CONCHO

June 6, 2019

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

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

Re: Closure Report
Diamondback 22 State Com 5H (9/19/18)
API #: 30-015-42432
RP#: 2RP-4985
GPS: 32.03482 -104.06966
Unit Letter A, Section 22, Township 25 South, Range 28 East
Eddy County, New Mexico

Mr. Bratcher and Mr. Mann,

COG Operating, LLC (COG) is pleased to submit the following closure report in response to a release that occurred at the Diamondback 22 State Com 5H located in Unit Letter A, Section 22 Township 25 South and Range 28 East in Eddy County, New Mexico.

BACKGROUND

The release was discovered on September 19, 2018 and a C-141 initial report was submitted to the New Mexico Oil Conservation Division (NMOCD) and New Mexico State Land Office (NMSLO). The release was caused by a 3rd party driver that did not secure the valve load line. Approximately fifteen (15) barrels of produced water were released. A vacuum truck recovered ten (10) barrels of fluid. All of the fluid remained on the well pad.

GROUNDWATER AND REGULATORY FRAMEWORK

According to the New Mexico Office of the State Engineer (NMOSE), a water well was reported in Section 22 with a depth of 120 feet below surface. In addition, the USGS showed a depth to water <50 feet below surface. In addition, the Chevron Trend Map show depth to groundwater in the area <50 feet below surface for the area. The water well information is shown in Appendix B.

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 area is high 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 groundwater data and the site characterization evaluation data is summarized in Appendix B. The delineation and closure criteria are listed below:

General Site Characterization and Groundwater:

Site Characterization	Average Groundwater Depth (ft.)
Karst Area	<50 feet

Delineation and Closure Criteria:

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

PROPOSED WORK PLAN

- The impacted areas were excavated to depths from 0.5-feet to 2-feet BGS utilizing laboratory analysis to guide the extent of the excavation.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- Confirmation soil samples (5-point composite) were collected from the bottom and sidewalls every 200 square feet per the approved sampling plan.
- Upon receipt of acceptable analytical results the excavation was backfilled with clean “like” material and contoured to match the surrounding location.

SITE RECLAMATION AND RESTORATION

The spill remained on the pad thus no reclamation activities will be required at the site.

CLOSURE REQUEST

COG Operating, LLC respectfully requests that the New Mexico Oil Conservation Division and the New Mexico State Land Office grant closure approval for the Diamondback 22 State Com #005H incident that occurred on September 19, 2018.

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

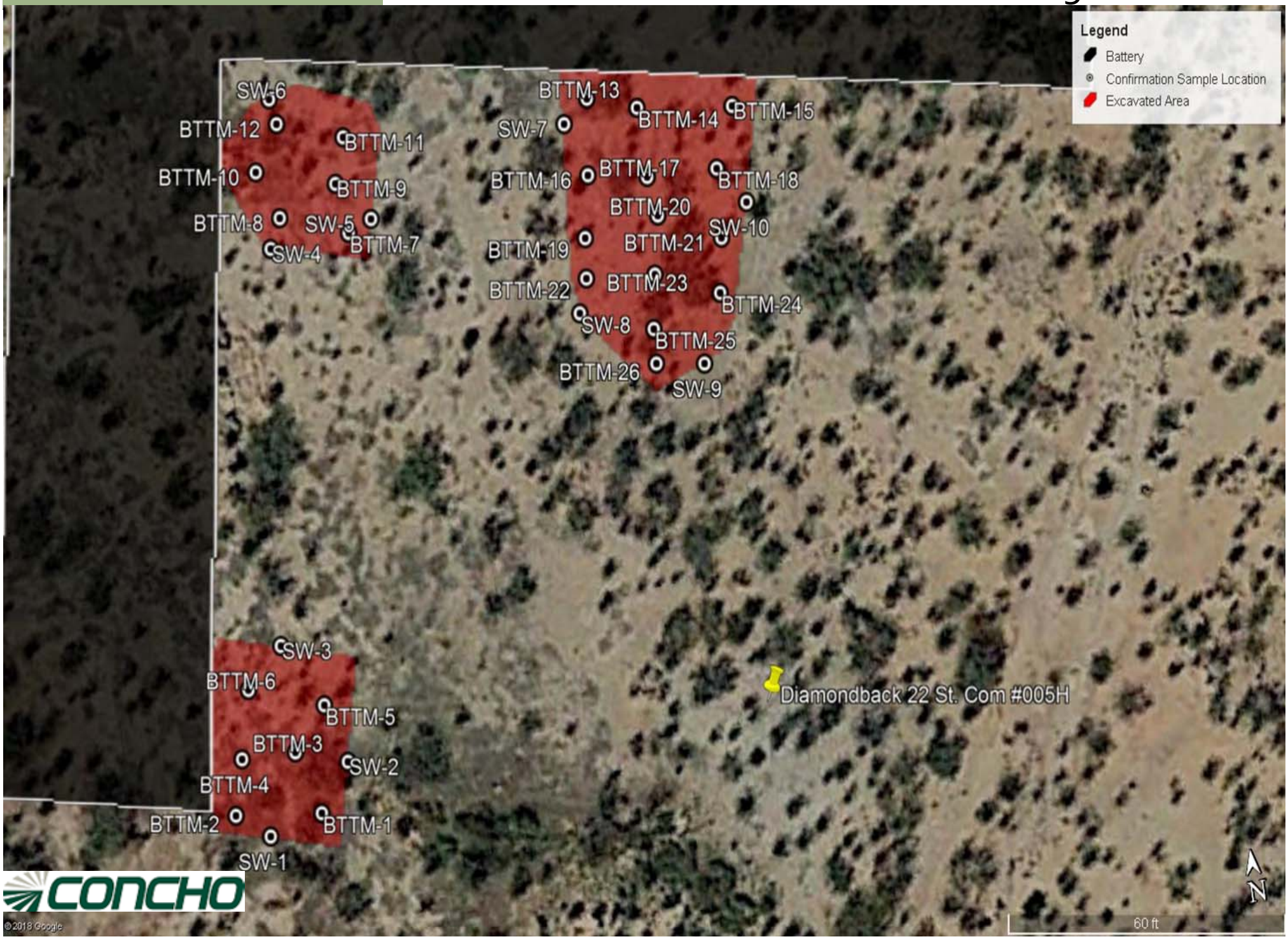
Sincerely,

Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

FIGURES

September 19, 2018

Diamondback 22 St. Com #005H



CONCHO

TABLES

Table 1
COG Operating LLC.
Diamondback 22 State Com #005H
Eddy County, New Mexico

Sample ID	Sample Depth (ft)	Sample Date	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	*Total*			
NMOCD RRAL Limits (mg/kg)					-	-	-	100	10	50	600
BTTM-1	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	109.0
BTTM-2	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	73.7
BTTM-3	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	296.0
BTTM-4	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	262.0
BTTM-5	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	52.4
BTTM-6	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	82.6
BTTM-7	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	60.7
BTTM-8	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	82.1
BTTM-9	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	495.0
BTTM-10	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	171.0
BTTM-11	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	261.0
BTTM-12	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	101.0
BTTM-13	0.5	4/24/2019		X	<15.0	39.9	<15.0	39.9	<0.002	<0.002	2,480.0
BTTM-14	0.5	4/24/2019		X	<15.0	<15.0	<15.0	0.0	<0.002	<0.002	942.0
BTTM-15	0.5	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	473.0
BTTM-16	0.5	4/24/2019	X			22.8	<15.0	22.8	<0.002	<0.002	271.0
BTTM-17	0.5	4/24/2019		X	<15.0	<15.0	<15.0	0.0	<0.002	<0.002	809.0
BTTM-18	0.5	4/24/2019		X		29.5	<15.0	29.5	<0.002	<0.002	6,400.0
BTTM-19	0.5	4/24/2019		X		15.3	<15.0	15.3	<0.002	<0.002	1,770.0
BTTM-20	0.5	4/24/2019		X	<15.0	<15.0	<15.0	0.0	<0.002	<0.002	1,190.0
BTTM-21	0.5	4/24/2019		X		33.7	<15.0	33.7	<0.002	<0.002	2,280.0
BTTM-22	0.5	4/24/2019		X		111	16.4	127.4	<0.002	<0.002	2,280.0
BTTM-23	0.5	4/24/2019		X		95.3	<15.0	95.3	<0.002	<0.002	2,670.0
BTTM-24	0.5	4/24/2019	X			28.8	<15.0	28.8	<0.002	<0.002	470.0
BTTM-25	0.5	4/24/2019	X			34.1	<15.0	34.1	<0.002	<0.002	204.0
BTTM-26	0.5	4/24/2019	X			23.1	<15.0	23.1	<0.002	<0.002	269.0
SW-1	N/A	4/24/2019		X	<15.0	<15.0	<15.0	0.0	<0.002	<0.002	863.0
SW-2	N/A	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	245.0
SW-3	N/A	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	205.0
SW-4	N/A	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	97.3
SW-5	N/A	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	440.0
SW-6	N/A	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	53.4
SW-7	N/A	4/24/2019		X		28.4	<15.0	28.4	<0.002	<0.002	781.0
SW-8	N/A	4/24/2019	X			21.3	<15.0	21.3	<0.002	<0.002	490.0
SW-9	N/A	4/24/2019		X		17	<15.0	17.0	<0.002	<0.002	2,230.0
SW-10	N/A	4/24/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	174.0
SW-1	N/A	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	223.0
SW-7	N/A	5/15/2019		X	<15.0	<15.0	<15.0	0.0	<0.002	<0.002	761.0
SW-9	N/A	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	320.0
BTTM-13	1	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	562.0
BTTM-14	1	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	116.0
BTTM-17	1	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	116.0

Table 1
COG Operating LLC.
Diamondback 22 State Com #005H
Eddy County, New Mexico

Sample ID	Sample Depth (ft)	Sample Date	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	*Total*			
BTTM-18	1	5/15/2019		X	<15.0	<15.0	<15.0	0.0	<0.002	<0.002	972.0
BTTM-19	1	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	350.0
BTTM-20	1	5/15/2019		X	<15.0	<15.0	<15.0	0.0	<0.002	<0.002	6,840.0
BTTM-21	1	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	262.0
BTTM-22	1	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	174.0
BTTM-23	1	5/15/2019	X		<15.0	<15.0	<15.0	0.0	<0.002	<0.002	328.0
BTTM-18	2	5/24/2019	X		#	#	#	#	#	#	120.0
BTTM-20	2	5/24/2019	X		#	#	#	#	#	#	274.0
SW-7	N/A	5/24/2019	X		#	#	#	#	#	#	97.3

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 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	COG Operating, LLC	OGRID	229137
Contact Name	Jennifer Knowlton	Contact Telephone	(432) 683-7443
Contact email	jknowlton@concho.com	Incident # *(assigned by OCD)*	
Contact mailing address	600 West Illinois Avenue, Midland, Texas 79701		

Location of Release Source

Latitude 32.03482 Longitude -104.06966
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Diamondback 22 St. Com #005H	Site Type	Tank Battery
Date Release Discovered	9/19/2019	API# *(if applicable)*	30-015-42432

Unit Letter	Section	Township	Range	County
A	22	26S	28E	Eddy

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) 15	Volume Recovered (bbls) 10
	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

The release was caused by a 3rd party truck driver not properly securing the valve on the load line. The release was on location. A vacuum truck was dispatched to remove all freestanding fluids. Concho will evaluate the site to determine if we may commence remediation immediately or 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.

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: Sheldon L. Hitchcock Title: HSE Coordinator

Signature: Sheldon Hitchcock Date: 6/6/2019

email: slhitchcock@concho.com Telephone: 575-746-2010

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?	>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
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	

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: Sheldon L. Hitchcock Title: HSE Coordinator

Signature: Sheldon Hitch Date: 6/6/2019

email: slhitchcock@concho.com Telephone: 575-746-2010

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
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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: Sheldon L. Hitchcock Title: HSE Coordinator

Signature: Sheldon Hitchcock Date: 6/6/2019

email: slhitchcock@concho.com Telephone: 575-746-2010

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

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: Sheldon L. Hitchcock Title: HSE Coordinator

Signature: Sheldon Hitchcock Date: 6/6/2019

email: slhitchcock@concho.com Telephone: 575-746-2010

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

CONCHO

ArcGIS Web Map

Legend

OSE PODs

- Active
- Pending

Flood Hazard Zones

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Mine Workings

Karst Occurance Areas

- High
- Low
- Medium

Diamondback 22 St. Com #005h

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	Tws	Rng	X	Y		Depth Well	Depth Water	Water Column
C 01668		CUB	ED		3	3	12	26S	28E	589957	3546554*		250	100	150
C 02160		CUB	ED	4	1	2	14	26S	28E	589243	3546044*		300	120	180
C 02160 S		CUB	ED	1	1	2	14	26S	28E	589043	3546244*		300	120	180
C 02160 S2		CUB	ED	1	1	2	14	26S	28E	589043	3546244*		300	120	180
C 02160 S3		CUB	ED	2	2	1	14	26S	28E	588834	3546241*		300	120	180
C 02160 S4		CUB	ED	2	2	1	14	26S	28E	588834	3546241*		300	120	180
C 02160 S5		CUB	ED	1	1	1	14	26S	28E	588225	3546237*		300	120	180
C 02160 S6		CUB	ED	3	3	1	14	26S	28E	588232	3545635*		300	120	180
C 02160 S7		CUB	ED	3	3	1	22	26S	28E	586638	3543998*		300	120	180
C 02160 S8		CUB	ED	2	3	3	12	26S	28E	590056	3546653*		200	120	80
C 02160 S9		CUB	ED	3	3	2	02	26S	28E	589020	3548868*		300	120	180
C 02477		CUB	ED		1	1	03	26S	28E	586687	3549347*		150		
C 02478		CUB	ED		2	1	05	26S	28E	583848	3549325*		100		
C 02479		CUB	ED		4	4	10	26S	28E	587909	3546534*		200		
C 02480		CUB	ED		4	4	10	26S	28E	587909	3546534*		150		
C 02481		CUB	ED		1	1	14	26S	28E	588326	3546138*		200		
C 02894		C	ED	2	2	3	12	26S	28E	590458	3547061*		240		
C 02924		C	ED	1	3	2	11	26S	28E	589032	3547451*				
C 04022 POD1		CUB	ED	4	4	2	15	26S	28E	588082	3545647		220	175	45
C 04022 POD2		CUB	ED	2	2	2	27	26S	28E	588106	3543082		250	145	105

Average Depth to Water: **124 feet**

Minimum Depth: **100 feet**

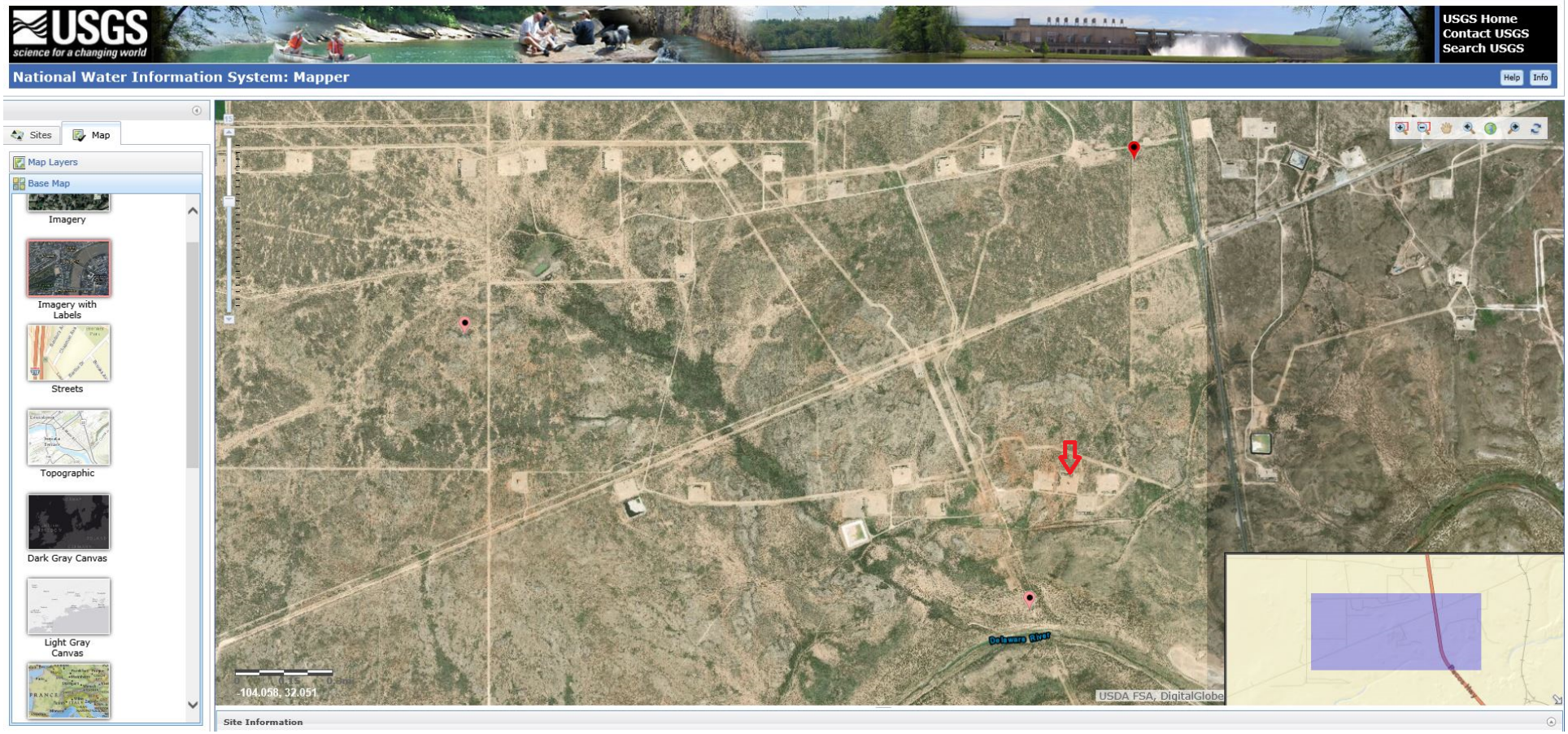
Maximum Depth: **175 feet**

Record Count: 20

PLSS Search:

Township: 26S **Range:** 28E

***UTM location was derived from PLSS - see Help**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Info
Sites
Map
Map Layers
Base Map
Imagery
Imagery with Labels
Streets
Topographic
Dark Gray Canvas
Light Gray Canvas
-104.058, 32.051
Delaware River
USDA FSA, DigitalGlobe
Site Information

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Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320145104041701

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

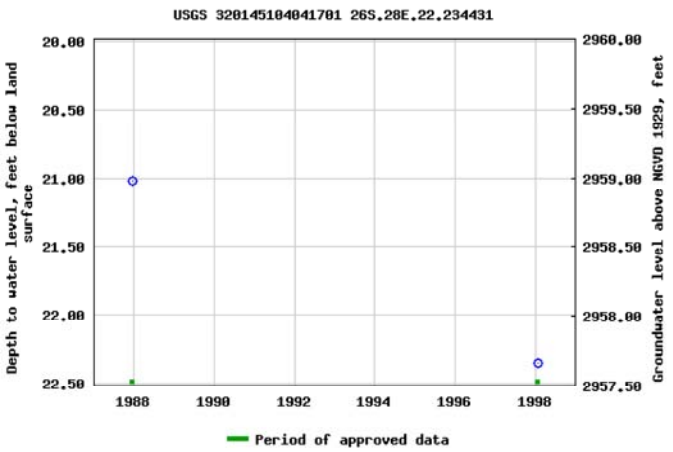
USGS 320145104041701 26S.28E.22.234431

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

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°01'45", Longitude 104°04'17" NAD27
Land-surface elevation 2,980 feet above NGVD29
The depth of the well is 23.00 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
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Click to hideNews Bulletins

- Please see news on new formats
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320230104060601

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

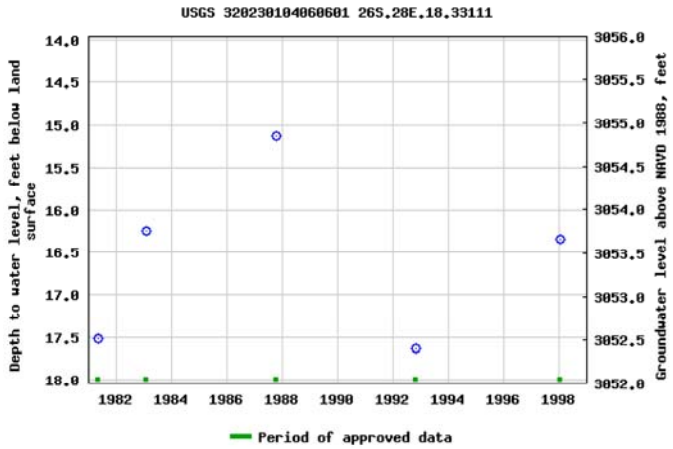
USGS 320230104060601 26S.28E.18.33111

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

Eddy County, New Mexico
Hydrologic Unit Code --
Latitude 32°02'30", Longitude 104°06'06" NAD27
Land-surface elevation 3,070 feet above NAVD88
This well is completed in the Castile Gypsum (312CSTL) 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
Subscribe for system changes
News

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- Please see news on new formats
- Full News

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320309104020401

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

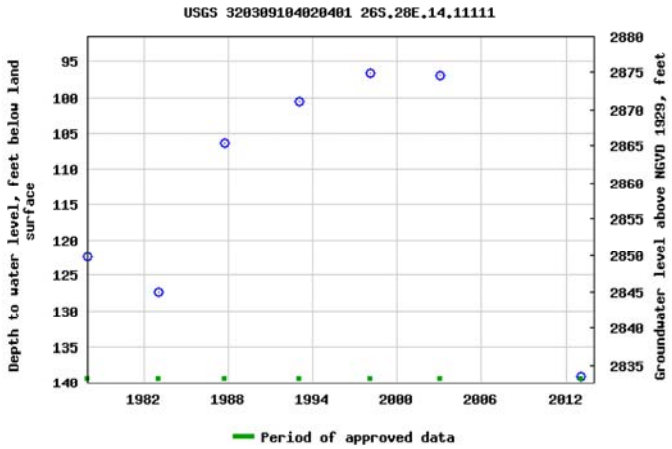
USGS 320309104020401 26S.28E.14.11111

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

Eddy County, New Mexico
Hydrologic Unit Code 13060011
Latitude 32°02'59.0", Longitude 104°03'58.7" NAD83
Land-surface elevation 2,972.00 feet above NGVD29
This well is completed in the Rustler Formation (312RSLR) 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
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APPENDIX C

Certificate of Analysis Summary 622392

COG Operating LLC, Artesia, NM

Project Name: diamondback 22 St. Com #5H

Project Id:
Contact: Sheldon Hitchcock
Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 01-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622392-001		622392-002		622392-003		622392-004		622392-005		622392-006	
	Field Id:	Bttm-1		Bttm-2		Bttm-3		Bttm-4		Bttm-5		Bttm-6	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-24-19 13:00		Apr-24-19 13:02		Apr-24-19 13:04		Apr-24-19 13:06		Apr-24-19 13:08		Apr-24-19 13:10	
BTEX by EPA 8021B	***Extracted:***	Apr-29-19 16:00		Apr-29-19 16:00		Apr-29-19 16:00		Apr-29-19 16:00		Apr-29-19 16:00		Apr-29-19 16:00	
	Analyzed:	Apr-30-19 02:58		Apr-30-19 04:31		Apr-30-19 04:51		Apr-30-19 05:10		Apr-30-19 05:29		Apr-30-19 05:48	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201
Toluene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201
Ethylbenzene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201
m,p-Xylenes		<0.00402	0.00402	<0.00398	0.00398	<0.00401	0.00401	<0.00398	0.00398	<0.00397	0.00397	<0.00402	0.00402
o-Xylene		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201
Total Xylenes		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201
Total BTEX		<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00199	0.00199	<0.00198	0.00198	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Apr-26-19 17:00		Apr-26-19 17:00		Apr-26-19 17:00		Apr-26-19 17:00		Apr-26-19 17:00		Apr-26-19 17:30	
	Analyzed:	Apr-27-19 01:02		Apr-27-19 01:09		Apr-27-19 01:16		Apr-27-19 01:24		Apr-27-19 01:31		Apr-26-19 19:36	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		109	25.2	73.7	50.3	296	25.2	262	49.5	52.4	49.8	82.6	50.2
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00	
	Analyzed:	Apr-28-19 14:58		Apr-28-19 16:01		Apr-28-19 16:22		Apr-28-19 16:43		Apr-28-19 17:04		Apr-28-19 17:25	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics		<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622392

COG Operating LLC, Artesia, NM

Project Name: diamondback 22 St. Com #5H

Project Id:
Contact: Sheldon Hitchcock
Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 01-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622392-007		622392-008		622392-009		622392-010		622392-011		622392-012	
	Field Id:	Bttm-7		Bttm-8		Bttm-9		Bttm-10		Bttm-11		Bttm-12	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-24-19 13:12		Apr-24-19 13:14		Apr-24-19 13:16		Apr-24-19 13:18		Apr-24-19 13:20		Apr-24-19 13:22	
BTEX by EPA 8021B	***Extracted:***	Apr-29-19 16:00		Apr-29-19 16:00		Apr-29-19 16:00		Apr-29-19 16:00		Apr-29-19 16:00		Apr-30-19 08:45	
	Analyzed:	Apr-30-19 06:07		Apr-30-19 06:26		Apr-30-19 06:45		Apr-30-19 07:04		Apr-30-19 07:23		Apr-30-19 15:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Toluene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Ethylbenzene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
m,p-Xylenes		<0.00398	0.00398	<0.00400	0.00400	<0.00403	0.00403	<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402
o-Xylene		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Total Xylenes		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Total BTEX		<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201
Chloride by EPA 300	***Extracted:***	Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30	
	Analyzed:	Apr-26-19 19:42		Apr-26-19 19:48		Apr-26-19 19:54		Apr-26-19 20:12		Apr-26-19 20:18		Apr-26-19 20:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		60.7	50.3	82.1	50.1	495	50.2	171	49.6	261	50.3	101	50.3
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00	
	Analyzed:	Apr-28-19 17:46		Apr-28-19 18:07		Apr-28-19 18:28		Apr-28-19 18:49		Apr-28-19 19:52		Apr-28-19 20:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	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		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<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		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622392

COG Operating LLC, Artesia, NM

Project Name: diamondback 22 St. Com #5H

Project Id:
Contact: Sheldon Hitchcock
Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 01-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622392-013		622392-014		622392-015		622392-016		622392-017		622392-018	
	Field Id:	Bttm-13		Bttm-14		Bttm-15		Bttm-16		Bttm-17		Bttm-18	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-24-19 13:24		Apr-24-19 13:26		Apr-24-19 13:28		Apr-24-19 13:30		Apr-24-19 13:32		Apr-24-19 13:34	
BTEX by EPA 8021B	***Extracted:***	Apr-30-19 08:45		Apr-30-19 08:45		Apr-30-19 08:45		Apr-30-19 08:45		Apr-30-19 08:45		Apr-30-19 08:45	
	Analyzed:	Apr-30-19 15:30		Apr-30-19 16:45		Apr-30-19 17:04		Apr-30-19 17:23		Apr-30-19 17:43		Apr-30-19 18:02	
	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	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00399	0.00399	<0.00402	0.00402	<0.00401	0.00401	<0.00398	0.00398	<0.00400	0.00400	<0.00403	0.00403
o-Xylene		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30	
	Analyzed:	Apr-26-19 20:30		Apr-26-19 20:36		Apr-26-19 21:00		Apr-26-19 21:05		Apr-26-19 21:23		Apr-26-19 21:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2480	50.0	942	50.1	473	50.0	217	49.5	809	49.5	6400	100
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00	
	Analyzed:	Apr-28-19 20:35		Apr-28-19 20:56		Apr-28-19 21:17		Apr-28-19 21:38		Apr-28-19 21:59		Apr-28-19 22:19	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics		39.9	15.0	<15.0	15.0	<14.9	14.9	22.8	14.9	<15.0	15.0	29.5	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		39.9	15.0	<15.0	15.0	<14.9	14.9	22.8	14.9	<15.0	15.0	29.5	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622392

COG Operating LLC, Artesia, NM

Project Name: diamondback 22 St. Com #5H

Project Id:
Contact: Sheldon Hitchcock
Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 01-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622392-019		622392-020		622392-021		622392-022		622392-023		622392-024	
	Field Id:	Bttm-19		Bttm-20		Bttm-21		Bttm-22		Bttm-23		Bttm-24	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-24-19 13:36		Apr-24-19 13:38		Apr-24-19 13:40		Apr-24-19 13:42		Apr-24-19 13:44		Apr-24-19 13:46	
BTEX by EPA 8021B	***Extracted:***	Apr-30-19 08:45		Apr-30-19 08:45		Apr-30-19 08:45		Apr-30-19 08:45		Apr-30-19 08:45		Apr-30-19 16:30	
	Analyzed:	Apr-30-19 18:21		Apr-30-19 18:41		Apr-30-19 19:00		Apr-30-19 19:19		Apr-30-19 19:38		Apr-30-19 22:28	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Toluene		<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Ethylbenzene		<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
m,p-Xylenes		<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398	<0.00400	0.00400	<0.00399	0.00399	<0.00403	0.00403
o-Xylene		<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total Xylenes		<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Total BTEX		<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202
Chloride by EPA 300	***Extracted:***	Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 17:30		Apr-26-19 18:00	
	Analyzed:	Apr-26-19 21:35		Apr-26-19 21:41		Apr-26-19 21:47		Apr-26-19 21:53		Apr-26-19 21:59		Apr-27-19 18:56	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		1770	50.4	1190	50.4	2280	50.4	2300	50.0	2670	50.0	470	49.6
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00	
	Analyzed:	Apr-28-19 22:40		Apr-28-19 23:01		Apr-29-19 00:44		Apr-29-19 01:45		Apr-29-19 02:05		Apr-29-19 02:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	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		15.3	15.0	<15.0	15.0	33.7	15.0	111	15.0	95.3	15.0	28.8	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	16.4	15.0	<15.0	15.0	<15.0	15.0
Total TPH		15.3	15.0	<15.0	15.0	33.7	15.0	127	15.0	95.3	15.0	28.8	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622392

COG Operating LLC, Artesia, NM

Project Name: diamondback 22 St. Com #5H

Project Id:

Contact: Sheldon Hitchcock

Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am

Report Date: 01-MAY-19

Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622392-025		622392-026		622392-027		622392-028		622392-029		622392-030	
	Field Id:	Bttm-25		Bttm-26		SW-1		SW-2		SW-3		SW-4	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-24-19 13:48		Apr-24-19 13:50		Apr-24-19 13:52		Apr-24-19 13:54		Apr-24-19 13:56		Apr-24-19 13:58	
BTEX by EPA 8021B	***Extracted:***	Apr-30-19 16:30		Apr-30-19 16:30		Apr-30-19 16:30		Apr-30-19 16:30		Apr-30-19 16:30		Apr-30-19 16:30	
	Analyzed:	Apr-30-19 22:47		Apr-30-19 23:06		Apr-30-19 23:25		Apr-30-19 23:45		May-01-19 00:04		May-01-19 00:23	
	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	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
m,p-Xylenes		<0.00401	0.00401	<0.00400	0.00400	<0.00400	0.00400	<0.00399	0.00399	<0.00403	0.00403	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00200	0.00200	<0.00202	0.00202	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Apr-26-19 18:00		Apr-26-19 18:00		Apr-26-19 18:00		Apr-26-19 18:00		Apr-26-19 18:00		Apr-26-19 18:00	
	Analyzed:	Apr-27-19 19:03		Apr-27-19 19:10		Apr-27-19 19:18		Apr-27-19 19:39		Apr-27-19 19:47		Apr-27-19 19:54	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		204	49.6	269	49.6	863	49.6	245	50.2	205	50.2	97.3	49.8
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00	
	Analyzed:	Apr-29-19 02:46		Apr-29-19 03:06		Apr-29-19 03:26		Apr-29-19 03:46		Apr-29-19 04:06		Apr-29-19 04:26	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Diesel Range Organics		34.1	15.0	23.1	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0
Total TPH		34.1	15.0	23.1	15.0	<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 622392

COG Operating LLC, Artesia, NM

Project Name: diamondback 22 St. Com #5H

Project Id:
Contact: Sheldon Hitchcock
Project Location:

Date Received in Lab: Fri Apr-26-19 11:30 am
Report Date: 01-MAY-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	622392-031		622392-032		622392-033		622392-034		622392-035		622392-036	
	Field Id:	SW-5		SW-6		SW-7		SW-8		SW-9		SW-10	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Apr-24-19 14:00		Apr-24-19 14:02		Apr-24-19 14:04		Apr-24-19 14:06		Apr-24-19 14:08		Apr-24-19 14:10	
BTEX by EPA 8021B	***Extracted:***	Apr-30-19 16:30		Apr-30-19 16:30		Apr-30-19 16:30		Apr-30-19 16:30		Apr-30-19 16:30		Apr-30-19 16:30	
	Analyzed:	May-01-19 00:42		May-01-19 01:01		May-01-19 01:20		May-01-19 02:34		May-01-19 02:53		May-01-19 03:12	
	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	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Toluene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Ethylbenzene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
m,p-Xylenes		<0.00401	0.00401	<0.00398	0.00398	<0.00399	0.00399	<0.00402	0.00402	<0.00401	0.00401	<0.00398	0.00398
o-Xylene		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Total Xylenes		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Total BTEX		<0.00200	0.00200	<0.00199	0.00199	<0.00200	0.00200	<0.00201	0.00201	<0.00200	0.00200	<0.00199	0.00199
Chloride by EPA 300	***Extracted:***	Apr-26-19 18:00		Apr-26-19 18:00		Apr-26-19 18:00		Apr-26-19 18:00		Apr-26-19 18:00		Apr-26-19 18:00	
	Analyzed:	Apr-27-19 20:01		Apr-27-19 20:08		Apr-27-19 20:37		Apr-27-19 20:45		Apr-27-19 21:06		Apr-27-19 21:14	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		440	49.7	53.4	49.6	781	50.0	490	49.6	2230	49.5	174	50.4
TPH By SW8015 Mod	***Extracted:***	Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00		Apr-27-19 14:00	
	Analyzed:	Apr-29-19 05:26		Apr-29-19 05:46		Apr-29-19 06:06		Apr-29-19 06:26		Apr-29-19 06:46		Apr-29-19 07:07	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Diesel Range Organics		<15.0	15.0	<15.0	15.0	28.4	15.0	21.3	15.0	17.0	14.9	<14.9	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	28.4	15.0	21.3	15.0	17.0	14.9	<14.9	14.9

Jessica Kramer
Project Assistant

Analytical Report 622392

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

diamondback 22 St. Com #5H

01-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), 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 (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
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), North Carolina (483)
Xenco-Lakeland: Florida (E84098)

01-MAY-19

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

Reference: XENCO Report No(s): **622392**
diamondback 22 St. Com #5H
Project Address:

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 622392. 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. 622392 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

Sample Cross Reference 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bttm-1	S	04-24-19 13:00		622392-001
Bttm-2	S	04-24-19 13:02		622392-002
Bttm-3	S	04-24-19 13:04		622392-003
Bttm-4	S	04-24-19 13:06		622392-004
Bttm-5	S	04-24-19 13:08		622392-005
Bttm-6	S	04-24-19 13:10		622392-006
Bttm-7	S	04-24-19 13:12		622392-007
Bttm-8	S	04-24-19 13:14		622392-008
Bttm-9	S	04-24-19 13:16		622392-009
Bttm-10	S	04-24-19 13:18		622392-010
Bttm-11	S	04-24-19 13:20		622392-011
Bttm-12	S	04-24-19 13:22		622392-012
Bttm-13	S	04-24-19 13:24		622392-013
Bttm-14	S	04-24-19 13:26		622392-014
Bttm-15	S	04-24-19 13:28		622392-015
Bttm-16	S	04-24-19 13:30		622392-016
Bttm-17	S	04-24-19 13:32		622392-017
Bttm-18	S	04-24-19 13:34		622392-018
Bttm-19	S	04-24-19 13:36		622392-019
Bttm-20	S	04-24-19 13:38		622392-020
Bttm-21	S	04-24-19 13:40		622392-021
Bttm-22	S	04-24-19 13:42		622392-022
Bttm-23	S	04-24-19 13:44		622392-023
Bttm-24	S	04-24-19 13:46		622392-024
Bttm-25	S	04-24-19 13:48		622392-025
Bttm-26	S	04-24-19 13:50		622392-026
SW-1	S	04-24-19 13:52		622392-027
SW-2	S	04-24-19 13:54		622392-028
SW-3	S	04-24-19 13:56		622392-029
SW-4	S	04-24-19 13:58		622392-030
SW-5	S	04-24-19 14:00		622392-031
SW-6	S	04-24-19 14:02		622392-032
SW-7	S	04-24-19 14:04		622392-033
SW-8	S	04-24-19 14:06		622392-034
SW-9	S	04-24-19 14:08		622392-035
SW-10	S	04-24-19 14:10		622392-036

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3087358 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3087479 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3087483 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**Bttm-1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-001	Date Collected:	04.24.19 13.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.00	Basis:	Wet Weight
Seq Number:	3087124				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**109**	25.2	mg/kg	04.27.19 01.02		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 14.58	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 14.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 14.58	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 14.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.28.19 14.58	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 14.58	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**Bttm-1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-001	Date Collected:	04.24.19 13.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.30.19 02.58	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.30.19 02.58	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.30.19 02.58	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.30.19 02.58	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.30.19 02.58	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.30.19 02.58	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.30.19 02.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.30.19 02.58	
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.30.19 02.58	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**Bttm-2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-002	Date Collected:	04.24.19 13.02		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.00	Basis:	Wet Weight
Seq Number:	3087124				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**73.7**	50.3	mg/kg	04.27.19 01.09		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	04.28.19 16.01	U	1
Diesel Range Organics	C10C28DRO	<14.9	14.9	mg/kg	04.28.19 16.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.28.19 16.01	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.28.19 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.28.19 16.01	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 16.01	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**Bttm-2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-002	Date Collected:	04.24.19 13.02		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.19 04.31	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 04.31	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 04.31	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 04.31	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 04.31	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 04.31	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 04.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.30.19 04.31	
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.30.19 04.31	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**Bttm-3**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-003	Date Collected:	04.24.19 13.04		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.00	Basis:	Wet Weight
Seq Number:	3087124				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**296**	25.2	mg/kg	04.27.19 01.16		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	04.28.19 16.22	U	1
Diesel Range Organics	C10C28DRO	<14.9	14.9	mg/kg	04.28.19 16.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.28.19 16.22	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.28.19 16.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.28.19 16.22	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 16.22	

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Sample Id:	**Bttm-3**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-003	Date Collected:	04.24.19 13.04		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 04.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 04.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 04.51	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.30.19 04.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 04.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 04.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 04.51	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.30.19 04.51	
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.30.19 04.51	

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Sample Id:	**Bttm-4**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-004	Date Collected:	04.24.19 13.06		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.00	Basis:	Wet Weight
Seq Number:	3087124				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**262**	49.5	mg/kg	04.27.19 01.24		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 16.43	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 16.43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 16.43	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 16.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.28.19 16.43	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 16.43	

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Sample Id:	**Bttm-4**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-004	Date Collected:	04.24.19 13.06		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.19 05.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 05.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 05.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 05.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 05.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 05.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 05.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.30.19 05.10	
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.30.19 05.10	

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Sample Id:	**Bttm-5**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-005	Date Collected:	04.24.19 13.08		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.00	Basis:	Wet Weight
Seq Number:	3087124				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**52.4**	49.8	mg/kg	04.27.19 01.31		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 17.04	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 17.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 17.04	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 17.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.28.19 17.04	
o-Terphenyl	84-15-1	100	%	70-135	04.28.19 17.04	

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Sample Id:	**Bttm-5**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-005	Date Collected:	04.24.19 13.08		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	04.30.19 05.29	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	04.30.19 05.29	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	04.30.19 05.29	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	04.30.19 05.29	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	04.30.19 05.29	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	04.30.19 05.29	U	1
Total BTEX		<0.00198	0.00198	mg/kg	04.30.19 05.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.30.19 05.29	
4-Bromofluorobenzene	460-00-4	108	%	70-130	04.30.19 05.29	

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Sample Id:	**Bttm-6**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-006	Date Collected:	04.24.19 13.10		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**82.6**	50.2	mg/kg	04.26.19 19.36		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 17.25	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 17.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 17.25	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 17.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.28.19 17.25	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 17.25	

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Sample Id:	**Bttm-6**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-006	Date Collected:	04.24.19 13.10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.30.19 05.48	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.30.19 05.48	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.30.19 05.48	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.30.19 05.48	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.30.19 05.48	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.30.19 05.48	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.30.19 05.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.30.19 05.48	
4-Bromofluorobenzene	460-00-4	109	%	70-130	04.30.19 05.48	

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Sample Id:	**Bttm-7**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-007	Date Collected:	04.24.19 13.12		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**60.7**	50.3	mg/kg	04.26.19 19.42		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 17.46	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 17.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 17.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 17.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.28.19 17.46	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 17.46	

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Sample Id:	**Bttm-7**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-007	Date Collected:	04.24.19 13.12		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.19 06.07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 06.07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 06.07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 06.07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 06.07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 06.07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 06.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.30.19 06.07	
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.30.19 06.07	

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Sample Id:	**Bttm-8**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-008	Date Collected:	04.24.19 13.14		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**82.1**	50.1	mg/kg	04.26.19 19.48		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 18.07	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 18.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 18.07	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 18.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.28.19 18.07	
o-Terphenyl	84-15-1	102	%	70-135	04.28.19 18.07	

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Sample Id:	**Bttm-8**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-008	Date Collected:	04.24.19 13.14		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 06.26	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 06.26	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 06.26	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.30.19 06.26	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 06.26	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 06.26	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 06.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	04.30.19 06.26	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.30.19 06.26	

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Sample Id:	**Bttm-9**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-009	Date Collected:	04.24.19 13.16		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**495**	50.2	mg/kg	04.26.19 19.54		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 18.28	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 18.28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 18.28	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 18.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.28.19 18.28	
o-Terphenyl	84-15-1	102	%	70-135	04.28.19 18.28	

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Sample Id:	**Bttm-9**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-009	Date Collected:	04.24.19 13.16		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.30.19 06.45	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.30.19 06.45	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.30.19 06.45	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.30.19 06.45	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.30.19 06.45	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.30.19 06.45	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.30.19 06.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.30.19 06.45	
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.30.19 06.45	

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Sample Id:	**Bttm-10**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-010	Date Collected:	04.24.19 13.18		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**171**	49.6	mg/kg	04.26.19 20.12		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 18.49	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 18.49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 18.49	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 18.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.28.19 18.49	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 18.49	

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COG Operating LLC, Artesia, NM

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Sample Id:	**Bttm-10**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-010	Date Collected:	04.24.19 13.18		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.19 07.04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 07.04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 07.04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 07.04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 07.04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 07.04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 07.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.30.19 07.04	
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.30.19 07.04	

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COG Operating LLC, Artesia, NM

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Sample Id:	**Bttm-11**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-011	Date Collected:	04.24.19 13.20		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**261**	50.3	mg/kg	04.26.19 20.18		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 19.52	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 19.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 19.52	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.28.19 19.52	
o-Terphenyl	84-15-1	97	%	70-135	04.28.19 19.52	

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Sample Id:	**Bttm-11**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-011	Date Collected:	04.24.19 13.20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.29.19 16.00	Basis:	Wet Weight
Seq Number:	3087358				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 07.23	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 07.23	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 07.23	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.30.19 07.23	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 07.23	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 07.23	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 07.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.30.19 07.23	
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.30.19 07.23	

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Sample Id:	**Bttm-12**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-012	Date Collected:	04.24.19 13.22		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**101**	50.3	mg/kg	04.26.19 20.24		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 20.14	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 20.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 20.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 20.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	04.28.19 20.14	
o-Terphenyl	84-15-1	97	%	70-135	04.28.19 20.14	

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Sample Id:	**Bttm-12**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-012	Date Collected:	04.24.19 13.22		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.30.19 15.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.30.19 15.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.30.19 15.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.30.19 15.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.30.19 15.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.30.19 15.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.30.19 15.10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	04.30.19 15.10	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.30.19 15.10	

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Sample Id:	**Bttm-13**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-013	Date Collected:	04.24.19 13.24		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2480**	50.0	mg/kg	04.26.19 20.30		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 20.35	U	1
Diesel Range Organics	C10C28DRO	**39.9**	15.0	mg/kg	04.28.19 20.35		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 20.35	U	1
Total TPH	PHC635	**39.9**	15.0	mg/kg	04.28.19 20.35		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-135	04.28.19 20.35	
o-Terphenyl	84-15-1	98	%	70-135	04.28.19 20.35	

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Sample Id:	**Bttm-13**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-013	Date Collected:	04.24.19 13.24		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 15.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 15.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 15.30	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.30.19 15.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 15.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 15.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 15.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	98	%	70-130	04.30.19 15.30	
4-Bromofluorobenzene	460-00-4	100	%	70-130	04.30.19 15.30	

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Sample Id:	**Bttm-14**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-014	Date Collected:	04.24.19 13.26		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**942**	50.1	mg/kg	04.26.19 20.36		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 20.56	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 20.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 20.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 20.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.28.19 20.56	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 20.56	

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Sample Id:	**Bttm-14**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-014	Date Collected:	04.24.19 13.26		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.30.19 16.45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.30.19 16.45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.30.19 16.45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.30.19 16.45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.30.19 16.45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.30.19 16.45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.30.19 16.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	95	%	70-130	04.30.19 16.45	
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.30.19 16.45	

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Sample Id:	**Bttm-15**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-015	Date Collected:	04.24.19 13.28		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**473**	50.0	mg/kg	04.26.19 21.00		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	04.28.19 21.17	U	1
Diesel Range Organics	C10C28DRO	<14.9	14.9	mg/kg	04.28.19 21.17	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.28.19 21.17	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.28.19 21.17	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.28.19 21.17	
o-Terphenyl	84-15-1	97	%	70-135	04.28.19 21.17	

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Sample Id:	**Bttm-15**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-015	Date Collected:	04.24.19 13.28		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 17.04	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 17.04	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 17.04	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.30.19 17.04	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 17.04	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 17.04	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 17.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	96	%	70-130	04.30.19 17.04	
4-Bromofluorobenzene	460-00-4	94	%	70-130	04.30.19 17.04	

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Sample Id:	**Bttm-16**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-016	Date Collected:	04.24.19 13.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**217**	49.5	mg/kg	04.26.19 21.05		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	04.28.19 21.38	U	1
Diesel Range Organics	C10C28DRO	**22.8**	14.9	mg/kg	04.28.19 21.38		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.28.19 21.38	U	1
Total TPH	PHC635	**22.8**	14.9	mg/kg	04.28.19 21.38		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.28.19 21.38	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 21.38	

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Sample Id:	**Bttm-16**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-016	Date Collected:	04.24.19 13.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.19 17.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 17.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 17.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 17.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 17.23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 17.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 17.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.30.19 17.23	
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.30.19 17.23	

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Sample Id:	**Bttm-17**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-017	Date Collected:	04.24.19 13.32		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**809**	49.5	mg/kg	04.26.19 21.23		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 21.59	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 21.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 21.59	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 21.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.28.19 21.59	
o-Terphenyl	84-15-1	101	%	70-135	04.28.19 21.59	

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Sample Id:	**Bttm-17**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-017	Date Collected:	04.24.19 13.32		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 17.43	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 17.43	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 17.43	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.30.19 17.43	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 17.43	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 17.43	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 17.43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.30.19 17.43	
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.30.19 17.43	

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Sample Id:	**Bttm-18**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-018	Date Collected:	04.24.19 13.34		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6400**	100	mg/kg	04.26.19 21.29		20

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 22.19	U	1
Diesel Range Organics	C10C28DRO	**29.5**	15.0	mg/kg	04.28.19 22.19		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 22.19	U	1
Total TPH	PHC635	**29.5**	15.0	mg/kg	04.28.19 22.19		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	04.28.19 22.19	
o-Terphenyl	84-15-1	98	%	70-135	04.28.19 22.19	

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Sample Id:	**Bttm-18**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-018	Date Collected:	04.24.19 13.34		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.30.19 18.02	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.30.19 18.02	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.30.19 18.02	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.30.19 18.02	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.30.19 18.02	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.30.19 18.02	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.30.19 18.02	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.30.19 18.02	
4-Bromofluorobenzene	460-00-4	104	%	70-130	04.30.19 18.02	

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Sample Id:	**Bttm-19**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-019	Date Collected:	04.24.19 13.36		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1770**	50.4	mg/kg	04.26.19 21.35		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 22.40	U	1
Diesel Range Organics	C10C28DRO	**15.3**	15.0	mg/kg	04.28.19 22.40		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 22.40	U	1
Total TPH	PHC635	**15.3**	15.0	mg/kg	04.28.19 22.40		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	04.28.19 22.40	
o-Terphenyl	84-15-1	99	%	70-135	04.28.19 22.40	

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Sample Id:	**Bttm-19**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-019	Date Collected:	04.24.19 13.36		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.19 18.21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 18.21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 18.21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 18.21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 18.21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 18.21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 18.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.30.19 18.21	
1,4-Difluorobenzene	540-36-3	97	%	70-130	04.30.19 18.21	

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Sample Id:	**Bttm-20**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-020	Date Collected:	04.24.19 13.38		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**1190**	50.4	mg/kg	04.26.19 21.41		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087226				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.28.19 23.01	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.28.19 23.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.28.19 23.01	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.28.19 23.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.28.19 23.01	
o-Terphenyl	84-15-1	102	%	70-135	04.28.19 23.01	

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Sample Id:	**Bttm-20**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-020	Date Collected:	04.24.19 13.38		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	04.30.19 18.41	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	04.30.19 18.41	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	04.30.19 18.41	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	04.30.19 18.41	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	04.30.19 18.41	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	04.30.19 18.41	U	1
Total BTEX		<0.00201	0.00201	mg/kg	04.30.19 18.41	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.30.19 18.41	
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.30.19 18.41	

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Sample Id:	**Bttm-21**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-021	Date Collected:	04.24.19 13.40		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2280**	50.4	mg/kg	04.26.19 21.47		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 00.44	U	1
Diesel Range Organics	C10C28DRO	**33.7**	15.0	mg/kg	04.29.19 00.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 00.44	U	1
Total TPH	PHC635	**33.7**	15.0	mg/kg	04.29.19 00.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.29.19 00.44	
o-Terphenyl	84-15-1	102	%	70-135	04.29.19 00.44	

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Sample Id:	**Bttm-21**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-021	Date Collected:	04.24.19 13.40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	04.30.19 19.00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	04.30.19 19.00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	04.30.19 19.00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	04.30.19 19.00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	04.30.19 19.00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	04.30.19 19.00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	04.30.19 19.00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	04.30.19 19.00	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.30.19 19.00	

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Sample Id:	**Bttm-22**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-022	Date Collected:	04.24.19 13.42		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2300**	50.0	mg/kg	04.26.19 21.53		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 01.45	U	1
Diesel Range Organics	C10C28DRO	**111**	15.0	mg/kg	04.29.19 01.45		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	**16.4**	15.0	mg/kg	04.29.19 01.45		1
Total TPH	PHC635	**127**	15.0	mg/kg	04.29.19 01.45		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.19 01.45	
o-Terphenyl	84-15-1	105	%	70-135	04.29.19 01.45	

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Sample Id:	**Bttm-22**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-022	Date Collected:	04.24.19 13.42		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 19.19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 19.19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 19.19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.30.19 19.19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 19.19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 19.19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 19.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.30.19 19.19	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.30.19 19.19	

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Sample Id:	**Bttm-23**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-023	Date Collected:	04.24.19 13.44		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 17.30	Basis:	Wet Weight
Seq Number:	3087123				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2670**	50.0	mg/kg	04.26.19 21.59		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 02.05	U	1
Diesel Range Organics	C10C28DRO	**95.3**	15.0	mg/kg	04.29.19 02.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 02.05	U	1
Total TPH	PHC635	**95.3**	15.0	mg/kg	04.29.19 02.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	04.29.19 02.05	
o-Terphenyl	84-15-1	105	%	70-135	04.29.19 02.05	

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Sample Id:	**Bttm-23**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-023	Date Collected:	04.24.19 13.44		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 08.45	Basis:	Wet Weight
Seq Number:	3087479				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 19.38	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 19.38	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 19.38	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.30.19 19.38	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 19.38	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 19.38	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 19.38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	04.30.19 19.38	
4-Bromofluorobenzene	460-00-4	101	%	70-130	04.30.19 19.38	

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Sample Id:	**Bttm-24**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-024	Date Collected:	04.24.19 13.46		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**470**	49.6	mg/kg	04.27.19 18.56		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 02.26	U	1
Diesel Range Organics	C10C28DRO	**28.8**	15.0	mg/kg	04.29.19 02.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 02.26	U	1
Total TPH	PHC635	**28.8**	15.0	mg/kg	04.29.19 02.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.29.19 02.26	
o-Terphenyl	84-15-1	105	%	70-135	04.29.19 02.26	

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Sample Id:	**Bttm-24**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-024	Date Collected:	04.24.19 13.46		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	04.30.19 22.28	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	04.30.19 22.28	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	04.30.19 22.28	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	04.30.19 22.28	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	04.30.19 22.28	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	04.30.19 22.28	U	1
Total BTEX		<0.00202	0.00202	mg/kg	04.30.19 22.28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	04.30.19 22.28	
1,4-Difluorobenzene	540-36-3	99	%	70-130	04.30.19 22.28	

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COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**Bttm-25**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-025	Date Collected:	04.24.19 13.48		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**204**	49.6	mg/kg	04.27.19 19.03		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 02.46	U	1
Diesel Range Organics	C10C28DRO	**34.1**	15.0	mg/kg	04.29.19 02.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 02.46	U	1
Total TPH	PHC635	**34.1**	15.0	mg/kg	04.29.19 02.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	04.29.19 02.46	
o-Terphenyl	84-15-1	106	%	70-135	04.29.19 02.46	

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COG Operating LLC, Artesia, NM

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Sample Id:	**Bttm-25**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-025	Date Collected:	04.24.19 13.48		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 22.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 22.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 22.47	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	04.30.19 22.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 22.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 22.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 22.47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	04.30.19 22.47	
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.30.19 22.47	

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Sample Id:	**Bttm-26**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-026	Date Collected:	04.24.19 13.50		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**269**	49.6	mg/kg	04.27.19 19.10		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 03.06	U	1
Diesel Range Organics	C10C28DRO	**23.1**	15.0	mg/kg	04.29.19 03.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 03.06	U	1
Total TPH	PHC635	**23.1**	15.0	mg/kg	04.29.19 03.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.19 03.06	
o-Terphenyl	84-15-1	103	%	70-135	04.29.19 03.06	

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COG Operating LLC, Artesia, NM

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Sample Id:	**Bttm-26**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-026	Date Collected:	04.24.19 13.50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 23.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 23.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 23.06	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.30.19 23.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 23.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 23.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 23.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	109	%	70-130	04.30.19 23.06	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.30.19 23.06	

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Sample Id:	**SW-1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-027	Date Collected:	04.24.19 13.52		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**863**	49.6	mg/kg	04.27.19 19.18		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 03.26	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.29.19 03.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 03.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.29.19 03.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	04.29.19 03.26	
o-Terphenyl	84-15-1	105	%	70-135	04.29.19 03.26	

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COG Operating LLC, Artesia, NM

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Sample Id:	**SW-1**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-027	Date Collected:	04.24.19 13.52		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 23.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 23.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 23.25	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	04.30.19 23.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 23.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 23.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 23.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	107	%	70-130	04.30.19 23.25	
1,4-Difluorobenzene	540-36-3	102	%	70-130	04.30.19 23.25	

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Sample Id:	**SW-2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-028	Date Collected:	04.24.19 13.54		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**245**	50.2	mg/kg	04.27.19 19.39		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	04.29.19 03.46	U	1
Diesel Range Organics	C10C28DRO	<14.9	14.9	mg/kg	04.29.19 03.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.29.19 03.46	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.29.19 03.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	04.29.19 03.46	
o-Terphenyl	84-15-1	109	%	70-135	04.29.19 03.46	

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COG Operating LLC, Artesia, NM

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Sample Id:	**SW-2**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-028	Date Collected:	04.24.19 13.54		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	04.30.19 23.45	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	04.30.19 23.45	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	04.30.19 23.45	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	04.30.19 23.45	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	04.30.19 23.45	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	04.30.19 23.45	U	1
Total BTEX		<0.00200	0.00200	mg/kg	04.30.19 23.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	04.30.19 23.45	
4-Bromofluorobenzene	460-00-4	105	%	70-130	04.30.19 23.45	

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Sample Id:	**SW-3**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-029	Date Collected:	04.24.19 13.56		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**205**	50.2	mg/kg	04.27.19 19.47		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 04.06	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.29.19 04.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 04.06	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.29.19 04.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.19 04.06	
o-Terphenyl	84-15-1	103	%	70-135	04.29.19 04.06	

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Sample Id:	**SW-3**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-029	Date Collected:	04.24.19 13.56		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.01.19 00.04	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.01.19 00.04	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.01.19 00.04	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.01.19 00.04	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.01.19 00.04	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.01.19 00.04	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.01.19 00.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.01.19 00.04	
4-Bromofluorobenzene	460-00-4	109	%	70-130	05.01.19 00.04	

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Sample Id:	**SW-4**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-030	Date Collected:	04.24.19 13.58		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**97.3**	49.8	mg/kg	04.27.19 19.54		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 04.26	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.29.19 04.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 04.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.29.19 04.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.19 04.26	
o-Terphenyl	84-15-1	102	%	70-135	04.29.19 04.26	

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Sample Id:	**SW-4**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-030	Date Collected:	04.24.19 13.58		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.01.19 00.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.01.19 00.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.01.19 00.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.01.19 00.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.01.19 00.23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.01.19 00.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.01.19 00.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	100	%	70-130	05.01.19 00.23	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.01.19 00.23	

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Sample Id:	**SW-5**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-031	Date Collected:	04.24.19 14.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**440**	49.7	mg/kg	04.27.19 20.01		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 05.26	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.29.19 05.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 05.26	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.29.19 05.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	04.29.19 05.26	
o-Terphenyl	84-15-1	103	%	70-135	04.29.19 05.26	

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Sample Id:	**SW-5**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-031	Date Collected:	04.24.19 14.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.19 00.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.19 00.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.19 00.42	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.01.19 00.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.19 00.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.19 00.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.19 00.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.01.19 00.42	
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.01.19 00.42	

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Sample Id:	**SW-6**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-032	Date Collected:	04.24.19 14.02		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**53.4**	49.6	mg/kg	04.27.19 20.08		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 05.46	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	04.29.19 05.46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 05.46	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	04.29.19 05.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	04.29.19 05.46	
o-Terphenyl	84-15-1	105	%	70-135	04.29.19 05.46	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**SW-6**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-032	Date Collected:	04.24.19 14.02		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.01.19 01.01	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.01.19 01.01	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.01.19 01.01	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.01.19 01.01	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.01.19 01.01	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.01.19 01.01	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.01.19 01.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.01.19 01.01	
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.01.19 01.01	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

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Sample Id:	**SW-7**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-033	Date Collected:	04.24.19 14.04		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**781**	50.0	mg/kg	04.27.19 20.37		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 06.06	U	1
Diesel Range Organics	C10C28DRO	**28.4**	15.0	mg/kg	04.29.19 06.06		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 06.06	U	1
Total TPH	PHC635	**28.4**	15.0	mg/kg	04.29.19 06.06		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	04.29.19 06.06	
o-Terphenyl	84-15-1	101	%	70-135	04.29.19 06.06	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**SW-7**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-033	Date Collected:	04.24.19 14.04		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.19 01.20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.19 01.20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.19 01.20	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.01.19 01.20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.19 01.20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.19 01.20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.19 01.20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.01.19 01.20	
4-Bromofluorobenzene	460-00-4	99	%	70-130	05.01.19 01.20	

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COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**SW-8**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-034	Date Collected:	04.24.19 14.06		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**490**	49.6	mg/kg	04.27.19 20.45		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	04.29.19 06.26	U	1
Diesel Range Organics	C10C28DRO	**21.3**	15.0	mg/kg	04.29.19 06.26		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	04.29.19 06.26	U	1
Total TPH	PHC635	**21.3**	15.0	mg/kg	04.29.19 06.26		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.29.19 06.26	
o-Terphenyl	84-15-1	102	%	70-135	04.29.19 06.26	

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COG Operating LLC, Artesia, NM

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Sample Id:	**SW-8**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-034	Date Collected:	04.24.19 14.06		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.01.19 02.34	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.01.19 02.34	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.01.19 02.34	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.01.19 02.34	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.01.19 02.34	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.01.19 02.34	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.01.19 02.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	98	%	70-130	05.01.19 02.34	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.01.19 02.34	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**SW-9**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-035	Date Collected:	04.24.19 14.08		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**2230**	49.5	mg/kg	04.27.19 21.06		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	04.29.19 06.46	U	1
Diesel Range Organics	C10C28DRO	**17.0**	14.9	mg/kg	04.29.19 06.46		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.29.19 06.46	U	1
Total TPH	PHC635	**17.0**	14.9	mg/kg	04.29.19 06.46		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	04.29.19 06.46	
o-Terphenyl	84-15-1	101	%	70-135	04.29.19 06.46	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**SW-9**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-035	Date Collected:	04.24.19 14.08		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.01.19 02.53	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.01.19 02.53	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.01.19 02.53	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.01.19 02.53	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.01.19 02.53	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.01.19 02.53	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.01.19 02.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	92	%	70-130	05.01.19 02.53	
1,4-Difluorobenzene	540-36-3	96	%	70-130	05.01.19 02.53	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**SW-10**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-036	Date Collected:	04.24.19 14.10		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	SPC			% Moisture:	
Analyst:	SPC	Date Prep:	04.26.19 18.00	Basis:	Wet Weight
Seq Number:	3087137				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**174**	50.4	mg/kg	04.27.19 21.14		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	04.27.19 14.00	Basis:	Wet Weight
Seq Number:	3087228				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	04.29.19 07.07	U	1
Diesel Range Organics	C10C28DRO	<14.9	14.9	mg/kg	04.29.19 07.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	04.29.19 07.07	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	04.29.19 07.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	04.29.19 07.07	
o-Terphenyl	84-15-1	104	%	70-135	04.29.19 07.07	

Certificate of Analytical Results 622392

COG Operating LLC, Artesia, NM

diamondback 22 St. Com #5H

Sample Id:	**SW-10**	Matrix:	Soil	Date Received:	04.26.19 11.30
Lab Sample Id:	622392-036	Date Collected:	04.24.19 14.10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	04.30.19 16.30	Basis:	Wet Weight
Seq Number:	3087483				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.01.19 03.12	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.01.19 03.12	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.01.19 03.12	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.01.19 03.12	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.01.19 03.12	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.01.19 03.12	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.01.19 03.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	104	%	70-130	05.01.19 03.12	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.01.19 03.12	

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 622392

COG Operating LLC

diamondback 22 St. Com #5H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087124 Matrix: Solid Date Prep: 04.26.19
MB Sample Id: 7676645-1-BLK LCS Sample Id: 7676645-1-BKS LCSD Sample Id: 7676645-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	251	100	253	101	90-110	1	20	mg/kg	04.26.19 22:01	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087123 Matrix: Solid Date Prep: 04.26.19
MB Sample Id: 7676644-1-BLK LCS Sample Id: 7676644-1-BKS LCSD Sample Id: 7676644-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.63	250	274	110	274	110	90-110	0	20	mg/kg	04.26.19 19:07	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087137 Matrix: Solid Date Prep: 04.26.19
MB Sample Id: 7676646-1-BLK LCS Sample Id: 7676646-1-BKS LCSD Sample Id: 7676646-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	262	105	262	105	90-110	0	20	mg/kg	04.27.19 18:20	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087124 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622388-004 MS Sample Id: 622388-004 S MSD Sample Id: 622388-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	92.7	253	334	95	337	97	90-110	1	20	mg/kg	04.26.19 22:30	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087124 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622389-006 MS Sample Id: 622389-006 S MSD Sample Id: 622389-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	37.8	250	278	96	278	96	90-110	0	20	mg/kg	04.27.19 00:04	

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 622392

COG Operating LLC

diamondback 22 St. Com #5H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087123 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622390-007 MS Sample Id: 622390-007 S MSD Sample Id: 622390-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	177	253	449	108	447	107	90-110	0	20	mg/kg	04.26.19 19:24	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087123 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622390-008 MS Sample Id: 622390-008 S MSD Sample Id: 622390-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	60.1	251	338	111	338	111	90-110	0	20	mg/kg	04.26.19 20:48	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087137 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622390-001 MS Sample Id: 622390-001 S MSD Sample Id: 622390-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	6.60	251	252	98	251	97	90-110	0	20	mg/kg	04.27.19 18:41	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3087137 Matrix: Soil Date Prep: 04.26.19
Parent Sample Id: 622390-002 MS Sample Id: 622390-002 S MSD Sample Id: 622390-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	4.69	252	261	102	260	101	90-110	0	20	mg/kg	04.27.19 20:23	

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087226 Matrix: Solid Date Prep: 04.27.19
MB Sample Id: 7676730-1-BLK LCS Sample Id: 7676730-1-BKS LCSD Sample Id: 7676730-1-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	<8.00	1000	992	99	1020	102	70-135	3	20	mg/kg	04.28.19 14:16	
Diesel Range Organics	<8.13	1000	996	100	1020	102	70-135	2	20	mg/kg	04.28.19 14:16	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		126		125		70-135	%	04.28.19 14:16
o-Terphenyl	100		124		121		70-135	%	04.28.19 14:16

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

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

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

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

QC Summary 622392

COG Operating LLC

diamondback 22 St. Com #5H

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087228 Matrix: Solid Date Prep: 04.27.19
MB Sample Id: 7676731-1-BLK LCS Sample Id: 7676731-1-BKS LCSD Sample Id: 7676731-1-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	<8.00	1000	1050	105	1050	105	70-135	0	20	mg/kg	04.29.19 00:03	
Diesel Range Organics	<8.13	1000	1060	106	1070	107	70-135	1	20	mg/kg	04.29.19 00:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		130		122		70-135	%	04.29.19 00:03
o-Terphenyl	98		109		107		70-135	%	04.29.19 00:03

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087226 Matrix: Soil Date Prep: 04.27.19
Parent Sample Id: 622392-001 MS Sample Id: 622392-001 S MSD Sample Id: 622392-001 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	<7.98	997	949	95	960	96	70-135	1	20	mg/kg	04.28.19 15:19	
Diesel Range Organics	<8.10	997	960	96	955	96	70-135	1	20	mg/kg	04.28.19 15:19	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	97		98		70-135	%	04.28.19 15:19
o-Terphenyl	92		96		70-135	%	04.28.19 15:19

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3087228 Matrix: Soil Date Prep: 04.27.19
Parent Sample Id: 622392-021 MS Sample Id: 622392-021 S MSD Sample Id: 622392-021 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	<7.99	998	966	97	994	99	70-135	3	20	mg/kg	04.29.19 01:04	
Diesel Range Organics	33.7	998	980	95	1010	98	70-135	3	20	mg/kg	04.29.19 01:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	120		123		70-135	%	04.29.19 01:04
o-Terphenyl	100		105		70-135	%	04.29.19 01:04

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

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

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

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

QC Summary 622392

COG Operating LLC

diamondback 22 St. Com #5H

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087358 Matrix: Solid Date Prep: 04.29.19
MB Sample Id: 7676766-1-BLK LCS Sample Id: 7676766-1-BKS LCSD Sample Id: 7676766-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.104	105	0.103	103	70-130	1	35	mg/kg	04.29.19 22:34	
Toluene	<0.000453	0.0994	0.0992	100	0.0974	97	70-130	2	35	mg/kg	04.29.19 22:34	
Ethylbenzene	<0.000561	0.0994	0.105	106	0.102	102	70-130	3	35	mg/kg	04.29.19 22:34	
m,p-Xylenes	<0.00101	0.199	0.219	110	0.214	107	70-130	2	35	mg/kg	04.29.19 22:34	
o-Xylene	<0.000342	0.0994	0.108	109	0.107	107	70-130	1	35	mg/kg	04.29.19 22:34	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		98		100		70-130	%	04.29.19 22:34
4-Bromofluorobenzene	88		97		101		70-130	%	04.29.19 22:34

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087479 Matrix: Solid Date Prep: 04.30.19
MB Sample Id: 7676887-1-BLK LCS Sample Id: 7676887-1-BKS LCSD Sample Id: 7676887-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.113	113	0.112	112	70-130	1	35	mg/kg	04.30.19 22:14	
Toluene	<0.000455	0.0998	0.107	107	0.107	107	70-130	0	35	mg/kg	04.30.19 22:14	
Ethylbenzene	<0.000564	0.0998	0.114	114	0.113	113	70-130	1	35	mg/kg	04.30.19 22:14	
m,p-Xylenes	<0.00101	0.200	0.239	120	0.237	119	70-130	1	35	mg/kg	04.30.19 22:14	
o-Xylene	<0.000344	0.0998	0.117	117	0.116	116	70-130	1	35	mg/kg	04.30.19 22:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	88		101		101		70-130	%	04.30.19 22:14
4-Bromofluorobenzene	85		105		102		70-130	%	04.30.19 22:14

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3087483 Matrix: Solid Date Prep: 04.30.19
MB Sample Id: 7676889-1-BLK LCS Sample Id: 7676889-1-BKS LCSD Sample Id: 7676889-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0996	0.107	107	0.110	110	70-130	3	35	mg/kg	04.30.19 20:35	
Toluene	<0.000454	0.0996	0.103	103	0.105	105	70-130	2	35	mg/kg	04.30.19 20:35	
Ethylbenzene	<0.000563	0.0996	0.110	110	0.111	111	70-130	1	35	mg/kg	04.30.19 20:35	
m,p-Xylenes	<0.00101	0.199	0.230	116	0.232	115	70-130	1	35	mg/kg	04.30.19 20:35	
o-Xylene	<0.000343	0.0996	0.113	113	0.115	115	70-130	2	35	mg/kg	04.30.19 20:35	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	90		98		100		70-130	%	04.30.19 20:35
4-Bromofluorobenzene	81		93		99		70-130	%	04.30.19 20:35

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 622392

COG Operating LLC

diamondback 22 St. Com #5H

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3087358 | Matrix: Soil | Date Prep: 04.29.19
Parent Sample Id: 622383-001 | MS Sample Id: 622383-001 S | MSD Sample Id: 622383-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.101	101	0.103	104	70-130	2	35	mg/kg	04.29.19 23:12	
Toluene	0.000488	0.100	0.0946	94	0.0970	97	70-130	3	35	mg/kg	04.29.19 23:12	
Ethylbenzene	<0.000567	0.100	0.0962	96	0.0992	100	70-130	3	35	mg/kg	04.29.19 23:12	
m,p-Xylenes	<0.00102	0.201	0.201	100	0.207	105	70-130	3	35	mg/kg	04.29.19 23:12	
o-Xylene	<0.000346	0.100	0.0980	98	0.101	102	70-130	3	35	mg/kg	04.29.19 23:12	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		70-130	%	04.29.19 23:12
4-Bromofluorobenzene	102		106		70-130	%	04.29.19 23:12

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3087479 | Matrix: Soil | Date Prep: 04.30.19
Parent Sample Id: 622388-001 | MS Sample Id: 622388-001 S | MSD Sample Id: 622388-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000383	0.0994	0.106	107	0.107	106	70-130	1	35	mg/kg	04.30.19 22:52	
Toluene	<0.000453	0.0994	0.0999	101	0.103	102	70-130	3	35	mg/kg	04.30.19 22:52	
Ethylbenzene	<0.000561	0.0994	0.104	105	0.110	109	70-130	6	35	mg/kg	04.30.19 22:52	
m,p-Xylenes	<0.00101	0.199	0.218	110	0.231	114	70-130	6	35	mg/kg	04.30.19 22:52	
o-Xylene	<0.000342	0.0994	0.107	108	0.114	113	70-130	6	35	mg/kg	04.30.19 22:52	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		99		70-130	%	04.30.19 22:52
4-Bromofluorobenzene	102		111		70-130	%	04.30.19 22:52

Analytical Method: BTEX by EPA 8021B | Prep Method: SW5030B
Seq Number: 3087483 | Matrix: Soil | Date Prep: 04.30.19
Parent Sample Id: 622392-024 | MS Sample Id: 622392-024 S | MSD Sample Id: 622392-024 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000382	0.0992	0.0913	92	0.0941	95	70-130	3	35	mg/kg	04.30.19 21:14	
Toluene	<0.000452	0.0992	0.0840	85	0.0839	84	70-130	0	35	mg/kg	04.30.19 21:14	
Ethylbenzene	<0.000560	0.0992	0.0837	84	0.0806	81	70-130	4	35	mg/kg	04.30.19 21:14	
m,p-Xylenes	<0.00101	0.198	0.173	87	0.166	83	70-130	4	35	mg/kg	04.30.19 21:14	
o-Xylene	<0.000342	0.0992	0.0857	86	0.0826	83	70-130	4	35	mg/kg	04.30.19 21:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		70-130	%	04.30.19 21:14
4-Bromofluorobenzene	103		100		70-130	%	04.30.19 21:14

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

Analysis Request of Chain of Custody Record

CONCHO

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

602392

Client Name: COG-Artesia	**Site Manager:** Sheldon Hitchcock
Project Name: Diamondback 22 St. com #5H	
Project Location: (county, state) Eddy, NM	**Project #:**
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	**Sampler Name:** Sheldon Hitchcock
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	FILTERED (Y/N)	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	B+tm-1	4/24	1:00		X			X	1		X	X	X	
	B+tm-2		1:02						1					
	B+tm-3		1:04						1					
	B+tm-4		1:06						1					
	B+tm-5		1:08						1					
	B+tm-6		1:10						1					
	B+tm-7		1:12						1					
	B+tm-8		1:14						1					
	B+tm-9		1:16						1					
	B+tm-10		1:18						1					

Relinquished by: Sheldon Hitchcock	Date:	Time:	Received by: Corbin P	Date: 4/24/19	Time: 16:20
Relinquished by: Corbin P	Date: 4/25/19	Time: 14:00	Received by: To Fed Ex	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date: 4.26.19	Time: 1130

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 3.1/3.0

R8-0.1

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 #: _____

Analysis Request of Chain of Custody Record

CONCHO

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

022392

Client Name: COG-Artesia	**Site Manager:** Sheldon Hitchcock
Project Name: Diamondback 22 St Com #5H	
Project Location: (county, state) Eddy, NM	**Project #:**
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	**Sampler Name:** Sheldon Hitchcock
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	FILTERED (Y/N)	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	Bttm-11	4/24	1:20		X			X	1		X	X	X	
	Bttm-12		1:22						1					
	Bttm-13		1:24						1					
	Bttm-14		1:26						1					
	Bttm-15		1:28						1					
	Bttm-16		1:30						1					
	Bttm-17		1:32						1					
	Bttm-18		1:34						1					
	Bttm-19		1:36						1					
	Bttm-20		1:38						1					

Relinquished by:	Date:	Time:	Received by: Date: 4/24/19 Time: 16:20
Relinquished by: Date: 4/25/19 Time: 14:00			Received by: to FedEx Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: 4.26.19 Time: 1130

ORIGINAL COPY

LAB USE ONLY

Sample Temperature
3.1/3.0
R8 -0.1

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 #: _____

Final 1.000

Analysis Request of Chain of Custody Record

CONCHO

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

602392

Client Name: COG-Artesia	**Site Manager:** Sheldon Hitchcock
Project Name: Diamondback 22 St. com #5H	
Project Location: (county, state) Eddy, NM	**Project #:**
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	**Sampler Name:** Sheldon Hitchcock
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	Grab(G) / Comp(C)	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	Bttm-21	4/24	1:40		X			X	1	C	X	X	X	
	Bttm-22		1:42						1					
	Bttm-23		1:44						1					
	Bttm-24		1:46						1					
	Bttm-25		1:49						1					
	Bttm-26		1:50						1					
	SW-1		1:52						1					
	SW-2		1:54						1					
	SW-3		1:56						1					
	SW-4		1:59						1					

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Sheldon Hitchcock			Corbin	4/24/19	16:20
Corbin	4/25/19	14:00	to Fedex		
			Jesse	4-26-19	1130

LAB USE ONLY

Sample Temperature 3.1/3.0 R8 -0.1

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 #: _____

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Analysis Request of Chain of Custody Record

CONCHO

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

022392

Client Name: COG-Artesia	**Site Manager:** Sheldon Hitchcock
Project Name: Diamondback 22 St. Com #5H	
Project Location: (county, state) Eddy, NM	**Project #:**
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	**Sampler Name:** Sheldon Hitchcock
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	# CONTAINERS	FILTERED (Y/N)	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	SW-5	4/24	2:00		X			X	1		X	X	X	
	SW-6		2:02						1					
	SW-7		2:04						1					
	SW-8		2:06						1					
	SW-9		2:08						1					
	SW-10		2:10						1					

ANALYSIS REQUEST
(Circle or Specify Method No.)

Relinquished by:	Date:	Time:	Received by: Date: 4/24/19 Time: 16:20
Relinquished by:	Date: 4/25/19	Time: 14:00	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: 4.26.19 Time: 1130

ORIGINAL COPY

LAB USE ONLY

Sample Temperature 3.1/3.0

R8-0.1

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 #: _____

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 04/26/2019 11:30:00 AM

Work Order #: 622392

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

Temperature Measuring device used : R8

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

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

Analyst: PH Device/Lot#:

Checklist completed by: Katie Lowe Date: 04/26/2019

Checklist reviewed by: Jessica Kramer Date: 04/29/2019

Jessica Kramer

Certificate of Analysis Summary 624489

COG Operating LLC, Artesia, NM

Project Name: Diamondback 22 SL #5

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy, NM

Date Received in Lab: Thu May-16-19 10:58 am

Report Date: 20-MAY-19

Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	624489-001		624489-002		624489-003		624489-004		624489-005		624489-006	
	Field Id:	SW-1		SW-7		SW-9		Bttm-13		Bttm-14		Bttm-17	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-15-19 08:00		May-15-19 08:10		May-15-19 08:20		May-15-19 08:30		May-15-19 08:40		May-15-19 08:50	
BTEX by EPA 8021B	*Extracted:*	May-16-19 12:00		May-16-19 12:00		May-16-19 12:00		May-16-19 12:00		May-16-19 12:00		May-16-19 12:00	
	Analyzed:	May-16-19 19:33		May-16-19 19:52		May-16-19 20:11		May-16-19 20:30		May-16-19 20:49		May-16-19 21:08	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Benzene		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Toluene		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Ethylbenzene		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
m,p-Xylenes		<0.00403	0.00403	<0.00398	0.00398	<0.00402	0.00402	<0.00398	0.00398	<0.00402	0.00402	<0.00400	0.00400
o-Xylene		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Total Xylenes		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Total BTEX		<0.00202	0.00202	<0.00199	0.00199	<0.00201	0.00201	<0.00199	0.00199	<0.00201	0.00201	<0.00200	0.00200
Chloride by EPA 300	*Extracted:*	May-16-19 13:30		May-16-19 13:30		May-16-19 13:30		May-16-19 13:30		May-16-19 13:30		May-16-19 13:30	
	Analyzed:	May-17-19 16:36		May-17-19 16:43		May-17-19 16:50		May-17-19 16:57		May-17-19 17:05		May-17-19 17:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		223	49.8	761	49.8	320	25.1	562	50.0	287	50.0	116	50.0
TPH By SW8015 Mod	*Extracted:*	May-16-19 16:00		May-16-19 16:00		May-16-19 16:00		May-16-19 16:00		May-16-19 16:00		May-16-19 16:00	
	Analyzed:	May-17-19 05:35		May-17-19 05:55		May-17-19 06:14		May-17-19 06:34		May-17-19 06:53		May-17-19 08:12	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Diesel Range Organics		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9
Total TPH		<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0	<14.9	14.9

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 624489

COG Operating LLC, Artesia, NM

Project Name: Diamondback 22 SL #5

Project Id:

Contact: Sheldon Hitchcock

Project Location: Eddy, NM

Date Received in Lab: Thu May-16-19 10:58 am

Report Date: 20-MAY-19

Project Manager: Jessica Kramer

Analysis Requested	*Lab Id:*	624489-007		624489-008		624489-009		624489-010		624489-011		624489-012	
	Field Id:	Bttm-18		Bttm-19		Bttm-20		Bttm-21		Bttm-22		Bttm-23	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-15-19 09:00		May-15-19 09:10		May-15-19 09:20		May-15-19 09:30		May-15-19 09:40		May-15-19 09:50	
BTEX by EPA 8021B	*Extracted:*	May-16-19 12:00		May-16-19 12:00		May-16-19 12:00		May-16-19 12:00		May-16-19 15:00		May-16-19 15:00	
	Analyzed:	May-16-19 21:27		May-16-19 21:46		May-16-19 22:05		May-16-19 22:24		May-17-19 01:12		May-17-19 01:31	
	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	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200
Toluene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200
Ethylbenzene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200
m,p-Xylenes		<0.00399	0.00399	<0.00401	0.00401	<0.00397	0.00397	<0.00398	0.00398	<0.00403	0.00403	<0.00401	0.00401
o-Xylene		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200
Total Xylenes		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200
Total BTEX		<0.00200	0.00200	<0.00200	0.00200	<0.00198	0.00198	<0.00199	0.00199	<0.00202	0.00202	<0.00200	0.00200
Chloride by EPA 300	*Extracted:*	May-16-19 14:30		May-16-19 14:30		May-16-19 14:30		May-16-19 14:30		May-16-19 14:30		May-16-19 14:30	
	Analyzed:	May-16-19 17:37		May-16-19 17:59		May-16-19 18:06		May-16-19 18:13		May-16-19 18:21		May-17-19 09:01	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		972	50.5	350	50.0	6840	50.0	262	50.0	174	50.0	328	50.3
TPH By SW8015 Mod	*Extracted:*	May-16-19 16:00		May-16-19 16:00		May-16-19 16:00		May-16-19 16:00		May-16-19 11:30		May-16-19 11:30	
	Analyzed:	May-17-19 08:56		May-17-19 09:15		May-17-19 09:35		May-17-19 09:54		May-16-19 14:03		May-16-19 14:23	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Diesel Range Organics		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0	<14.9	14.9	<15.0	15.0	<15.0	15.0	<15.0	15.0	<15.0	15.0

Jessica Kramer
Project Assistant

Analytical Report 624489

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Diamondback 22 SL #5

20-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

20-MAY-19

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

Reference: XENCO Report No(s): **624489**
Diamondback 22 SL #5
Project Address: Eddy, NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 624489. 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. 624489 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

Sample Cross Reference 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-1	S	05-15-19 08:00		624489-001
SW-7	S	05-15-19 08:10		624489-002
SW-9	S	05-15-19 08:20		624489-003
Bttm-13	S	05-15-19 08:30		624489-004
Bttm-14	S	05-15-19 08:40		624489-005
Bttm-17	S	05-15-19 08:50		624489-006
Bttm-18	S	05-15-19 09:00		624489-007
Bttm-19	S	05-15-19 09:10		624489-008
Bttm-20	S	05-15-19 09:20		624489-009
Bttm-21	S	05-15-19 09:30		624489-010
Bttm-22	S	05-15-19 09:40		624489-011
Bttm-23	S	05-15-19 09:50		624489-012

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3089288 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3089300 BTEX by EPA 8021B
Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**SW-1**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-001	Date Collected:	05.15.19 08.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 13.30	Basis:	Wet Weight
Seq Number:	3089409				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**223**	49.8	mg/kg	05.17.19 16.36		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.17.19 05.35	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.17.19 05.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.17.19 05.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.17.19 05.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-135	05.17.19 05.35	
o-Terphenyl	84-15-1	120	%	70-135	05.17.19 05.35	

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**SW-1**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-001	Date Collected:	05.15.19 08.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.16.19 19.33	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.16.19 19.33	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.16.19 19.33	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.16.19 19.33	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.16.19 19.33	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.16.19 19.33	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.16.19 19.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.16.19 19.33	
4-Bromofluorobenzene	460-00-4	95	%	70-130	05.16.19 19.33	

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**SW-7**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-002	Date Collected:	05.15.19 08.10		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 13.30	Basis:	Wet Weight
Seq Number:	3089409				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**761**	49.8	mg/kg	05.17.19 16.43		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.17.19 05.55	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.17.19 05.55	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.17.19 05.55	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.17.19 05.55	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	05.17.19 05.55	
o-Terphenyl	84-15-1	112	%	70-135	05.17.19 05.55	

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**SW-7**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-002	Date Collected:	05.15.19 08.10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.16.19 19.52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.16.19 19.52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.16.19 19.52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.16.19 19.52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.16.19 19.52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.16.19 19.52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.16.19 19.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.16.19 19.52	
4-Bromofluorobenzene	460-00-4	94	%	70-130	05.16.19 19.52	

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**SW-9**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-003	Date Collected:	05.15.19 08.20		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 13.30	Basis:	Wet Weight
Seq Number:	3089409				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**320**	25.1	mg/kg	05.17.19 16.50		5

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.17.19 06.14	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.17.19 06.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.17.19 06.14	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.17.19 06.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	05.17.19 06.14	
o-Terphenyl	84-15-1	116	%	70-135	05.17.19 06.14	

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**SW-9**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-003	Date Collected:	05.15.19 08.20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.16.19 20.11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.16.19 20.11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.16.19 20.11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.16.19 20.11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.16.19 20.11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.16.19 20.11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.16.19 20.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.16.19 20.11	
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.16.19 20.11	

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**Bttm-13**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-004	Date Collected:	05.15.19 08.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 13.30	Basis:	Wet Weight
Seq Number:	3089409				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**562**	50.0	mg/kg	05.17.19 16.57		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.17.19 06.34	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.17.19 06.34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.17.19 06.34	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.17.19 06.34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	05.17.19 06.34	
o-Terphenyl	84-15-1	116	%	70-135	05.17.19 06.34	

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**Bttm-13**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-004	Date Collected:	05.15.19 08.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.16.19 20.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.16.19 20.30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.16.19 20.30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.16.19 20.30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.16.19 20.30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.16.19 20.30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.16.19 20.30	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	99	%	70-130	05.16.19 20.30	
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.16.19 20.30	

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Diamondback 22 SL #5

Sample Id:	**Bttm-14**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-005	Date Collected:	05.15.19 08.40		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 13.30	Basis:	Wet Weight
Seq Number:	3089409				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**287**	50.0	mg/kg	05.17.19 17.05		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.17.19 06.53	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.17.19 06.53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.17.19 06.53	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.17.19 06.53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	05.17.19 06.53	
o-Terphenyl	84-15-1	114	%	70-135	05.17.19 06.53	

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COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**Bttm-14**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-005	Date Collected:	05.15.19 08.40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	05.16.19 20.49	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	05.16.19 20.49	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	05.16.19 20.49	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	05.16.19 20.49	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	05.16.19 20.49	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	05.16.19 20.49	U	1
Total BTEX		<0.00201	0.00201	mg/kg	05.16.19 20.49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	05.16.19 20.49	
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.16.19 20.49	

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Diamondback 22 SL #5

Sample Id:	**Bttm-17**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-006	Date Collected:	05.15.19 08.50		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 13.30	Basis:	Wet Weight
Seq Number:	3089409				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**116**	50.0	mg/kg	05.17.19 17.12		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	05.17.19 08.12	U	1
Diesel Range Organics	C10C28DRO	<14.9	14.9	mg/kg	05.17.19 08.12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.17.19 08.12	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.17.19 08.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	05.17.19 08.12	
o-Terphenyl	84-15-1	116	%	70-135	05.17.19 08.12	

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Diamondback 22 SL #5

Sample Id:	**Bttm-17**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-006	Date Collected:	05.15.19 08.50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.16.19 21.08	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.16.19 21.08	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.16.19 21.08	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	05.16.19 21.08	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.16.19 21.08	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.16.19 21.08	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.16.19 21.08	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.16.19 21.08	
4-Bromofluorobenzene	460-00-4	101	%	70-130	05.16.19 21.08	

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Diamondback 22 SL #5

Sample Id:	**Bttm-18**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-007	Date Collected:	05.15.19 09.00		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 14.30	Basis:	Wet Weight
Seq Number:	3089346				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**972**	50.5	mg/kg	05.16.19 17.37		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.17.19 08.56	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.17.19 08.56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.17.19 08.56	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.17.19 08.56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	05.17.19 08.56	
o-Terphenyl	84-15-1	114	%	70-135	05.17.19 08.56	

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Diamondback 22 SL #5

Sample Id:	**Bttm-18**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-007	Date Collected:	05.15.19 09.00		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.16.19 21.27	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.16.19 21.27	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.16.19 21.27	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	05.16.19 21.27	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.16.19 21.27	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.16.19 21.27	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.16.19 21.27	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	106	%	70-130	05.16.19 21.27	
1,4-Difluorobenzene	540-36-3	103	%	70-130	05.16.19 21.27	

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Diamondback 22 SL #5

Sample Id:	**Bttm-19**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-008	Date Collected:	05.15.19 09.10		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 14.30	Basis:	Wet Weight
Seq Number:	3089346				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**350**	50.0	mg/kg	05.16.19 17.59		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<14.9	14.9	mg/kg	05.17.19 09.15	U	1
Diesel Range Organics	C10C28DRO	<14.9	14.9	mg/kg	05.17.19 09.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<14.9	14.9	mg/kg	05.17.19 09.15	U	1
Total TPH	PHC635	<14.9	14.9	mg/kg	05.17.19 09.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	05.17.19 09.15	
o-Terphenyl	84-15-1	118	%	70-135	05.17.19 09.15	

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Sample Id:	**Bttm-19**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-008	Date Collected:	05.15.19 09.10		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.16.19 21.46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.16.19 21.46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.16.19 21.46	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.16.19 21.46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.16.19 21.46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.16.19 21.46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.16.19 21.46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.16.19 21.46	
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.16.19 21.46	

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Diamondback 22 SL #5

Sample Id:	**Bttm-20**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-009	Date Collected:	05.15.19 09.20		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 14.30	Basis:	Wet Weight
Seq Number:	3089346				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**6840**	50.0	mg/kg	05.16.19 18.06		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.17.19 09.35	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.17.19 09.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.17.19 09.35	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.17.19 09.35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	05.17.19 09.35	
o-Terphenyl	84-15-1	111	%	70-135	05.17.19 09.35	

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Sample Id:	**Bttm-20**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-009	Date Collected:	05.15.19 09.20		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	05.16.19 22.05	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	05.16.19 22.05	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	05.16.19 22.05	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	05.16.19 22.05	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	05.16.19 22.05	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	05.16.19 22.05	U	1
Total BTEX		<0.00198	0.00198	mg/kg	05.16.19 22.05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	102	%	70-130	05.16.19 22.05	
4-Bromofluorobenzene	460-00-4	103	%	70-130	05.16.19 22.05	

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Diamondback 22 SL #5

Sample Id:	**Bttm-21**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-010	Date Collected:	05.15.19 09.30		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 14.30	Basis:	Wet Weight
Seq Number:	3089346				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**262**	50.0	mg/kg	05.16.19 18.13		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 16.00	Basis:	Wet Weight
Seq Number:	3089321				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.17.19 09.54	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.17.19 09.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.17.19 09.54	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.17.19 09.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-135	05.17.19 09.54	
o-Terphenyl	84-15-1	113	%	70-135	05.17.19 09.54	

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Diamondback 22 SL #5

Sample Id:	**Bttm-21**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-010	Date Collected:	05.15.19 09.30		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 12.00	Basis:	Wet Weight
Seq Number:	3089288				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	05.16.19 22.24	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	05.16.19 22.24	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	05.16.19 22.24	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	05.16.19 22.24	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	05.16.19 22.24	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	05.16.19 22.24	U	1
Total BTEX		<0.00199	0.00199	mg/kg	05.16.19 22.24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	05.16.19 22.24	
1,4-Difluorobenzene	540-36-3	101	%	70-130	05.16.19 22.24	

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Sample Id:	**Bttm-22**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-011	Date Collected:	05.15.19 09.40		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 14.30	Basis:	Wet Weight
Seq Number:	3089346				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**174**	50.0	mg/kg	05.16.19 18.21		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 11.30	Basis:	Wet Weight
Seq Number:	3089319				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.16.19 14.03	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.16.19 14.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.16.19 14.03	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.19 14.03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	05.16.19 14.03	
o-Terphenyl	84-15-1	101	%	70-135	05.16.19 14.03	

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Sample Id:	**Bttm-22**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-011	Date Collected:	05.15.19 09.40		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 15.00	Basis:	Wet Weight
Seq Number:	3089300				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	05.17.19 01.12	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	05.17.19 01.12	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	05.17.19 01.12	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	05.17.19 01.12	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	05.17.19 01.12	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	05.17.19 01.12	U	1
Total BTEX		<0.00202	0.00202	mg/kg	05.17.19 01.12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	97	%	70-130	05.17.19 01.12	
1,4-Difluorobenzene	540-36-3	99	%	70-130	05.17.19 01.12	

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Diamondback 22 SL #5

Sample Id:	**Bttm-23**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-012	Date Collected:	05.15.19 09.50		

Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.16.19 14.30	Basis:	Wet Weight
Seq Number:	3089346				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**328**	50.3	mg/kg	05.17.19 09.01		10

Analytical Method:	TPH By SW8015 Mod			Prep Method:	TX1005P
Tech:	ARM			% Moisture:	
Analyst:	ARM	Date Prep:	05.16.19 11.30	Basis:	Wet Weight
Seq Number:	3089319				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<15.0	15.0	mg/kg	05.16.19 14.23	U	1
Diesel Range Organics	C10C28DRO	<15.0	15.0	mg/kg	05.16.19 14.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<15.0	15.0	mg/kg	05.16.19 14.23	U	1
Total TPH	PHC635	<15.0	15.0	mg/kg	05.16.19 14.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	05.16.19 14.23	
o-Terphenyl	84-15-1	98	%	70-135	05.16.19 14.23	

Certificate of Analytical Results 624489

COG Operating LLC, Artesia, NM

Diamondback 22 SL #5

Sample Id:	**Bttm-23**	Matrix:	Soil	Date Received:	05.16.19 10.58
Lab Sample Id:	624489-012	Date Collected:	05.15.19 09.50		
Analytical Method:	BTEX by EPA 8021B			Prep Method:	SW5030B
Tech:	SCM			% Moisture:	
Analyst:	SCM	Date Prep:	05.16.19 15.00	Basis:	Wet Weight
Seq Number:	3089300				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	05.17.19 01.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	05.17.19 01.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	05.17.19 01.31	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	05.17.19 01.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	05.17.19 01.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	05.17.19 01.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	05.17.19 01.31	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	96	%	70-130	05.17.19 01.31	
1,4-Difluorobenzene	540-36-3	100	%	70-130	05.17.19 01.31	

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 624489

COG Operating LLC

Diamondback 22 SL #5

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089409 Matrix: Solid Date Prep: 05.16.19
MB Sample Id: 7678024-1-BLK LCS Sample Id: 7678024-1-BKS LCSD Sample Id: 7678024-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	250	100	250	100	90-110	0	20	mg/kg	05.17.19 12:50	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089346 Matrix: Solid Date Prep: 05.16.19
MB Sample Id: 7678025-1-BLK LCS Sample Id: 7678025-1-BKS LCSD Sample Id: 7678025-1-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	255	102	257	103	90-110	1	20	mg/kg	05.16.19 17:23	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089409 Matrix: Soil Date Prep: 05.16.19
Parent Sample Id: 624486-022 MS Sample Id: 624486-022 S MSD Sample Id: 624486-022 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	26.3	250	280	101	282	102	90-110	1	20	mg/kg	05.17.19 13:11	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089409 Matrix: Soil Date Prep: 05.16.19
Parent Sample Id: 624488-007 MS Sample Id: 624488-007 S MSD Sample Id: 624488-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.3	248	276	103	274	102	90-110	1	20	mg/kg	05.17.19 15:45	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089346 Matrix: Soil Date Prep: 05.16.19
Parent Sample Id: 624487-001 MS Sample Id: 624487-001 S MSD Sample Id: 624487-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	135	248	379	98	379	98	90-110	0	20	mg/kg	05.17.19 11:33	

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 624489

COG Operating LLC

Diamondback 22 SL #5

Analytical Method: **Chloride by EPA 300** Prep Method: E300P
Seq Number: 3089346 Matrix: Soil Date Prep: 05.16.19
Parent Sample Id: 624493-003 MS Sample Id: 624493-003 S MSD Sample Id: 624493-003 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7150	251	9800	1056	10000	1135	90-110	2	20	mg/kg	05.17.19 09:44	X

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3089319 Matrix: Solid Date Prep: 05.16.19
MB Sample Id: 7678029-1-BLK LCS Sample Id: 7678029-1-BKS LCSD Sample Id: 7678029-1-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	<8.00	1000	1030	103	1030	103	70-135	0	20	mg/kg	05.16.19 12:03	
Diesel Range Organics	<8.13	1000	1080	108	1070	107	70-135	1	20	mg/kg	05.16.19 12:03	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		128		126		70-135	%	05.16.19 12:03
o-Terphenyl	106		121		113		70-135	%	05.16.19 12:03

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3089321 Matrix: Solid Date Prep: 05.16.19
MB Sample Id: 7678031-1-BLK LCS Sample Id: 7678031-1-BKS LCSD Sample Id: 7678031-1-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	<8.00	1000	1080	108	1090	109	70-135	1	20	mg/kg	05.17.19 00:26	
Diesel Range Organics	<8.13	1000	1090	109	1110	111	70-135	2	20	mg/kg	05.17.19 00:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		129		129		70-135	%	05.17.19 00:26
o-Terphenyl	109		128		124		70-135	%	05.17.19 00:26

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3089319 Matrix: Soil Date Prep: 05.16.19
Parent Sample Id: 624486-021 MS Sample Id: 624486-021 S MSD Sample Id: 624486-021 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	<7.99	999	1080	108	1120	112	70-135	4	20	mg/kg	05.16.19 13:03	
Diesel Range Organics	<8.12	999	1060	106	1110	111	70-135	5	20	mg/kg	05.16.19 13:03	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	125		122		70-135	%	05.16.19 13:03
o-Terphenyl	107		110		70-135	%	05.16.19 13:03

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 624489

COG Operating LLC

Diamondback 22 SL #5

Analytical Method: **TPH By SW8015 Mod** Prep Method: TX1005P
Seq Number: 3089321 Matrix: Soil Date Prep: 05.16.19
Parent Sample Id: 624488-001 MS Sample Id: 624488-001 S MSD Sample Id: 624488-001 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	<7.97	996	1130	113	1130	113	70-135	0	20	mg/kg	05.17.19 01:24	
Diesel Range Organics	<8.10	996	1100	110	1090	109	70-135	1	20	mg/kg	05.17.19 01:24	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	119		129		70-135	%	05.17.19 01:24
o-Terphenyl	110		110		70-135	%	05.17.19 01:24

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3089288 Matrix: Solid Date Prep: 05.16.19
MB Sample Id: 7678044-1-BLK LCS Sample Id: 7678044-1-BKS LCSD Sample Id: 7678044-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000384	0.0998	0.109	109	0.117	117	70-130	7	35	mg/kg	05.16.19 13:26	
Toluene	<0.000455	0.0998	0.101	101	0.109	109	70-130	8	35	mg/kg	05.16.19 13:26	
Ethylbenzene	<0.000564	0.0998	0.106	106	0.114	114	70-130	7	35	mg/kg	05.16.19 13:26	
m,p-Xylenes	<0.00101	0.200	0.220	110	0.236	118	70-130	7	35	mg/kg	05.16.19 13:26	
o-Xylene	<0.000344	0.0998	0.108	108	0.116	116	70-130	7	35	mg/kg	05.16.19 13:26	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	92		104		104		70-130	%	05.16.19 13:26
4-Bromofluorobenzene	83		100		100		70-130	%	05.16.19 13:26

Analytical Method: **BTEX by EPA 8021B** Prep Method: SW5030B
Seq Number: 3089300 Matrix: Solid Date Prep: 05.16.19
MB Sample Id: 7678051-1-BLK LCS Sample Id: 7678051-1-BKS LCSD Sample Id: 7678051-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000386	0.100	0.105	105	0.112	112	70-130	6	35	mg/kg	05.16.19 23:20	
Toluene	<0.000457	0.100	0.0978	98	0.103	103	70-130	5	35	mg/kg	05.16.19 23:20	
Ethylbenzene	<0.000567	0.100	0.0998	100	0.106	106	70-130	6	35	mg/kg	05.16.19 23:20	
m,p-Xylenes	<0.00102	0.201	0.206	102	0.219	110	70-130	6	35	mg/kg	05.16.19 23:20	
o-Xylene	<0.000346	0.100	0.105	105	0.110	110	70-130	5	35	mg/kg	05.16.19 23:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	91		101		103		70-130	%	05.16.19 23:20
4-Bromofluorobenzene	80		96		102		70-130	%	05.16.19 23:20

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 624489

COG Operating LLC

Diamondback 22 SL #5

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

Seq Number: 3089288 Matrix: Soil Date Prep: 05.16.19

Parent Sample Id: 624488-001 MS Sample Id: 624488-001 S MSD Sample Id: 624488-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000450	0.0994	0.0974	98	0.0947	93	70-130	3	35	mg/kg	05.16.19 14:05	
Toluene	0.000460	0.0994	0.0897	90	0.0869	86	70-130	3	35	mg/kg	05.16.19 14:05	
Ethylbenzene	<0.000561	0.0994	0.0932	94	0.0901	89	70-130	3	35	mg/kg	05.16.19 14:05	
m,p-Xylenes	<0.00101	0.199	0.193	97	0.187	93	70-130	3	35	mg/kg	05.16.19 14:05	
o-Xylene	0.000430	0.0994	0.0929	93	0.0901	89	70-130	3	35	mg/kg	05.16.19 14:05	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		103		70-130	%	05.16.19 14:05
4-Bromofluorobenzene	103		101		70-130	%	05.16.19 14:05

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

Seq Number: 3089300 Matrix: Soil Date Prep: 05.16.19

Parent Sample Id: 624489-011 MS Sample Id: 624489-011 S MSD Sample Id: 624489-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	0.000403	0.101	0.0950	94	0.0955	96	70-130	1	35	mg/kg	05.16.19 23:58	
Toluene	0.000494	0.101	0.0840	83	0.0847	85	70-130	1	35	mg/kg	05.16.19 23:58	
Ethylbenzene	<0.000568	0.101	0.0739	73	0.0745	75	70-130	1	35	mg/kg	05.16.19 23:58	
m,p-Xylenes	<0.00102	0.201	0.141	70	0.140	71	70-130	1	35	mg/kg	05.16.19 23:58	
o-Xylene	<0.000346	0.101	0.0731	72	0.0740	74	70-130	1	35	mg/kg	05.16.19 23:58	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		104		70-130	%	05.16.19 23:58
4-Bromofluorobenzene	100		104		70-130	%	05.16.19 23:58

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

Analysis Request of Chain of Custody Record

Lab # 624499

Page 1 of 2

CONCHO

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

Client Name: COG-Artesia	**Site Manager:** Sheldon Hitchcock
Project Name: Diamondback 22 St. #5	
Project Location: (county, state) Eddy, NM	**Project #:**
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	**Sampler Name:** Sheldon Hitchcock
Comments: Rush	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	(G)rab/(C)omposit	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	SV-1	5/15	8:00		X			X	1	C	X	X	X	
	SV-7		8:10		X			X	1	C	X	X	X	
	SV-9		8:20		X			X	1	C	X	X	X	
	Bttm-13		8:30		X			X	1	C	X	X	X	
	Bttm-14		8:40		X			X	1	C	X	X	X	
	Bttm-17		8:50		X			X	1	C	X	X	X	
	Bttm-18		9:00		X			X	1	C	X	X	X	
	Bttm-19		9:10		X			X	1	C	X	X	X	
	Bttm-20		9:20		X			X	1	C	X	X	X	
	Bttm-21		9:30		X			X	1	C	X	X	X	

Relinquished by:	Date:	Time:	Received by: Date: 05-15-19 Time: 15:20
Relinquished by:	Date:	Time:	Received by: Date: 5/16/19 Time: 1058
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature 0.3/0.2 -0.1 No

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 #: _____

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Analysis Request of Chain of Custody Record

624489

CONCHO

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

Client Name: COG-Artesia	**Site Manager:** Sheldon Hitchcock
Project Name: Diamondback 22 St. #5	
Project Location: (county, state) Eddy, NM	**Project #:**
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	**Sampler Name:** Sheldon Hitchcock
Comments: Rush	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	(G)rab/(C)omposit	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	Bttm - 22	5/15	9:40		X			X	1	C	X	X	X	
	Bttm - 23	5/15	9:50		X			X	1	C	X	X	X	

Final 1.000

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Relinquished by:	Date:	Time:	Received by: Date: 05-15-19 Time: 15:20
Relinquished by:	Date:	Time:	Received by: Date: 5/16/19 Time: 1058
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY

Sample Temperature
0.6
-0.1

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 #: _____

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After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 05/16/2019 10:58:00 AM

Work Order #: 624489

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
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#13 Samples properly preserved?	**Yes**
#14 Sample container(s) intact?	**Yes**
#15 Sufficient sample amount for indicated test(s)?	**Yes**
#16 All samples received within hold time?	**Yes**
#17 Subcontract of sample(s)?	**N/A**
#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: 05/16/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/16/2019
Jessica Kramer

Certificate of Analysis Summary 625607

COG Operating LLC, Artesia, NM

Project Name: Diamondback 22 St. Com #005H

Project Id:
Contact: Sheldon Hitchcock
Project Location: Eddy, NM

Date Received in Lab: Tue May-28-19 07:36 am
Report Date: 29-MAY-19
Project Manager: Jessica Kramer

Analysis Requested											
	Lab Id:	625607-001		625607-002		625607-003					
	Field Id:	Bttm-18		Bttm-20		SW-7					
	Depth:										
	Matrix:	SOIL		SOIL		SOIL					
	Sampled:	May-24-19 10:00		May-24-19 10:10		May-24-19 10:20					
Chloride by EPA 300	***Extracted:***	May-28-19 12:40		May-28-19 12:40		May-28-19 12:40					
	Analyzed:	May-28-19 13:50		May-28-19 13:57		May-28-19 14:04					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		120	50.3	274	49.6	97.3	49.9				

Jessica Kramer
Project Assistant

Analytical Report 625607

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Diamondback 22 St. Com #005H

29-MAY-19

Collected By: Client

1211 W. Florida Ave
Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)

29-MAY-19

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

Reference: XENCO Report No(s): **625607**
Diamondback 22 St. Com #005H
Project Address: Eddy, NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 625607. 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. 625607 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

Sample Cross Reference 625607

COG Operating LLC, Artesia, NM

Diamondback 22 St. Com #005H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bttm-18	S	05-24-19 10:00		625607-001
Bttm-20	S	05-24-19 10:10		625607-002
SW-7	S	05-24-19 10:20		625607-003

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 625607

COG Operating LLC, Artesia, NM

Diamondback 22 St. Com #005H

Sample Id:	**Bttm-18**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625607-001	Date Collected:	05.24.19 10.00		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.28.19 12.40	Basis:	Wet Weight
Seq Number:	3090378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**120**	50.3	mg/kg	05.28.19 13.50		10

Final 1.000

Certificate of Analytical Results 625607

COG Operating LLC, Artesia, NM

Diamondback 22 St. Com #005H

Sample Id:	**Bttm-20**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625607-002	Date Collected:	05.24.19 10.10		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.28.19 12.40	Basis:	Wet Weight
Seq Number:	3090378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**274**	49.6	mg/kg	05.28.19 13.57		10

Final 1.000

Certificate of Analytical Results 625607

COG Operating LLC, Artesia, NM

Diamondback 22 St. Com #005H

Sample Id:	**SW-7**	Matrix:	Soil	Date Received:	05.28.19 07.36
Lab Sample Id:	625607-003	Date Collected:	05.24.19 10.20		
Analytical Method:	Chloride by EPA 300			Prep Method:	E300P
Tech:	CHE			% Moisture:	
Analyst:	CHE	Date Prep:	05.28.19 12.40	Basis:	Wet Weight
Seq Number:	3090378				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**97.3**	49.9	mg/kg	05.28.19 14.04		10

Flagging Criteria

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

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

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

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

F RPD exceeded lab control limits.

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

U Analyte was not detected.

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

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

K Sample analyzed outside of recommended hold time.

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection 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 625607

COG Operating LLC

Diamondback 22 St. Com #005H

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3090378 Matrix: Solid Date Prep: 05.28.19

MB Sample Id: 7678646-1-BLK LCS Sample Id: 7678646-1-BKS LCSD Sample Id: 7678646-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	234	94	233	93	90-110	0	20	mg/kg	05.28.19 13:08	

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3090378 Matrix: Soil Date Prep: 05.28.19

Parent Sample Id: 625608-001 MS Sample Id: 625608-001 S MSD Sample Id: 625608-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	749	250	952	81	952	81	90-110	0	20	mg/kg	05.28.19 13:30	X

Analytical Method: **Chloride by EPA 300** Prep Method: E300P

Seq Number: 3090378 Matrix: Soil Date Prep: 05.28.19

Parent Sample Id: 625614-001 MS Sample Id: 625614-001 S MSD Sample Id: 625614-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	393	249	615	89	613	88	90-110	0	20	mg/kg	05.28.19 15:17	X

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

Analysis Request of Chain of Custody Record

le75607

CONCHO

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

Client Name: COG-Artesia	**Site Manager:** Sheldon Hitchcock
Project Name: Diamondback 22 St. Com #005H	
Project Location: (county, state) Eddy, NM	**Project #:**
Invoice to: Sheldon Hitchcock	
Receiving Laboratory: Xenco	**Sampler Name:** Sheldon Hitchcock
Comments: Rush	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	# CONTAINERS	(C)omposite/(G)rab	TPH 8015M (GRO - DRO - MRO)	BTEX 8021B	Chloride	Hold
	Bttm-18	5/24/2019	10:00		X				1	C			X	
	Bttm-20	5/24/2019	10:10		X				1	C			X	
	SW-7	5/24/2019	10:20		X				1	C			X	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Shelby Rice	5/24/19	13:20	[signature]	05-24-19	13:20
			[signature]	5/29/19	0736

LAB USE ONLY

Sample Temperature 0.3/0.1 -0.2 C

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

Final 1.000

Page 11 of 12

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 05/28/2019 07:36:00 AM

Work Order #: 625607

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)?	.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**
#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: 05/28/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 05/28/2019
Jessica Kramer

APPENDIX D

NW N NE

300 330 0 30 60

6°N (T) 32°2.100', -104°4.205' ±16.4ft ▲ 2974ft

COG

3602993 8-I

COG PRODUCTION LLC

DIAMONDBACK 22 STATE COM #5H

UL A SEC.22-T26S-R28E

170' FNL & 990' FEL

EDDY COUNTY, NM

API #30-015-42432

15 May 2019, 12:18:44

SW W NW

240 270 300 330

289°W (T) 32°2.086', -104°4.190' ±16.4ft ▲ 2980ft

15 May 2019, 12:20:31

SW W NW

210 240 270 300 330

271°W (T) 32°2.094', -104°4.214' ±16.4ft ▲ 2980ft

15 May 2019, 12:20:04

S SW W NW

180 210 240 270 300 330

254°W (T) 32°2.079', -104°4.211' ±16.4ft ▲ 2975ft

15 May 2019, 12:19:41