CONCHO

November 2, 2018

Olivia Yu and Christina Hernandez
Oil Conservation Division, District 1
1625 N. French Dr.
Hobbs, NM 88240

Ryan Mann
New Mexico State Land Office
1001 S. Atkinson
Roswell, NM 88230

Re: Work Plan
Osprey 20 State Com 3H
API #: 30-025-40969
RP#: 1RP-5158
GPS: 32.463732, -103.494739
Unit Letter K, Section 20, Township 21S, Range 34E
Lea County, NM

Ms. Yu/Mr. Mann,

COG Operating, LLC (COG) is pleased to submit the following remediation work plan in response to a release that occurred at the Osprey 20 State Com 3H located in Unit Letter K, Section 20, Township 21 South and Range 34 East in Lea County, New Mexico.

BACKGROUND

The release was discovered on August 10, 2018 and a C-141 initial report was submitted and approved by the New Mexico Oil Conservation Division (NMOCD). The release occurred from the packing from the oil dump failed allowing the tanks to overflow and sprayed oil out of the flare. The area around the flare was impacted and had some overspray in the pasture. Approximately five (5) barrels of oil were released from the flare and recovered one (1) barrel of oil. The initial C-141 is shown in Appendix A.

GROUNDWATER AND REGUALTORY FRAMEWORK

According to the New Mexico Office of the State Engineer (NMOSE) groundwater in the project vicinity is approximately >100' below ground surface (BGS) (Appendix B). The Chevron trend map shows the depth in the Section 20 between 50'-100'below surface. The USGS groundwater data shows wells in Section 8 and 28 with depth to water of 101' and 136', respectively.

A risk based evaluation and site determinations were perform 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, a playa is located near the site, which change the remediation criteria if it occurred less than 50 feet to ground water.

No other receptors (water wells, 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.)
Playa in the area	>50-100 feet

Delineation and Closure Criteria:

Recommended Remedial Action Levels (RRALs)	
Chlorides	600 mg/kg
TPH (GRO and DRO and MRO)	100 mg/kg
TPH (GRO and DRO)	NA mg/kg
Benzene	10 mg/kg
Total BTEX	50 mg/kg

PROPOSED WORK PLAN

- The area of AH-1 on the pad will be excavated to a depth of approximately 0.5' below surface.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- The excavation will be backfilled with clean "backfilled material.

SAMPLING PLAN

Once the excavation is complete, soil confirmation samples will be collected from the excavated areas. To collect representative samples, composite samples (5-point composite) will be collected every 200 square feet for the final confirmation sampling for the constituents of concern. Discrete soil samples will be collected from the excavation if any "hot spots" are encountered during the excavation.

REMEDIATION TIMEFRAME AND ESTIMATED VOLUME

The remediation will be performed 90 days after the work plan has been approved. Approximately 15-20 cubic yards of impacted soil will be excavated from the impacted area and hauled top proper disposal.

SITE RECLAMATION AND RESTORATION

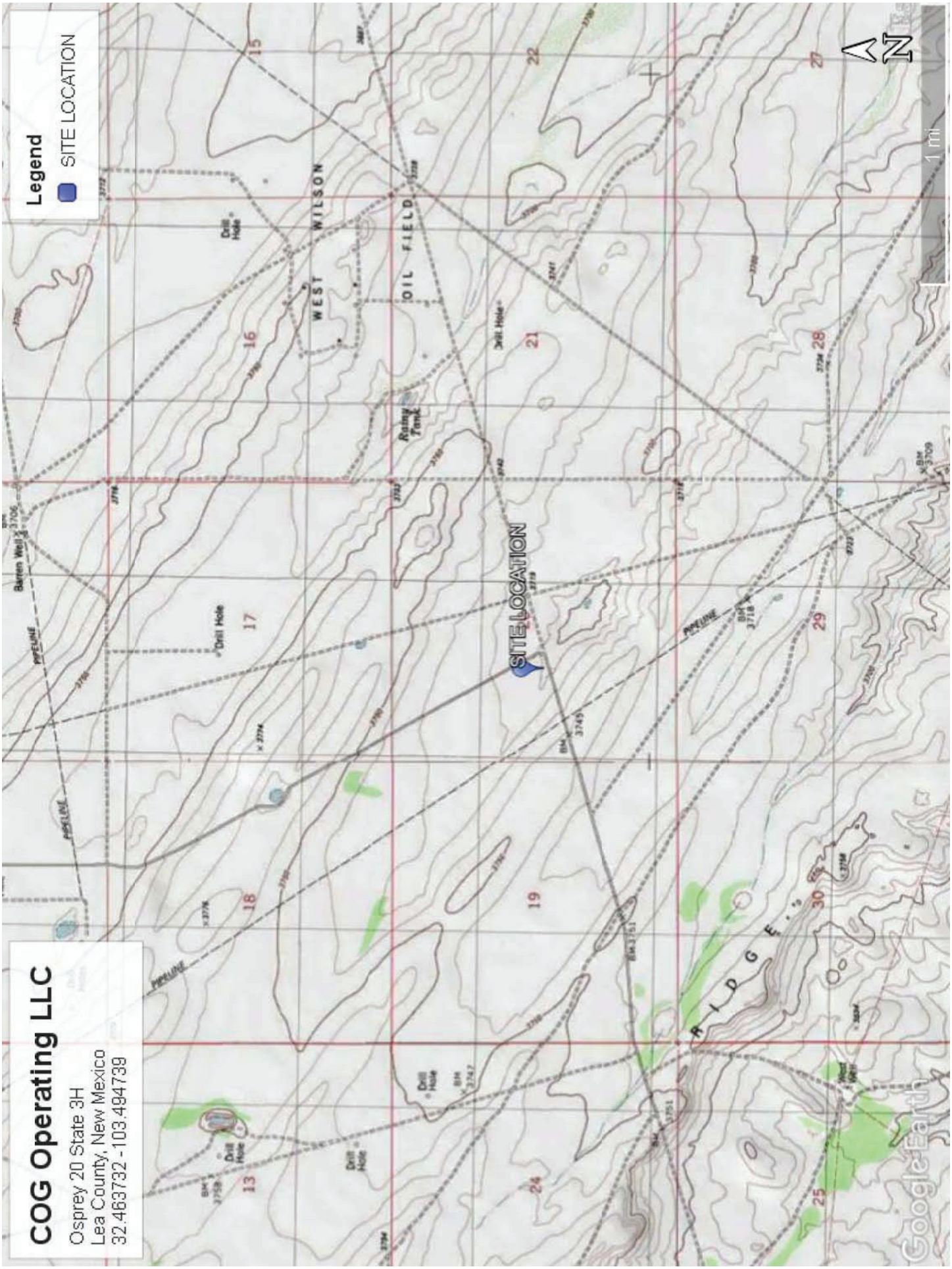
All of the samples in the pasture are below the RALs for TPH and BTEX and below the 600 mg/kg chloride threshold and does not require any reclamation.

Should you have any questions or concerns on the proposed remediation activities, please do not hesitate to contact me.

Sincerely,
Concho Operating, LLC

Ike Tavarez, P. G.
Senior HSE Supervisor
itavarez@concho.com

Figures


COG Operating LLC
Osprey 20 State 3H
Lea County, New Mexico
32.463732 -103.494739
Legend
SITE LOCATION
SITE LOCATION
WEST WILSON
OIL FIELD
RIDGE
PIPELINE
Drill Hole
Rainey Tank
Baren Well
N
1 mi
Google Earth


COG Operating LLC
Osprey 20 State 3H
Lea County, New Mexico
32.463732 -103.494739
Legend
Overspray Area
Sample Locations
Spill Area
AH-1
AH-2
AH-3
AH-4
AH-5
N
100 ft
Google Earth

Tables

Released to Imaging: 12/1/2022 9:54:25 AM

Received by OCD: 12/1/2022 9:42:15 AM

Table 1
COG Operating LLC.
Osprey 20 Com 3H
Lea County, New Mexico

Sample ID	Sample Date	Sample 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'			**Location Near Playa**											
NMOCD RAL Limits (mg/kg)					-	-	-	100	-	-	-	10	50	600
AH-1	8/21/2018	0-0.5	X		27.6	233	<15.0	**261**	-	-	-	<0.001	<0.001	236
		0.5-1.0			<15.0	18.0	<15.0	18.0	-	-	-	-	-	-
AH-2	8/23/2018	0-0.5	X		<15.0	59.4	<15.0	59.4	-	-	-	<0.00199	<0.00199	21.3
AH-3	8/23/2018	0-0.5	X		<15.0	<15.0	<15.0	<15.0	-	-	-	<0.00202	<0.00202	<5.00
AH-4	8/23/2018	0-0.5	X		<15.0	16.5	<15.0	16.5	-	-	-	<0.00202	<0.00202	15.9
AH-5	8/23/2018	0-0.5	X		<15.0	<15.0	<15.0	<15.0	-	-	-	<0.00200	<0.00200	31.1

Proposed Excavation Depth

(-) Not Analyzed

Appendix A

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

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

Form C-141
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating LLC (OGRID #229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No. 432-683-7443
Facility Name: **Osprey 20 State Com #003H**	Facility Type: Tank Battery

Surface Owner: State	Mineral Owner: State	API No. 30-025-40969

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	20	21S	34E					Lea

Latitude 32.463732 **Longitude** -103.494739 NAD83

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 5 bbl.	Volume Recovered: 1 bbl.
Source of Release: Valve Failure	Date and Hour of Occurrence: August 10, 2018 9:36am	Date and Hour of Discovery: August 10, 2018 9:36am
Was Immediate Notice Given? ☐ Yes ☒ No ☒ Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

RECEIVED
By Olivia Yu at 10:51 am, Aug 20, 2018

Describe Cause of Problem and Remedial Action Taken.*

Packing in the oil dump caused it to fail allowing the tanks to overflow and spray out of the flare.

Describe Area Affected and Cleanup Action Taken.*

The release was within a pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant 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 NMOCD 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 NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD 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.

Signature: DeAnn Grant	OIL CONSERVATION DIVISION
Printed Name: DeAnn Grant	Approved by Environmental Specialist:
Title: HSE Administrative Assistant	Approval Date: 8/20/2018 Expiration Date:
E-mail Address: agrant@concho.com	Conditions of Approval: Attached ☐
Date: August 13, 2018 Phone: 432-253-4513	See NMAC 19.15.29 for conditions. Please be advised that release characterization must be completed before any significant remedial activities.

* Attach Additional Sheets If Necessary

nOY1823239315 pOY1823239504 1RP-5158

Incident ID	
District RP	1RP 5158
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?	50'-100 (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
515 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	1RP 5158
Facility ID	
Application ID	

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: Ike Tavarez Title: Senior HSE Supervisor

Signature: Date: 10/24/18

email: itavarez@concho.com Telephone: 432-683-7443

OCD Only

Received by: Date:

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	1RP 5158
Facility ID	
Application ID	

Remediation Plan

Remediation Plan Checklist: ***Each of the following items must be included in the plan.***

☒ Detailed description of proposed remediation technique
☒ Scaled sitemap with GPS coordinates showing delineation points
☒ Estimated volume of material to be remediated
☒ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
☒ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

Deferral Requests Only: ***Each of the following items must be confirmed as part of any request for deferral of remediation.***

☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.

☐ Extents of contamination must be fully delineated.

☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: Ike Tavarez Title: Senior HSE Supervisor

Signature: _____ Date: _____

email: itavarez@concho.com Telephone: 432-683-7443

OCD Only

Received by: _____ Date: _____

☐ Approved ☑ Approved with Attached Conditions of Approval ☐ Denied ☐ Deferral Approved

Signature: Brittany Hall Date: 12/1/2022

Incident ID	
District RP	1RP 5158
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: _____ 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

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

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

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

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

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00089	O	CP	LE		2	1	13	21S	34E	647840	3594615	235		
CP 00092 POD1		CP	LE	1	3	1	25	21S	34E	647479	3591694*	196		
CP 00489		CP	LE				04	21S	34E	643274	3597749*	125	95	30
CP 00498		CP	LE		2	4	08	21S	34E	642287	3595932*	145	120	25
CP 00571 POD1		CP	LE		3	4	28	21S	34E	643500	3591063	170	135	35
CP 00583		CP	LE			3	21	21S	34E	642944	3592518*	171	128	43
CP 00588 POD1		CP	LE		3	2	33	21S	34E	643583	3589918*	89		
CP 00589 POD1		CP	LE		3	2	33	21S	34E	643583	3589918*	84		
CP 00590 POD1		CP	LE				01	21S	34E	648099	3597829*	79		
CP 00611		CP	LE		2	1	06	21S	34E	639838	3598306*	118	112	6
CP 00791		CP	LE	4	2	4	06	21S	34E	640754	3597413*	85	55	30
CP 01066 POD1		CP	LE	4	3	2	28	21S	34E	643735	3591345	210	140	70
CP 01067 POD1		CP	LE	1	3	4	28	21S	34E	643447	3591434	210	140	70
CP 01068 POD1		CP	LE	4	1	4	28	21S	34E	643610	3591005	180	140	40
CP 01069 POD1		CP	LE	2	1	4	28	21S	34E	643738	3591191	210	140	70
CP 01091 POD1		CP	LE	3	3	2	28	21S	34E	643447	3591434	200	140	60
CP 01364 POD1		CP	LE	4	2	3	16	21S	34E	643147	3594331	165	105	60
CP 01366 POD1		CP	LE	4	4	1	16	21S	34E	643196	3594698	180	110	70
CP 01671 POD1		CP	LE	2	4	1	16	21S	34E	643108	3594887	157		

Average Depth to Water: **120 feet**
Minimum Depth: **55 feet**
Maximum Depth: **140 feet**

Record Count: 19

PLSS Search:

Township: 21S **Range:** 34E

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

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

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Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 322650103281801

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

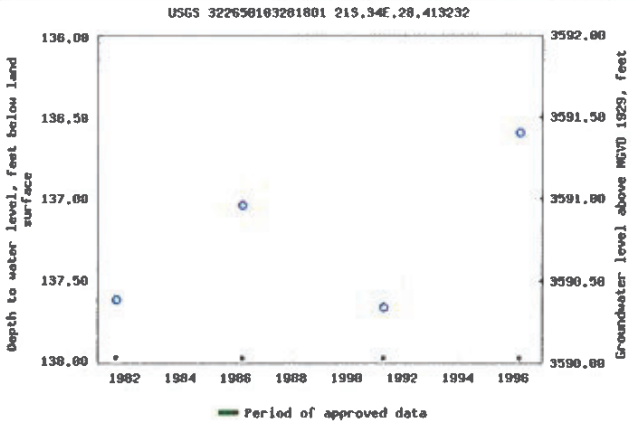
USGS 322650103281801 21S.34E.28.413232

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

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°26'51", Longitude 103°28'24" NAD27
Land-surface elevation 3,728.00 feet above NGVD29
The depth of the well is 170 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) 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
Automated retrievals
Help
Data Tips
Explanation of terms
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Agency code = usgs
site_no list =
- 322738103263701

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

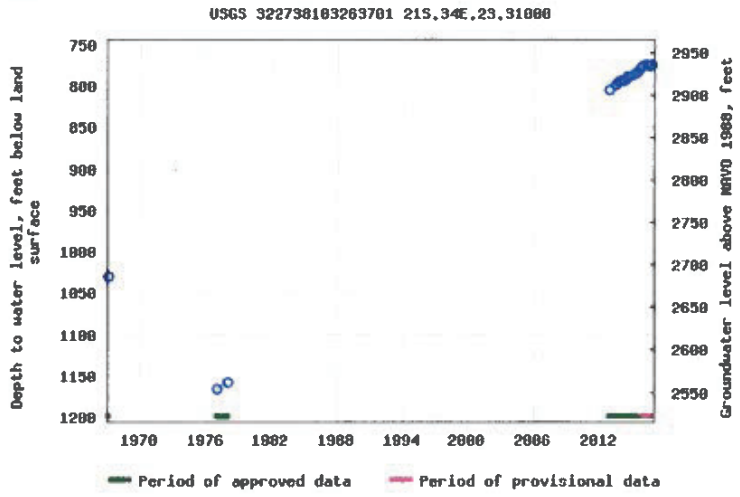
USGS 322738103263701 21S.34E.23.31000

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

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°27'45.6", Longitude 103°26'49.4" NAD83
Land-surface elevation 3,715 feet above NAVD88
The depth of the well is 5,390 feet below land surface.
This well is completed in the Capitan Limestone (313CPTN) local aquifer.

Output formats

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



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Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 322916103291101

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

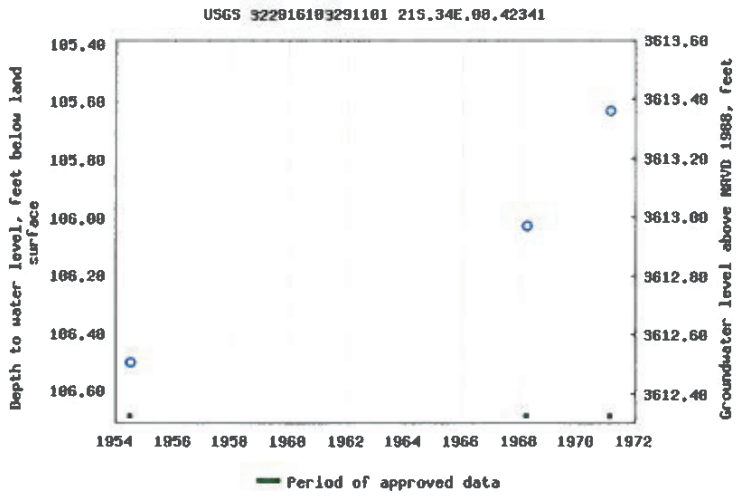
USGS 322916103291101 21S.34E.08.42341

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

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°29'16", Longitude 103°29'11" NAD27
Land-surface elevation 3,719 feet above NAVD88
The depth of the well is 120 feet below land surface.
This well is completed in the Ogallala Formation (121OGLL) local aquifer.

Output formats

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



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Data Category: Groundwater | Geographic Area: New Mexico | GO

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- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 323022103285301

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

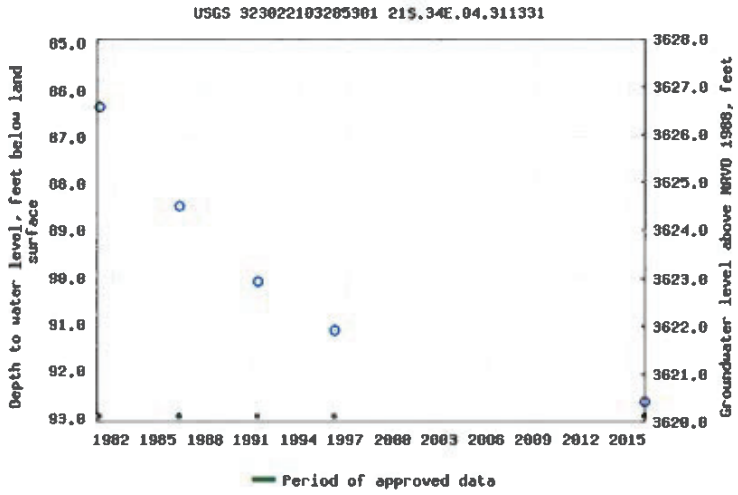
USGS 323022103285301 21S.34E.04.311331

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

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°30'50.1", Longitude 103°28'59.8" NAD83
Land-surface elevation 3,713 feet above NAVD88
The depth of the well is 125 feet below land surface.
This well is completed in the Chinle Formation (231CHNL) local aquifer.

Output formats

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



Appendix C

Released to Imaging: 12/1/2022 9:54:25 AM

Received by OCD: 12/1/2022 9:42:15 AM

Certificate of Analysis Summary 596598

COG Operating LLC, Artesia, NM

Project Name: Osprey 20 Com 3H (8/10/18

Project Id:

Contact: Ike Tavarez

Project Location: Lea County, New Mexico

Date Received in Lab: Wed Aug-22-18 09:34 am

Report Date: 29-AUG-18

Project Manager: Jessica Kramer

Analysis Requested																	
	Lab Id:	596598-001			596598-002		596598-003		596598-005		596598-007		596598-008				
	Field Id:	AH-1			AH-1		AH-2		AH-3		AH-4		AH-5				
	Depth:																
	Matrix:	SOIL			SOIL		SOIL		SOIL		SOIL		SOIL				
	Sampled:	Aug-21-18 00:00			Aug-21-18 00:00		Aug-21-18 00:00		Aug-21-18 00:00		Aug-21-18 00:00		Aug-21-18 00:00				
BTEX by EPA 8021B	***Extracted:***	Aug-28-18 08:00					Aug-28-18 08:00		Aug-28-18 08:00		Aug-28-18 08:00		Aug-28-18 08:00				
	Analyzed:	Aug-28-18 16:02					Aug-28-18 16:22		Aug-28-18 16:42		Aug-28-18 17:03		Aug-28-18 17:23				
	Units/RL:	mg/kg	RL				mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Benzene		<0.00199	0.00199				<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200			
Toluene		<0.00199	0.00199				<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200			
Ethylbenzene		<0.00199	0.00199				<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200			
m,p-Xylenes		<0.00398	0.00398				<0.00398	0.00398	<0.00403	0.00403	<0.00404	0.00404	<0.00401	0.00401			
o-Xylene		0.0438	0.00199				<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200			
Total Xylenes		0.0438	0.00199				<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200			
Total BTEX		0.0438	0.00199				<0.00199	0.00199	<0.00202	0.00202	<0.00202	0.00202	<0.00200	0.00200			
Chloride by EPA 300	***Extracted:***	Aug-24-18 14:30					Aug-24-18 14:30		Aug-24-18 14:30		Aug-24-18 14:30		Aug-24-18 14:30				
	Analyzed:	Aug-24-18 20:14					Aug-24-18 19:25		Aug-24-18 20:47		Aug-24-18 21:09		Aug-24-18 21:14				
	Units/RL:	mg/kg	RL				mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		236	4.99				21.3	4.95	<5.00	5.00	15.9	4.96	31.1	5.00			
TPH By SW8015 Mod	***Extracted:***	Aug-23-18 15:00			Aug-28-18 14:00		Aug-23-18 15:00		Aug-23-18 15:00		Aug-23-18 15:00		Aug-23-18 15:00				
	Analyzed:	Aug-23-18 19:38			Aug-28-18 22:38		Aug-23-18 20:36		Aug-23-18 20:56		Aug-23-18 21:15		Aug-23-18 21:35				
	Units/RL:	mg/kg	RL		mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons (GRO)		27.6	15.0		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0			
Diesel Range Organics (DRO)		233	15.0		18.0	15.0	59.4	15.0	<15.0	15.0	16.5	15.0	<15.0	15.0			
Oil Range Hydrocarbons (ORO)		<15.0	15.0		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0			
Total TPH		261	15.0		18.0	15.0	59.4	15.0	<15.0	15.0	16.5	15.0	<15.0	15.0			

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

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

Jessica Kramer
Project Assistant

Final 1.000

Analytical Report 596598

for

COG Operating LLC

Project Manager: Ike Tavarez

Osprey 20 Com 3H (8/10/18

29-AUG-18

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

29-AUG-18

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

Reference: XENCO Report No(s): **596598**
Osprey 20 Com 3H (8/10/18
Project Address: Lea County, New Mexico

Ike Tavarez:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 596598. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 596598 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer

Jessica Kramer
Project Assistant

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

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

Sample Cross Reference 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1	S	08-21-18 00:00		596598-001
AH-1	S	08-21-18 00:00		596598-002
AH-2	S	08-21-18 00:00		596598-003
AH-3	S	08-21-18 00:00		596598-005
AH-4	S	08-21-18 00:00		596598-007
AH-5	S	08-21-18 00:00		596598-008
AH-2	S	08-21-18 00:00		Not Analyzed
AH-3	S	08-21-18 00:00		Not Analyzed

CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Osprey 20 Com 3H (8/10/18

Project ID:
Work Order Number(s): *596598*

Report Date: *29-AUG-18*
Date Received: *08/22/2018*

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3061437 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.
Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.
Samples affected are: 596598-001.

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-1** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-001 Date Collected: 08.21.18 00.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.24.18 14.30 Basis: Wet Weight

Seq Number: 3061247

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**236**	4.99	mg/kg	08.24.18 20.14		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight

Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	**27.6**	15.0	mg/kg	08.23.18 19.38		1
Diesel Range Organics (DRO)	C10C28DRO	**233**	15.0	mg/kg	08.23.18 19.38		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 19.38	U	1
Total TPH	PHC635	**261**	15.0	mg/kg	08.23.18 19.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	08.23.18 19.38	
o-Terphenyl	84-15-1	110	%	70-135	08.23.18 19.38	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id:	**AH-1**	Matrix:	Soil	Date Received:	08.22.18 09.34
Lab Sample Id:	596598-001	Date Collected:	08.21.18 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.28.18 08.00	Basis:	Wet Weight
Seq Number:	3061437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.18 16.02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.18 16.02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.18 16.02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.18 16.02	U	1
o-Xylene	95-47-6	**0.0438**	0.00199	mg/kg	08.28.18 16.02		1
Total Xylenes	1330-20-7	**0.0438**	0.00199	mg/kg	08.28.18 16.02		1
Total BTEX		**0.0438**	0.00199	mg/kg	08.28.18 16.02		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	137	%	70-130	08.28.18 16.02	**
1,4-Difluorobenzene	540-36-3	83	%	70-130	08.28.18 16.02	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-1** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-002 Date Collected: 08.21.18 00.00

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.28.18 14.00 Basis: Wet Weight

Seq Number: 3061546

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.28.18 22.38	U	1
Diesel Range Organics (DRO)	C10C28DRO	**18.0**	15.0	mg/kg	08.28.18 22.38		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.28.18 22.38	U	1
Total TPH	PHC635	**18.0**	15.0	mg/kg	08.28.18 22.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.28.18 22.38	
o-Terphenyl	84-15-1	95	%	70-135	08.28.18 22.38	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-2** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-003 Date Collected: 08.21.18 00.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.24.18 14.30 Basis: Wet Weight

Seq Number: 3061247

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**21.3**	4.95	mg/kg	08.24.18 19.25		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight

Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 20.36	U	1
Diesel Range Organics (DRO)	C10C28DRO	**59.4**	15.0	mg/kg	08.23.18 20.36		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 20.36	U	1
Total TPH	PHC635	**59.4**	15.0	mg/kg	08.23.18 20.36		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	08.23.18 20.36	
o-Terphenyl	84-15-1	103	%	70-135	08.23.18 20.36	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id:	**AH-2**	Matrix:	Soil	Date Received:	08.22.18 09.34
Lab Sample Id:	596598-003	Date Collected:	08.21.18 00.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	ALJ			% Moisture:	
Analyst:	ALJ	Date Prep:	08.28.18 08.00	Basis:	Wet Weight
Seq Number:	3061437				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.28.18 16.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.28.18 16.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.28.18 16.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.28.18 16.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.28.18 16.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.28.18 16.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.28.18 16.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	122	%	70-130	08.28.18 16.22	
4-Bromofluorobenzene	460-00-4	123	%	70-130	08.28.18 16.22	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-3** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-005 Date Collected: 08.21.18 00.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.24.18 14.30 Basis: Wet Weight

Seq Number: 3061247

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.24.18 20.47	U	1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight

Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 20.56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.23.18 20.56	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 20.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.23.18 20.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.23.18 20.56	
o-Terphenyl	84-15-1	95	%	70-135	08.23.18 20.56	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-3** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-005 Date Collected: 08.21.18 00.00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 08.28.18 08.00 Basis: Wet Weight

Seq Number: 3061437

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.28.18 16.42	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.28.18 16.42	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.28.18 16.42	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.28.18 16.42	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.28.18 16.42	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.28.18 16.42	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.28.18 16.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	129	%	70-130	08.28.18 16.42	
1,4-Difluorobenzene	540-36-3	94	%	70-130	08.28.18 16.42	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-4** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-007 Date Collected: 08.21.18 00.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.24.18 14.30 Basis: Wet Weight

Seq Number: 3061247

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**15.9**	4.96	mg/kg	08.24.18 21.09		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight

Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 21.15	U	1
Diesel Range Organics (DRO)	C10C28DRO	**16.5**	15.0	mg/kg	08.23.18 21.15		1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 21.15	U	1
Total TPH	PHC635	**16.5**	15.0	mg/kg	08.23.18 21.15		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-135	08.23.18 21.15	
o-Terphenyl	84-15-1	98	%	70-135	08.23.18 21.15	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-4** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-007 Date Collected: 08.21.18 00.00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 08.28.18 08.00 Basis: Wet Weight

Seq Number: 3061437

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.28.18 17.03	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.28.18 17.03	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.28.18 17.03	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.28.18 17.03	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.28.18 17.03	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.28.18 17.03	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.28.18 17.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	75	%	70-130	08.28.18 17.03	
1,4-Difluorobenzene	540-36-3	95	%	70-130	08.28.18 17.03	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-5** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-008 Date Collected: 08.21.18 00.00

Analytical Method: Chloride by EPA 300 Prep Method: E300P

Tech: SCM % Moisture:

Analyst: SCM Date Prep: 08.24.18 14.30 Basis: Wet Weight

Seq Number: 3061247

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**31.1**	5.00	mg/kg	08.24.18 21.14		1

Analytical Method: TPH By SW8015 Mod Prep Method: TX1005P

Tech: ARM % Moisture:

Analyst: ARM Date Prep: 08.23.18 15.00 Basis: Wet Weight

Seq Number: 3061132

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<15.0	15.0	mg/kg	08.23.18 21.35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<15.0	15.0	mg/kg	08.23.18 21.35	U	1
Oil Range Hydrocarbons (ORO)	PHCG2835	<15.0	15.0	mg/kg	08.23.18 21.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	08.23.18 21.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	08.23.18 21.35	
o-Terphenyl	84-15-1	94	%	70-135	08.23.18 21.35	

Certificate of Analytical Results 596598

COG Operating LLC, Artesia, NM

Osprey 20 Com 3H (8/10/18

Sample Id: **AH-5** Matrix: Soil Date Received:08.22.18 09.34

Lab Sample Id: 596598-008 Date Collected: 08.21.18 00.00

Analytical Method: BTEX by EPA 8021B Prep Method: SW5030B

Tech: ALJ % Moisture:

Analyst: ALJ Date Prep: 08.28.18 08.00 Basis: Wet Weight

Seq Number: 3061437

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.28.18 17.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.28.18 17.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.28.18 17.23	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.28.18 17.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.28.18 17.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.28.18 17.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.28.18 17.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	08.28.18 17.23	
4-Bromofluorobenzene	460-00-4	123	%	70-130	08.28.18 17.23	

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP 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

QC Summary 596598

COG Operating LLC

Osprey 20 Com 3H (8/10/18

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3061247 — Matrix: Solid — Date Prep: 08.24.18
MB Sample Id: 7661148-1-BLK — LCS Sample Id: 7661148-1-BKS — LCSD Sample Id: 7661148-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	243	97	247	99	90-110	2	20	mg/kg	08.24.18 18:57	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3061247 — Matrix: Soil — Date Prep: 08.24.18
Parent Sample Id: 596508-002 — MS Sample Id: 596508-002 S — MSD Sample Id: 596508-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	246	98	245	98	90-110	0	20	mg/kg	08.24.18 19:14	

Analytical Method: Chloride by EPA 300 — Prep Method: E300P
Seq Number: 3061247 — Matrix: Soil — Date Prep: 08.24.18
Parent Sample Id: 596508-003 — MS Sample Id: 596508-003 S — MSD Sample Id: 596508-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	244	98	244	98	90-110	0	20	mg/kg	08.24.18 20:30	

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061132 — Matrix: Solid — Date Prep: 08.23.18
MB Sample Id: 7661027-1-BLK — LCS Sample Id: 7661027-1-BKS — LCSD Sample Id: 7661027-1-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 (GRO)	<15.0	1000	967	97	945	95	70-135	2	20	mg/kg	08.23.18 18:59	
Diesel Range Organics (DRO)	<15.0	1000	1000	100	970	97	70-135	3	20	mg/kg	08.23.18 18:59	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		119		116		70-135	%	08.23.18 18:59
o-Terphenyl	99		99		94		70-135	%	08.23.18 18:59

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 596598

COG Operating LLC

Osprey 20 Com 3H (8/10/18

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061546 — Matrix: Solid — Date Prep: 08.28.18
MB Sample Id: 7661323-1-BLK — LCS Sample Id: 7661323-1-BKS — LCSD Sample Id: 7661323-1-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 (GRO)	<15.0	1000	1050	105	923	92	70-135	13	20	mg/kg	08.28.18 14:38	
Diesel Range Organics (DRO)	<15.0	1000	1110	111	962	96	70-135	14	20	mg/kg	08.28.18 14:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	95		130		117		70-135	%	08.28.18 14:38
o-Terphenyl	96		122		98		70-135	%	08.28.18 14:38

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061132 — Matrix: Soil — Date Prep: 08.23.18
Parent Sample Id: 596598-001 — MS Sample Id: 596598-001 S — MSD Sample Id: 596598-001 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 (GRO)	27.6	1000	920	89	938	91	70-135	2	20	mg/kg	08.23.18 19:57	
Diesel Range Organics (DRO)	233	1000	1120	89	1140	91	70-135	2	20	mg/kg	08.23.18 19:57	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	121		123		70-135	%	08.23.18 19:57
o-Terphenyl	106		106		70-135	%	08.23.18 19:57

Analytical Method: TPH By SW8015 Mod — Prep Method: TX1005P
Seq Number: 3061546 — Matrix: Soil — Date Prep: 08.28.18
Parent Sample Id: 597133-001 — MS Sample Id: 597133-001 S — MSD Sample Id: 597133-001 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 (GRO)	<15.0	997	880	88	885	89	70-135	1	20	mg/kg	08.28.18 15:38	
Diesel Range Organics (DRO)	<15.0	997	902	90	906	91	70-135	0	20	mg/kg	08.28.18 15:38	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		112		70-135	%	08.28.18 15:38
o-Terphenyl	99		94		70-135	%	08.28.18 15:38

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

QC Summary 596598

COG Operating LLC

Osprey 20 Com 3H (8/10/18

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3061437 — Matrix: Solid — Date Prep: 08.28.18
MB Sample Id: 7661266-1-BLK — LCS Sample Id: 7661266-1-BKS — LCSD Sample Id: 7661266-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00202	0.101	0.103	102	0.0983	98	70-130	5	35	mg/kg	08.28.18 08:45	
Toluene	<0.00202	0.101	0.0972	96	0.0929	93	70-130	5	35	mg/kg	08.28.18 08:45	
Ethylbenzene	<0.00202	0.101	0.111	110	0.105	105	70-130	6	35	mg/kg	08.28.18 08:45	
m,p-Xylenes	<0.00403	0.202	0.214	106	0.203	101	70-130	5	35	mg/kg	08.28.18 08:45	
o-Xylene	<0.00202	0.101	0.0985	98	0.0938	94	70-130	5	35	mg/kg	08.28.18 08:45	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		93		94		70-130	%	08.28.18 08:45
4-Bromofluorobenzene	94		93		92		70-130	%	08.28.18 08:45

Analytical Method: BTEX by EPA 8021B — Prep Method: SW5030B
Seq Number: 3061437 — Matrix: Soil — Date Prep: 08.28.18
Parent Sample Id: 596789-001 — MS Sample Id: 596789-001 S — MSD Sample Id: 596789-001 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	0.0998	0.0530	53	0.0585	59	70-130	10	35	mg/kg	08.28.18 09:26	X
Toluene	<0.00200	0.0998	0.0511	51	0.0558	56	70-130	9	35	mg/kg	08.28.18 09:26	X
Ethylbenzene	<0.00200	0.0998	0.0580	58	0.0633	63	70-130	9	35	mg/kg	08.28.18 09:26	X
m,p-Xylenes	<0.00399	0.200	0.112	56	0.122	61	70-130	9	35	mg/kg	08.28.18 09:26	X
o-Xylene	<0.00200	0.0998	0.0516	52	0.0571	57	70-130	10	35	mg/kg	08.28.18 09:26	X

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		90		70-130	%	08.28.18 09:26
4-Bromofluorobenzene	90		90		70-130	%	08.28.18 09:26

MS/MSD Percent Recovery — [D] = 100*(C-A) / B — LCS = Laboratory Control Sample — MS = Matrix Spike
Relative Percent Difference — RPD = 200* | (C-E) / (C+E) | — A = Parent Result — B = Spike Added
LCS/LCSD Recovery — [D] = 100 * (C) / [B] — C = MS/LCS Result — D = MSD/LCSD % Rec
Log Difference — Log Diff. = Log(Sample Duplicate) - Log(Original Sample) — E = MSD/LCSD Result

Page 43 of 45

Analysis Request of Chain of Custody Record

596598

CONCHO

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

Client Name: COG	**Site Manager:** Ike Tavarez
Project Name: Osprey 20 St Com 3H (8/10/18)	
Project Location: (county, state) Lea County, New Mexico	**Project #:**
Invoice to:	
Receiving Laboratory: Xenco	**Sampler Signature:** Ike Tavarez

Comments:

Run Deeper samples if TPH exceeds 100 mg/kg. Run deeper samples of chlorides exceed 600 mg/kg

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING 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)
	AH-1	8/21/2018			X				X			1	
	AH-1	8/21/2018			X				X			1	
	AH-2	8/21/2018			X				X			1	
	AH-2	8/21/2018			X				X			1	
	AH-3	8/21/2018			X				X			1	
	AH-3	8/21/2018			X				X			1	
	AH-4	8/21/2018			X				X			1	
	AH-5	8/21/2018			X				X			1	

ANALYSIS REQUEST
(Circle or Specify Method No.)

BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
X		X												X							
																					X
X		X												X							
																					X
X		X												X							
																					X
X		X												X							
X		X												X							

Relinquished by: Date: 8/22/18 Time: 9:34 m — Received by: Date: 8/20/18 Time: 0934

Relinquished by: Date: Time: — Received by: Date: Time:

Relinquished by: Date: Time: — Received by: Date: Time:

LAB USE ONLY

Sample Temperature 2.5/0.0 RE

REMARKS:

☐ 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

Received by OCD: 12/1/2022 9:43:15 AM
Released to Imaging: 12/1/2022 9:54:25 AM
Page 21 of 22
Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 08/22/2018 09:34:00 AM

Work Order #: 596598

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

Temperature Measuring device used : R8

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.5	
#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**	TPH 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: 08/22/2018
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 08/22/2018
Jessica Kramer

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 162944

CONDITIONS

Operator:	OGRID:
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	229137
	Action Number: 162944
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	Confirmation and side wall samples will need to be collected from the excavation.	12/1/2022
bhall	1RP-5158 closed. Please refer to incident #nOY1823239315 for all future communication.	12/1/2022
bhall	Submit a complete report through the OCD Permitting website by 3/3/2023.	12/1/2022