020*
Date Received: *08.06.2020*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id: **AH-1 0-1'** Matrix: Soil Date Received:08.06.2020 09:23

Lab Sample Id: 669307-001 Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.06.2020 12:15 Basis: Wet Weight

Seq Number: 3133769

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**96.5**	5.05	mg/kg	08.06.2020 13:52		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.06.2020 11:00 Basis: Wet Weight

Seq Number: 3133887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	08.06.2020 18:04	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 18:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 18:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 18:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	08.06.2020 18:04	
o-Terphenyl	84-15-1	85	%	70-130	08.06.2020 18:04	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id:	**AH-1 0-1'**	Matrix:	Soil	Date Received:	08.06.2020 09:23
Lab Sample Id:	669307-001	Date Collected:	08.04.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.05.2020 08:00	Basis:	Wet Weight
Seq Number:	3133864				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 16:35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 16:35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 16:35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.06.2020 16:35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 16:35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 16:35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 16:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	91	%	70-130	08.06.2020 16:35	
1,4-Difluorobenzene	540-36-3	111	%	70-130	08.06.2020 16:35	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id:	**AH-1 1'-1.5'**	Matrix:	Soil	Date Received:	08.06.2020 09:23
Lab Sample Id:	669307-002	Date Collected:	08.04.2020 00:00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.2020 12:15	Basis:	Wet Weight
Seq Number:	3133769				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**14.9**	4.96	mg/kg	08.06.2020 13:58		1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.06.2020 11:00	Basis:	Wet Weight
Seq Number:	3133887				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	08.06.2020 18:25	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	08.06.2020 18:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.06.2020 18:25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.06.2020 18:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-130	08.06.2020 18:25	
o-Terphenyl	84-15-1	78	%	70-130	08.06.2020 18:25	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id:	**AH-1 1'-1.5'**	Matrix:	Soil	Date Received:	08.06.2020 09:23
Lab Sample Id:	669307-002	Date Collected:	08.04.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.05.2020 08:00	Basis:	Wet Weight
Seq Number:	3133864				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 16:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 16:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 16:55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.06.2020 16:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 16:55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 16:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 16:55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	116	%	70-130	08.06.2020 16:55	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.06.2020 16:55	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id: **AH-2 0-1'** Matrix: Soil Date Received:08.06.2020 09:23

Lab Sample Id: 669307-003 Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.06.2020 12:15 Basis: Wet Weight

Seq Number: 3133769

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6.28**	4.99	mg/kg	08.06.2020 14:05		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.06.2020 11:00 Basis: Wet Weight

Seq Number: 3133887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	08.06.2020 18:47	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	08.06.2020 18:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.06.2020 18:47	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.06.2020 18:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	08.06.2020 18:47	
o-Terphenyl	84-15-1	85	%	70-130	08.06.2020 18:47	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id:	**AH-2 0-1'**	Matrix:	Soil	Date Received:	08.06.2020 09:23
Lab Sample Id:	669307-003	Date Collected:	08.04.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.05.2020 08:00	Basis:	Wet Weight
Seq Number:	3133864				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 17:16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 17:16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 17:16	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.06.2020 17:16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 17:16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 17:16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 17:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	94	%	70-130	08.06.2020 17:16	
1,4-Difluorobenzene	540-36-3	115	%	70-130	08.06.2020 17:16	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id:	**AH-2 1'-1.5'**	Matrix:	Soil	Date Received:	08.06.2020 09:23
Lab Sample Id:	669307-004	Date Collected:	08.04.2020 00:00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	08.06.2020 12:15	Basis:	Wet Weight
Seq Number:	3133769				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.06.2020 14:11	U	1

Analytical Method:	TPH By SW8015 Mod			Prep Method:	SW8015P
Tech:	DVM			% Moisture:	
Analyst:	ARM	Date Prep:	08.06.2020 11:00	Basis:	Wet Weight
Seq Number:	3133887				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	08.06.2020 19:08	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 19:08	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 19:08	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 19:08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	85	%	70-130	08.06.2020 19:08	
o-Terphenyl	84-15-1	78	%	70-130	08.06.2020 19:08	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id:	**AH-2 1'-1.5'**	Matrix:	Soil	Date Received:	08.06.2020 09:23
Lab Sample Id:	669307-004	Date Collected:	08.04.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.05.2020 08:00	Basis:	Wet Weight
Seq Number:	3133864				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.06.2020 17:36	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.06.2020 17:36	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.06.2020 17:36	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.06.2020 17:36	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.06.2020 17:36	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.06.2020 17:36	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.06.2020 17:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	08.06.2020 17:36	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.06.2020 17:36	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id: **AH-3 0-1'** Matrix: Soil Date Received:08.06.2020 09:23

Lab Sample Id: 669307-005 Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: CHE % Moisture:

Analyst: CHE Date Prep: 08.06.2020 12:15 Basis: Wet Weight

Seq Number: 3133769

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.06.2020 14:17	U	1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P

Tech: DVM % Moisture:

Analyst: ARM Date Prep: 08.06.2020 11:00 Basis: Wet Weight

Seq Number: 3133887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	08.06.2020 19:29	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	08.06.2020 19:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.06.2020 19:29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.06.2020 19:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	88	%	70-130	08.06.2020 19:29	
o-Terphenyl	84-15-1	84	%	70-130	08.06.2020 19:29	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id:	**AH-3 0-1'**	Matrix:	Soil	Date Received:	08.06.2020 09:23
Lab Sample Id:	669307-005	Date Collected:	08.04.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.05.2020 08:00	Basis:	Wet Weight
Seq Number:	3133864				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.06.2020 17:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.06.2020 17:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.06.2020 17:57	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.06.2020 17:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.06.2020 17:57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.06.2020 17:57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.06.2020 17:57	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	113	%	70-130	08.06.2020 17:57	
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.06.2020 17:57	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id: **AH-3 1'-1.5'** Matrix: Soil Date Received:08.06.2020 09:23
Lab Sample Id: 669307-006 Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: CHE % Moisture:
Analyst: CHE Date Prep: 08.06.2020 12:15 Basis: Wet Weight
Seq Number: 3133769

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**7.81**	4.95	mg/kg	08.06.2020 14:24		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
Tech: DVM % Moisture:
Analyst: ARM Date Prep: 08.06.2020 11:00 Basis: Wet Weight
Seq Number: 3133887

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	08.06.2020 19:51	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	08.06.2020 19:51	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.06.2020 19:51	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.06.2020 19:51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	82	%	70-130	08.06.2020 19:51	
o-Terphenyl	84-15-1	82	%	70-130	08.06.2020 19:51	

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Certificate of Analytical Results 669307

COG Operating LLC, Artesia, NM

Tatanka Federal Com #4

Sample Id:	**AH-3 1'-1.5'**	Matrix:	Soil	Date Received:	08.06.2020 09:23
Lab Sample Id:	669307-006	Date Collected:	08.04.2020 00:00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5035A
Tech:	KTL			% Moisture:	
Analyst:	KTL	Date Prep:	08.05.2020 08:00	Basis:	Wet Weight
Seq Number:	3133864				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.06.2020 19:19	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.06.2020 19:19	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.06.2020 19:19	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.06.2020 19:19	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.06.2020 19:19	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.06.2020 19:19	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.06.2020 19:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	109	%	70-130	08.06.2020 19:19	
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.06.2020 19:19	

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Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantitation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit. **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

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QC Summary 669307

COG Operating LLC

Tatanka Federal Com #4

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133769 — Matrix: Solid — Date Prep: 08.06.2020
MB Sample Id: 7708858-1-BLK — LCS Sample Id: 7708858-1-BKS — LCSD Sample Id: 7708858-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	247	99	247	99	90-110	0	20	mg/kg	08.06.2020 12:42	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133769 — Matrix: Soil — Date Prep: 08.06.2020
Parent Sample Id: 669307-006 — MS Sample Id: 669307-006 S — MSD Sample Id: 669307-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.81	248	265	104	265	104	90-110	0	20	mg/kg	08.06.2020 14:30	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3133769 — Matrix: Soil — Date Prep: 08.06.2020
Parent Sample Id: 669321-001 — MS Sample Id: 669321-001 S — MSD Sample Id: 669321-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	22.9	250	286	105	285	105	90-110	0	20	mg/kg	08.06.2020 13:01	

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133887 — Matrix: Solid — Date Prep: 08.06.2020
MB Sample Id: 7708923-1-BLK — LCS Sample Id: 7708923-1-BKS — LCSD Sample Id: 7708923-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	841	84	813	81	70-130	3	20	mg/kg	08.06.2020 11:40	
Diesel Range Organics	<50.0	1000	858	86	837	84	70-130	2	20	mg/kg	08.06.2020 11:40	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	91		94		91		70-130	%	08.06.2020 11:40
o-Terphenyl	91		95		91		70-130	%	08.06.2020 11:40

Analytical Method: TPH By SW8015 Mod — Prep Method: SW8015P
Seq Number: 3133887 — Matrix: Solid — Date Prep: 08.06.2020
MB Sample Id: 7708923-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.06.2020 11:19	

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

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QC Summary 669307

COG Operating LLC

Tatanka Federal Com #4

Analytical Method: **TPH By SW8015 Mod** Prep Method: SW8015P
Seq Number: 3133887 Matrix: Soil Date Prep: 08.06.2020
Parent Sample Id: 669268-001 MS Sample Id: 669268-001 S MSD Sample Id: 669268-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<49.9	998	808	81	818	82	70-130	1	20	mg/kg	08.06.2020 12:44	
Diesel Range Organics	<49.9	998	833	83	846	85	70-130	2	20	mg/kg	08.06.2020 12:44	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	87		89		70-130	%	08.06.2020 12:44
o-Terphenyl	85		88		70-130	%	08.06.2020 12:44

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3133864 Matrix: Solid Date Prep: 08.05.2020
MB Sample Id: 7708946-1-BLK LCS Sample Id: 7708946-1-BKS LCSD Sample Id: 7708946-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0748	75	0.0900	90	70-130	18	35	mg/kg	08.06.2020 09:05	
Toluene	<0.00200	0.100	0.0868	87	0.103	103	70-130	17	35	mg/kg	08.06.2020 09:05	
Ethylbenzene	<0.00200	0.100	0.0959	96	0.113	113	70-130	16	35	mg/kg	08.06.2020 09:05	
m,p-Xylenes	<0.00400	0.200	0.195	98	0.229	115	70-130	16	35	mg/kg	08.06.2020 09:05	
o-Xylene	<0.00200	0.100	0.0951	95	0.111	111	70-130	15	35	mg/kg	08.06.2020 09:05	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		92		92		70-130	%	08.06.2020 09:05
4-Bromofluorobenzene	130		116		117		70-130	%	08.06.2020 09:05

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5035A
Seq Number: 3133864 Matrix: Soil Date Prep: 08.05.2020
Parent Sample Id: 668914-001 MS Sample Id: 668914-001 S MSD Sample Id: 668914-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.00238	0.100	0.0825	80	0.0804	78	70-130	3	35	mg/kg	08.06.2020 10:25	
Toluene	0.00170	0.100	0.0945	93	0.0926	91	70-130	2	35	mg/kg	08.06.2020 10:25	
Ethylbenzene	<0.00200	0.100	0.106	106	0.103	104	70-130	3	35	mg/kg	08.06.2020 10:25	
m,p-Xylenes	<0.00401	0.200	0.218	109	0.210	106	70-130	4	35	mg/kg	08.06.2020 10:25	
o-Xylene	<0.00200	0.100	0.104	104	0.102	103	70-130	2	35	mg/kg	08.06.2020 10:25	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	93		90		70-130	%	08.06.2020 10:25
4-Bromofluorobenzene	124		121		70-130	%	08.06.2020 10:25

MS/MSD Percent Recovery [D] = 100*(C-A) / B
Relative Percent Difference RPD = 200* | (C-E) / (C+E) |
LCS/LCSD Recovery [D] = 100 * (C) / [B]
Log Difference Log Diff. = Log(Sample Duplicate) - Log(Original Sample)

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

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

Analysis Request of Chain of Custody Record

CONCHO

One Concho
Center/600/Illinois
Avenue/Midland, Texas
Tel (432) 683-7443

Lab 9307

Client Name: COG	**Site Manager:** Ike Tavarez itavarez@concho.com; Robert Grubbs Jr rgrubbs@concho.com
Project Name: Tatanka Federal Com #4	
Project Location: (county, state) Lea County, NM	**Project #:**
Invoice to: COG	
Receiving Laboratory: Xenco	**Sampler Signature:** Robert Grubbs Jr
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2020 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	TPH TX1005 (Ext to C35)	BTEX 8021B	TPH 8015M (GRO - DRO - MRO)	Chloride	Hold
	AH-1 0-1'	8/4/2020			X				X			1			X	X	X	
	AH-1 1'-1.5	8/4/2020			X				X			1			X	X	X	
	AH-2 0-1'	8/4/2020			X				X			1			X	X	X	
	AH-2 1'-1.5'	8/4/2020			X				X			1			X	X	X	
	AH-3 0-1'	8/4/2020			X				X			1			X	X	X	
	AH-3 1'-1.5'																	

Relinquished by:	Date:	Time:	Relinquished by:	Date:	Time:
Robert Grubbs Jr	8/6/2020	0923		8/6/20	0923
Relinquished by:	Date:	Time:	Relinquished by:	Date:	Time:
Relinquished by:	Date:	Time:	Relinquished by:	Date:	Time:

LAB USE ONLY

Sample Temperature 2.5/2.1 -0.4

REMARKS:

X	RUSH: Same Day 24 hr 48 hr 72 hr
	Rush Charges Authorized
	Special Report Limits or TRRP Report

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 08.06.2020 09.23.00 AM

Work Order #: 669307

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

Temperature Measuring device used : IR-8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.1	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received on ice?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 Custody Seals intact on sample bottles?	**N/A**	
#6*Custody Seals Signed and dated?	**N/A**	
#7 *Chain of Custody present?	**Yes**	
#8 Any missing/extra samples?	**No**	
#9 Chain of Custody signed when relinquished/ received?	**Yes**	
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**	
#11 Container label(s) legible and intact?	**Yes**	
#12 Samples in proper container/ bottle?	**Yes**	BTEX was in bulk container
#13 Samples properly preserved?	**Yes**	
#14 Sample container(s) intact?	**Yes**	
#15 Sufficient sample amount for indicated test(s)?	**Yes**	
#16 All samples received within hold time?	**Yes**	
#17 Subcontract of sample(s)?	**N/A**	
#18 Water VOC samples have zero headspace?	**N/A**	

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

Analyst: PH Device/Lot#:

Checklist completed by: Brianna Teel Date: 08.06.2020
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08.06.2020
Jessica Kramer

Form C-141 State of New Mexico
Page 6 Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

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 items must be included in the closure report.***

☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC

☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)

☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)

☐ Description of remediation activities

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: _____ Title: _____

Signature: Jacqui Harris _____ Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by: Robert Hamlet _____ Date: _____

Printed Name: _____ Title: _____

From:	Hamlet, Robert, EMNRD
To:	"Brittany Esparza"
Cc:	Bratcher, Mike, EMNRD; Eads, Cristina, EMNRD; CFO_Spill, BLM_NM
Subject:	Closure Approval - COG - Tatanka Com #4H - (Incident #NRM2006556242)
Date:	Wednesday, January 20, 2021 2:21:00 PM
Attachments:	Closure Approval - COG - Tatanka Com #4H - (NRM2006556242).pdf

Brittany,

We have received your closure report and final C-141 for **Incident #NRM2006556242 Tatanka Com #4H**, thank you. This closure is approved.

Please let me know if you have any further questions.

Regards,

Robert Hamlet ● Environmental Specialist - Advanced
Environmental Bureau
EMNRD - Oil Conservation Division
811 S. First Street | Artesia, NM 88210
505.748.1283 | robert.hamlet@state.nm.us
http://www.emnrd.state.nm.us/OCD/

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

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

CONDITIONS

Action 10509

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
COG OPERATING LLC 600 W Illinois Ave Midland, TX79701	229137	10509	C-141

OCD Reviewer	Condition
rhamlet	We have received your closure report and final C-141 for Incident #NRM2006556242 Tatanka Com #4H, thank you. This closure is approved.