



January 25, 2021

Oil Conservation Division, District 1
1625 N. French Dr.
Hobbs, NM 88240

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

Deferral Request

Gold Coast 26 Federal SWD #001

Incident #: NRM2017849298

DOR: June 12, 2020

GPS: 32.1876564 -103.6465607

**Unit Letter K, Section 26, Township 24 South, Range 32 East
Lea County, New Mexico**

To Whom It May Concern,

COG Operating, LLC (COG) is pleased to submit the following deferral request in response to a release that occurred at the Gold Coast 26 Federal SWD #001. The release was located in Unit Letter K, Section 26, Township 24 South and Range 32 East in Lea County, New Mexico. More specifically the latitude and longitude for the release are 32.1876564 North and -103.6465607 West.

BACKGROUND

The release was discovered on June 12, 2020. A C-141 initial report was submitted to the New Mexico Oil Conservation Division (NMOCD) and the Bureau of Land Management (BLM). The C-141 is presented in Appendix A. Internal corrosion of a fitting resulted in the release of approximately seventy (70) barrels (bbls) of produced water. A vacuum truck was utilized to recover sixty-four (64) bbls of produced water.

GROUNDWATER AND REGULATORY FRAMEWORK

In order to determine the depth to groundwater in the project vicinity, a soil boring was installed on the Gold Coast 26 Federal SWD #001 well pad. The soil boring was advanced to a depth of fifty-five (55) feet below ground surface (BGS). Casing and slotted well screen were installed and the soil boring was left open for 72-hours. No water was discovered in the well following the 72-hour period. The drillers log is shown in Appendix B.

According to the United State Geological Survey (USGS) the nearest well is approximately 1.8 miles southwest of the project site. The most recent measurement data indicates that groundwater is approximately two-hundred and ninety (290) feet below ground surface (BGS). 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, no other receptors (water wells, playas, karst, 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.)
None Located	>55 feet

Delineation and Closure Criteria:

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

REMEDIAL ACTIONS

- The impacted area was excavated to a depth of four (4) feet BGS.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- Confirmation soil samples were taken from the bottom and sidewalls of the excavated areas per NMED 19.15.29.13.
- All of the impacted soil above Table 1 closure criteria was removed except in the vicinity of sample location SW-18. SW-18 is a sidewall sample location with chloride concentrations greater than 600 mg/kg in the uppermost four feet. Due to buried pipelines, telephone poles, and the tank battery further excavation in this area would necessitate a major facility deconstruction.
- The excavation will be backfilled with clean “like” material and contoured to match the surrounding terrain.

SITE RECLAMATION AND RESTORATION

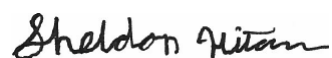
Upon completion of the remediation the pasture area will be backfilled with top soil and contoured to match the surrounding terrain. The surface will be left in a rough condition to approximate natural surface deviations. The site will be mechanically seeded with BLM #2 seed mixture once proper seasonal conditions exist.

DEFERRAL REQUEST

Due to the infrastructure present at this location further excavation and soil assessment activities are not feasible without threatening the structural integrity of the surrounding equipment and the safety of personnel. COG Operating, LLC respectfully requests that any further remedial activities be deferred until abandonment of the facility.

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

Sincerely,

A handwritten signature in black ink that reads "Sheldon Hitchcock". The signature is written in a cursive, slightly slanted style.

Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

FIGURES

June 12, 2020

Gold Coast 26 Federal SWD #001



June 12, 2020

Gold Coast 26 Federal SWD #001



June 12, 2020

Gold Coast 26 Federal SWD #001



TABLES

Table 1
COG Operating LLC.
Gold Coast 26 Federal SWD #001
Lea 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	GRO	DRO				Total
NMOCD RRAL Limits (mg/kg)					-	-	-	2,500	-	-	1,000	10	50	10,000
B-1	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,250
B-2	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	932
B-3	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,030
B-4	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,020
B-5	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	997
B-6	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,990
B-7	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	941
B-8	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,170
B-9	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,580
B-10	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,730
B-11	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	963
B-12	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	898
B-13	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	924
B-14	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	888
B-15	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,020
B-16	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	116
B-17	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	98
B-18	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	111
B-19	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	109
B-20	4	1/7/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	108
B-21	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	2,850
B-22	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	3,010
B-23	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	3,370
B-24	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	473
B-25	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	572
B-26	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	629
B-27	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,590
B-28	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,810
B-29	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,530
B-30	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	1,350
B-31	4	1/21/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	484
SW-1	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	137
SW-2	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	158
SW-3	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	236
SW-4	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	19.9
SW-5	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	14.5
SW-6	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	14.7
SW-7	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	14.6
SW-8	N/A	1/8/2021		X	<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	710
SW-9	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	33.7
SW-10	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	<9.90
SW-11	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	11.2

Table 1
COG Operating LLC.
Gold Coast 26 Federal SWD #001
Lea 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	GRO	DRO	Total			
SW-12	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	10.4
SW-13	N/A	1/8/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	11.1
SW-14	N/A	1/9/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	<10.0
SW-15	N/A	1/10/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	431
SW-16	N/A	1/11/2021	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	331
SW-17	N/A	1/22/2021	X		<10.0	24.3	<10.0	24.3	<10.0	24.3	24.3	<0.050	<0.300	<16.0
SW-18	N/A	1/22/2021	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.050	<0.300	1,340
SW-8	N/A	1/22/2021	X		#	#	#	0.0	#	#	0.0	#	#	48.0
(#) 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	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

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

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

Unit Letter	Section	Township	Range	County

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

Nature and Volume of Release

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

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

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 <u>not</u> been undertaken, explain why:	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: _____	Title: _____
Signature: <u>Sheldon Nitan</u>	Date: _____
email: _____	Telephone: _____
<u>OCD Only</u>	
Received by: _____	Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

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

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

Characterization Report Checklist: Each of the following items must be included in the report.

- ☐ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☐ Field data
- ☐ Data table of soil contaminant concentration data
- ☐ Depth to water determination
- ☐ Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
- ☐ Boring or excavation logs
- ☐ Photographs including date and GIS information
- ☐ Topographic/Aerial maps
- ☐ Laboratory data including chain of custody

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

State of New Mexico
Oil Conservation Division

Page 4

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: _____ Title: _____

Signature: Sheldon Nitan Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Remediation Plan

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

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

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

- ☐ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☐ Extents of contamination must be fully delineated.
- ☐ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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

Printed Name: _____ Title: _____

Signature: Sheldon Nitan Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Signature: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- ☐ A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- ☐ Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- ☐ Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- ☐ Description of remediation activities

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

Printed Name: _____ Title: _____

Signature: Sheldon Hittman Date: _____

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: Chad Henry Date: _____

Printed Name: _____ Title: _____

APPENDIX B



Gold Coast 26 Federal SWD #001

Legend

USGS WELLS

OSE_PODs

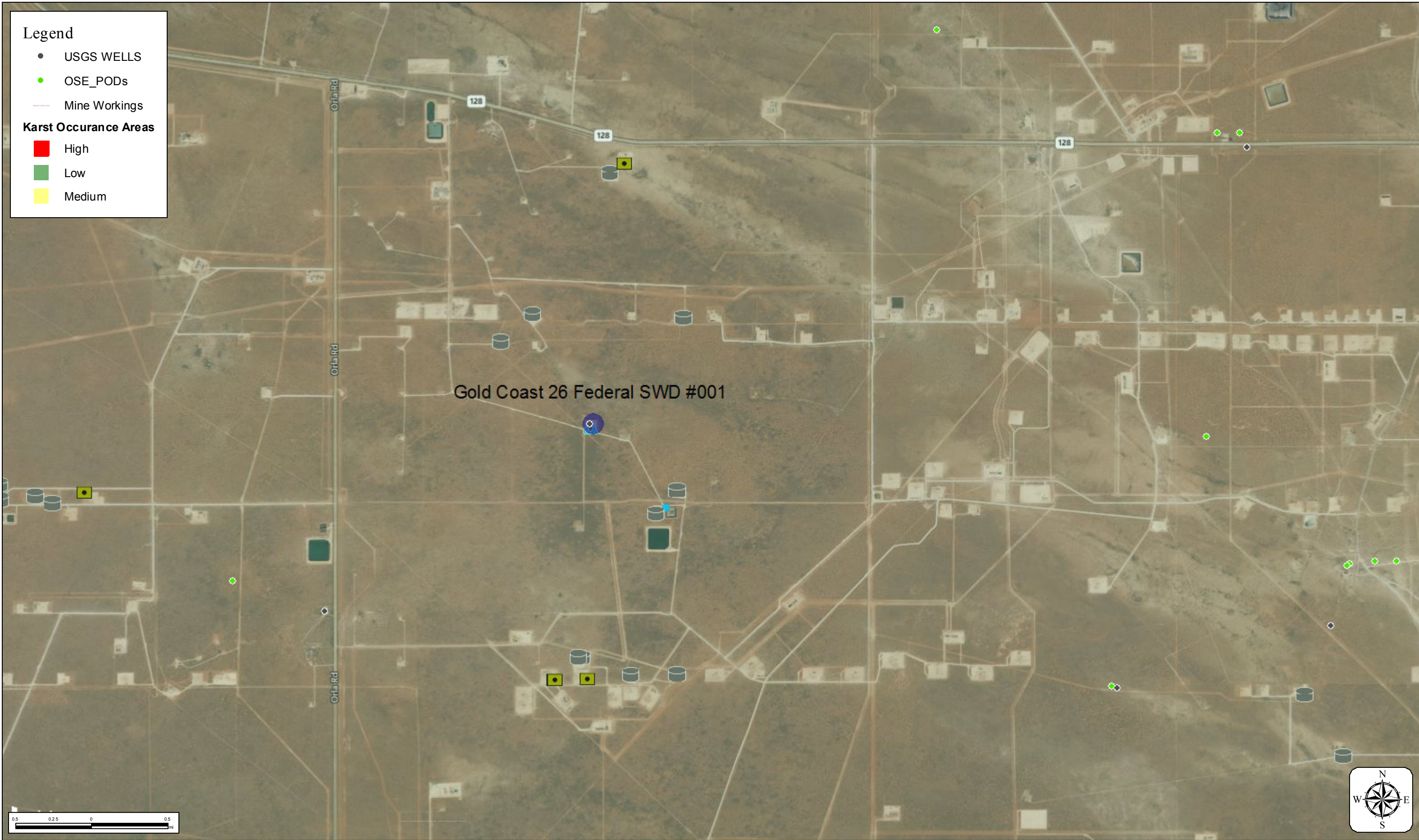
Mine Workings

Karst Occurance Areas

High

Low

Medium



WELL LOG

[illegible]

USGS 321005103402301 24S.32E.33.42241



APPENDIX C

Certificate of Analysis Summary 683820



COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Date Received in Lab: Thu 01.07.2021 14:23

Contact: Sheldon Hitchcock

Report Date: 01.11.2021 11:27

Project Location: Lea, New Mexico

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	683820-001	683820-002	683820-003	683820-004	683820-005	683820-006
	<i>Field Id:</i>	B-1	B-2	B-3	B-4	B-5	B-6
	<i>Depth:</i>	4- ft	4- ft	4- ft	4- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	01.07.2021 10:30	01.07.2021 10:32	01.07.2021 10:34	01.07.2021 10:36	01.07.2021 10:38	01.07.2021 10:40
BTEX by EPA 8021B	<i>Extracted:</i>	*** ** *	** ** ** *	*** ** *	** ** ** *	*** ** *	** ** ** *
	<i>Analyzed:</i>	01.08.2021 14:55	01.08.2021 15:18	01.08.2021 15:40	01.08.2021 16:03	01.08.2021 16:25	01.08.2021 16:48
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
m,p-Xylenes		<0.00401 0.00401	<0.00397 0.00397	<0.00399 0.00399	<0.00401 0.00401	<0.00403 0.00403	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30
	<i>Analyzed:</i>	01.08.2021 03:17	01.08.2021 03:23	01.08.2021 03:29	01.08.2021 10:20	01.08.2021 10:56	01.08.2021 11:02
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1250 9.94	932 9.96	1030 10.0	1020 9.92	997 10.1	1990 49.7
TPH By SW8015 Mod	<i>Extracted:</i>	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00
	<i>Analyzed:</i>	01.08.2021 17:33	01.08.2021 18:33	01.08.2021 18:53	01.08.2021 19:13	01.08.2021 19:33	01.08.2021 19:53
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<49.8 49.8	<50.1 50.1	<49.9 49.9	<50.2 50.2	<50.2 50.2	<50.2 50.2
Diesel Range Organics		<49.8 49.8	<50.1 50.1	<49.9 49.9	<50.2 50.2	<50.2 50.2	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.1 50.1	<49.9 49.9	<50.2 50.2	<50.2 50.2	<50.2 50.2
Total TPH		<49.8 49.8	<50.1 50.1	<49.9 49.9	<50.2 50.2	<50.2 50.2	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 683820



COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Date Received in Lab: Thu 01.07.2021 14:23

Contact: Sheldon Hitchcock

Report Date: 01.11.2021 11:27

Project Location: Lea, New Mexico

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	683820-007	683820-008	683820-009	683820-010	683820-011	683820-012
	<i>Field Id:</i>	B-7	B-8	B-9	B-10	B-11	B-12
	<i>Depth:</i>	4- ft	4- ft	4- ft	4- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	01.07.2021 10:42	01.07.2021 10:44	01.07.2021 10:46	01.07.2021 10:48	01.07.2021 10:50	01.07.2021 10:52
BTEX by EPA 8021B	<i>Extracted:</i>	*** ** *	** ** ** *	*** ** *	** ** ** *	*** ** *	** ** ** *
	<i>Analyzed:</i>	01.08.2021 17:10	01.08.2021 17:32	01.08.2021 17:55	01.08.2021 18:17	01.08.2021 19:37	01.08.2021 19:59
	<i>Units/RL:</i>	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	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00399 0.00399	<0.00397 0.00397	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30
	<i>Analyzed:</i>	01.08.2021 11:08	01.08.2021 11:14	01.08.2021 11:32	01.08.2021 11:38	01.08.2021 11:44	01.08.2021 11:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		941 50.4	1170 50.2	1580 49.5	1730 50.3	963 10.0	898 9.98
TPH By SW8015 Mod	<i>Extracted:</i>	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00
	<i>Analyzed:</i>	01.08.2021 20:13	01.08.2021 20:33	01.08.2021 20:53	01.08.2021 21:13	01.08.2021 21:53	01.08.2021 22:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.3 50.3	<50.0 50.0	<50.3 50.3
Diesel Range Organics		<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.3 50.3	<50.0 50.0	<50.3 50.3
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.3 50.3	<50.0 50.0	<50.3 50.3
Total TPH		<50.0 50.0	<50.2 50.2	<49.9 49.9	<50.3 50.3	<50.0 50.0	<50.3 50.3

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 683820



COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Date Received in Lab: Thu 01.07.2021 14:23

Contact: Sheldon Hitchcock

Report Date: 01.11.2021 11:27

Project Location: Lea, New Mexico

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	683820-013	683820-014	683820-015	683820-016	683820-017	683820-018
	<i>Field Id:</i>	B-13	B-14	B-15	B-16	B-17	B-18
	<i>Depth:</i>	4- ft	4- ft	4- ft	4- ft	4- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	01.07.2021 10:54	01.07.2021 10:56	01.07.2021 10:58	01.07.2021 11:00	01.07.2021 11:02	01.07.2021 11:04
BTEX by EPA 8021B	<i>Extracted:</i>	*** ** *	** ** ** *	*** ** *	** ** ** *	*** ** *	** ** ** *
	<i>Analyzed:</i>	01.08.2021 20:22	01.08.2021 20:44	01.08.2021 21:07	01.08.2021 21:29	01.08.2021 21:52	01.08.2021 22:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201
m,p-Xylenes		<0.00399 0.00399	<0.00403 0.00403	<0.00401 0.00401	<0.00404 0.00404	<0.00399 0.00399	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00201 0.00201
Chloride by EPA 300	<i>Extracted:</i>	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30
	<i>Analyzed:</i>	01.08.2021 11:56	01.08.2021 12:08	01.08.2021 12:25	01.08.2021 12:31	01.08.2021 12:55	01.08.2021 13:19
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		924 9.92	888 9.98	1020 10.0	116 10.1	98.4 9.92	111 10.1
TPH By SW8015 Mod	<i>Extracted:</i>	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00	01.08.2021 14:00
	<i>Analyzed:</i>	01.08.2021 22:33	01.08.2021 22:53	01.08.2021 23:13	01.08.2021 23:33	01.08.2021 23:53	01.09.2021 00:13
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.0 50.0	<50.1 50.1	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.2 50.2
Diesel Range Organics		<50.0 50.0	<50.1 50.1	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.1 50.1	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.2 50.2
Total TPH		<50.0 50.0	<50.1 50.1	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 683820

COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, New Mexico

Date Received in Lab: Thu 01.07.2021 14:23

Report Date: 01.11.2021 11:27

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683820-019		683820-020				
	Field Id:	B-19		B-20				
	Depth:	4- ft		4- ft				
	Matrix:	SOIL		SOIL				
	Sampled:	01.07.2021 11:06		01.07.2021 11:08				
BTEX by EPA 8021B	Extracted:	** ** *		** ** *				
	Analyzed:	01.08.2021 22:37		01.08.2021 22:59				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Benzene		<0.00202	0.00202	<0.00200	0.00200			
Toluene		<0.00202	0.00202	<0.00200	0.00200			
Ethylbenzene		<0.00202	0.00202	<0.00200	0.00200			
m,p-Xylenes		<0.00404	0.00404	<0.00400	0.00400			
o-Xylene		<0.00202	0.00202	<0.00200	0.00200			
Total Xylenes		<0.00202	0.00202	<0.00200	0.00200			
Total BTEX		<0.00202	0.00202	<0.00200	0.00200			
Chloride by EPA 300	Extracted:	01.07.2021 17:30		01.07.2021 17:30				
	Analyzed:	01.08.2021 13:25		01.08.2021 13:31				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Chloride		109	10.1	108	10.1			
TPH By SW8015 Mod	Extracted:	01.08.2021 14:00		01.08.2021 14:00				
	Analyzed:	01.09.2021 00:33		01.09.2021 00:53				
	Units/RL:	mg/kg	RL	mg/kg	RL			
Gasoline Range Hydrocarbons		<50.1	50.1	<50.2	50.2			
Diesel Range Organics		<50.1	50.1	<50.2	50.2			
Motor Oil Range Hydrocarbons (MRO)		<50.1	50.1	<50.2	50.2			
Total TPH		<50.1	50.1	<50.2	50.2			

BRL - Below Reporting Limit

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





Analytical Report 683820

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Gold Coast SWD

01.11.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.11.2021

Project Manager: **Sheldon Hitchcock**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **683820**

Gold Coast SWD

Project Address: Lea, New Mexico

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 683820. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 683820 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

Sample Cross Reference 683820**COG Operating LLC, Artesia, NM**

Gold Coast SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B-1	S	01.07.2021 10:30	4 ft	683820-001
B-2	S	01.07.2021 10:32	4 ft	683820-002
B-3	S	01.07.2021 10:34	4 ft	683820-003
B-4	S	01.07.2021 10:36	4 ft	683820-004
B-5	S	01.07.2021 10:38	4 ft	683820-005
B-6	S	01.07.2021 10:40	4 ft	683820-006
B-7	S	01.07.2021 10:42	4 ft	683820-007
B-8	S	01.07.2021 10:44	4 ft	683820-008
B-9	S	01.07.2021 10:46	4 ft	683820-009
B-10	S	01.07.2021 10:48	4 ft	683820-010
B-11	S	01.07.2021 10:50	4 ft	683820-011
B-12	S	01.07.2021 10:52	4 ft	683820-012
B-13	S	01.07.2021 10:54	4 ft	683820-013
B-14	S	01.07.2021 10:56	4 ft	683820-014
B-15	S	01.07.2021 10:58	4 ft	683820-015
B-16	S	01.07.2021 11:00	4 ft	683820-016
B-17	S	01.07.2021 11:02	4 ft	683820-017
B-18	S	01.07.2021 11:04	4 ft	683820-018
B-19	S	01.07.2021 11:06	4 ft	683820-019
B-20	S	01.07.2021 11:08	4 ft	683820-020



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Gold Coast SWD

Project ID:
Work Order Number(s): 683820

Report Date: 01.11.2021
Date Received: 01.07.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-1** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-001 Date Collected: 01.07.2021 10:30 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147124 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1250	9.94	mg/kg	01.08.2021 03:17		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	01.08.2021 17:33	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	01.08.2021 17:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.08.2021 17:33	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.08.2021 17:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	111	%	70-135	01.08.2021 17:33		
o-Terphenyl	84-15-1	106	%	70-135	01.08.2021 17:33		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-1** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-001 Date Collected: 01.07.2021 10:30 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 14:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 14:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 14:55	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.08.2021 14:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 14:55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 14:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 14:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	01.08.2021 14:55		
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.08.2021 14:55		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-2** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-002 Date Collected: 01.07.2021 10:32 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147124 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	932	9.96	mg/kg	01.08.2021 03:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	01.08.2021 18:33	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	01.08.2021 18:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.08.2021 18:33	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.08.2021 18:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	102	%	70-135	01.08.2021 18:33		
o-Terphenyl	84-15-1	110	%	70-135	01.08.2021 18:33		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-2** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-002 Date Collected: 01.07.2021 10:32 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.08.2021 15:18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.08.2021 15:18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.08.2021 15:18	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.08.2021 15:18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.08.2021 15:18	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.08.2021 15:18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.08.2021 15:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	01.08.2021 15:18		
1,4-Difluorobenzene	540-36-3	108	%	70-130	01.08.2021 15:18		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-3** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-003 Date Collected: 01.07.2021 10:34 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147124 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1030	10.0	mg/kg	01.08.2021 03:29		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.08.2021 18:53	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.08.2021 18:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.08.2021 18:53	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.08.2021 18:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-135	01.08.2021 18:53		
o-Terphenyl	84-15-1	98	%	70-135	01.08.2021 18:53		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-3** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-003 Date Collected: 01.07.2021 10:34 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 15:40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 15:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 15:40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 15:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 15:40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 15:40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 15:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	01.08.2021 15:40		
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.08.2021 15:40		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-4** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-004 Date Collected: 01.07.2021 10:36 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1020	9.92	mg/kg	01.08.2021 10:20		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.08.2021 19:13	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.08.2021 19:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.08.2021 19:13	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.08.2021 19:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	01.08.2021 19:13		
o-Terphenyl	84-15-1	103	%	70-135	01.08.2021 19:13		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-4** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-004 Date Collected: 01.07.2021 10:36 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 16:03	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 16:03	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 16:03	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.08.2021 16:03	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 16:03	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 16:03	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 16:03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	01.08.2021 16:03		
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.08.2021 16:03		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-5** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-005 Date Collected: 01.07.2021 10:38 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	997	10.1	mg/kg	01.08.2021 10:56		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.08.2021 19:33	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.08.2021 19:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.08.2021 19:33	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.08.2021 19:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	117	%	70-135	01.08.2021 19:33		
o-Terphenyl	84-15-1	96	%	70-135	01.08.2021 19:33		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-5** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-005 Date Collected: 01.07.2021 10:38 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.08.2021 16:25	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.08.2021 16:25	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.08.2021 16:25	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.08.2021 16:25	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.08.2021 16:25	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.08.2021 16:25	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.08.2021 16:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.08.2021 16:25		
4-Bromofluorobenzene	460-00-4	119	%	70-130	01.08.2021 16:25		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-6** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-006 Date Collected: 01.07.2021 10:40 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1990	49.7	mg/kg	01.08.2021 11:02		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.08.2021 19:53	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.08.2021 19:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.08.2021 19:53	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.08.2021 19:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	105	%	70-135	01.08.2021 19:53		
o-Terphenyl	84-15-1	110	%	70-135	01.08.2021 19:53		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-6** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-006 Date Collected: 01.07.2021 10:40 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 16:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 16:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 16:48	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.08.2021 16:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 16:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 16:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 16:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.08.2021 16:48		
4-Bromofluorobenzene	460-00-4	123	%	70-130	01.08.2021 16:48		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-7** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-007 Date Collected: 01.07.2021 10:42 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	941	50.4	mg/kg	01.08.2021 11:08		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.08.2021 20:13	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.08.2021 20:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.08.2021 20:13	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.08.2021 20:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-135	01.08.2021 20:13		
o-Terphenyl	84-15-1	118	%	70-135	01.08.2021 20:13		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-7** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-007 Date Collected: 01.07.2021 10:42 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 17:10	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 17:10	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 17:10	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 17:10	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 17:10	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 17:10	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 17:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.08.2021 17:10		
4-Bromofluorobenzene	460-00-4	119	%	70-130	01.08.2021 17:10		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-8** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-008 Date Collected: 01.07.2021 10:44 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1170	50.2	mg/kg	01.08.2021 11:14		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.08.2021 20:33	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.08.2021 20:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.08.2021 20:33	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.08.2021 20:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	119	%	70-135	01.08.2021 20:33		
o-Terphenyl	84-15-1	106	%	70-135	01.08.2021 20:33		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-8** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-008 Date Collected: 01.07.2021 10:44 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.08.2021 17:32	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.08.2021 17:32	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.08.2021 17:32	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.08.2021 17:32	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.08.2021 17:32	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.08.2021 17:32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.08.2021 17:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.08.2021 17:32		
4-Bromofluorobenzene	460-00-4	127	%	70-130	01.08.2021 17:32		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-9** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-009 Date Collected: 01.07.2021 10:46 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1580	49.5	mg/kg	01.08.2021 11:32		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.08.2021 20:53	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.08.2021 20:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.08.2021 20:53	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.08.2021 20:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	120	%	70-135	01.08.2021 20:53		
o-Terphenyl	84-15-1	114	%	70-135	01.08.2021 20:53		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-9** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-009 Date Collected: 01.07.2021 10:46 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 17:55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 17:55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 17:55	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 17:55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 17:55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 17:55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 17:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.08.2021 17:55		
4-Bromofluorobenzene	460-00-4	121	%	70-130	01.08.2021 17:55		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-10** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-010 Date Collected: 01.07.2021 10:48 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1730	50.3	mg/kg	01.08.2021 11:38		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.3	50.3	mg/kg	01.08.2021 21:13	U	1
Diesel Range Organics	C10C28DRO	<50.3	50.3	mg/kg	01.08.2021 21:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.08.2021 21:13	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.08.2021 21:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	113	%	70-135	01.08.2021 21:13		
o-Terphenyl	84-15-1	98	%	70-135	01.08.2021 21:13		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-10** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-010 Date Collected: 01.07.2021 10:48 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.08.2021 18:17	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.08.2021 18:17	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.08.2021 18:17	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.08.2021 18:17	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.08.2021 18:17	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.08.2021 18:17	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.08.2021 18:17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	109	%	70-130	01.08.2021 18:17		
4-Bromofluorobenzene	460-00-4	124	%	70-130	01.08.2021 18:17		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-11** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-011 Date Collected: 01.07.2021 10:50 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	963	10.0	mg/kg	01.08.2021 11:44		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.08.2021 21:53	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.08.2021 21:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.08.2021 21:53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.08.2021 21:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-135	01.08.2021 21:53		
o-Terphenyl	84-15-1	112	%	70-135	01.08.2021 21:53		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-11**
Lab Sample Id: 683820-011

Matrix: Soil
Date Collected: 01.07.2021 10:50

Date Received: 01.07.2021 14:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.07.2021 11:43

% Moisture:
Basis: Wet Weight

Seq Number: 3147337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 19:37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 19:37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 19:37	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 19:37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 19:37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 19:37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 19:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.08.2021 19:37		
4-Bromofluorobenzene	460-00-4	121	%	70-130	01.08.2021 19:37		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-12** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-012 Date Collected: 01.07.2021 10:52 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	898	9.98	mg/kg	01.08.2021 11:50		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.3	50.3	mg/kg	01.08.2021 22:13	U	1
Diesel Range Organics	C10C28DRO	<50.3	50.3	mg/kg	01.08.2021 22:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.08.2021 22:13	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.08.2021 22:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	119	%	70-135	01.08.2021 22:13		
o-Terphenyl	84-15-1	96	%	70-135	01.08.2021 22:13		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-12**
Lab Sample Id: 683820-012

Matrix: Soil
Date Collected: 01.07.2021 10:52

Date Received: 01.07.2021 14:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.07.2021 11:43

% Moisture:
Basis: Wet Weight

Seq Number: 3147337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.08.2021 19:59	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.08.2021 19:59	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.08.2021 19:59	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.08.2021 19:59	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.08.2021 19:59	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.08.2021 19:59	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.08.2021 19:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	01.08.2021 19:59		
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.08.2021 19:59		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-13** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-013 Date Collected: 01.07.2021 10:54 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	924	9.92	mg/kg	01.08.2021 11:56		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.08.2021 22:33	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.08.2021 22:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.08.2021 22:33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.08.2021 22:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	104	%	70-135	01.08.2021 22:33		
o-Terphenyl	84-15-1	122	%	70-135	01.08.2021 22:33		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-13**
Lab Sample Id: 683820-013

Matrix: Soil
Date Collected: 01.07.2021 10:54

Date Received: 01.07.2021 14:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.07.2021 11:43

% Moisture:
Basis: Wet Weight

Seq Number: 3147337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 20:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 20:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 20:22	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 20:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 20:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 20:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 20:22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.08.2021 20:22		
4-Bromofluorobenzene	460-00-4	118	%	70-130	01.08.2021 20:22		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-14** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-014 Date Collected: 01.07.2021 10:56 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	888	9.98	mg/kg	01.08.2021 12:08		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	01.08.2021 22:53	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	01.08.2021 22:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.08.2021 22:53	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.08.2021 22:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-135	01.08.2021 22:53		
o-Terphenyl	84-15-1	118	%	70-135	01.08.2021 22:53		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-14** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-014 Date Collected: 01.07.2021 10:56 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.08.2021 20:44	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.08.2021 20:44	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.08.2021 20:44	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.08.2021 20:44	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.08.2021 20:44	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.08.2021 20:44	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.08.2021 20:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.08.2021 20:44		
4-Bromofluorobenzene	460-00-4	119	%	70-130	01.08.2021 20:44		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-15** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-015 Date Collected: 01.07.2021 10:58 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1020	10.0	mg/kg	01.08.2021 12:25		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.08.2021 23:13	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.08.2021 23:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.08.2021 23:13	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.08.2021 23:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	112	%	70-135	01.08.2021 23:13		
o-Terphenyl	84-15-1	95	%	70-135	01.08.2021 23:13		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-15** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-015 Date Collected: 01.07.2021 10:58 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 21:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 21:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 21:07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.08.2021 21:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 21:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 21:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 21:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.08.2021 21:07		
4-Bromofluorobenzene	460-00-4	122	%	70-130	01.08.2021 21:07		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-16** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-016 Date Collected: 01.07.2021 11:00 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	116	10.1	mg/kg	01.08.2021 12:31		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	01.08.2021 23:33	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	01.08.2021 23:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.08.2021 23:33	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.08.2021 23:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	01.08.2021 23:33	
o-Terphenyl	84-15-1	116	%	70-135	01.08.2021 23:33	



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-16** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-016 Date Collected: 01.07.2021 11:00 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.08.2021 21:29	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.08.2021 21:29	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.08.2021 21:29	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.08.2021 21:29	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.08.2021 21:29	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.08.2021 21:29	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.08.2021 21:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.08.2021 21:29		
4-Bromofluorobenzene	460-00-4	117	%	70-130	01.08.2021 21:29		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-17** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-017 Date Collected: 01.07.2021 11:02 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	98.4	9.92	mg/kg	01.08.2021 12:55		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.08.2021 23:53	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.08.2021 23:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.08.2021 23:53	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.08.2021 23:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	114	%	70-135	01.08.2021 23:53		
o-Terphenyl	84-15-1	102	%	70-135	01.08.2021 23:53		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-17**
Lab Sample Id: 683820-017

Matrix: Soil
Date Collected: 01.07.2021 11:02

Date Received: 01.07.2021 14:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.07.2021 11:43

% Moisture:
Basis: Wet Weight

Seq Number: 3147337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 21:52	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 21:52	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 21:52	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 21:52	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 21:52	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 21:52	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 21:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	117	%	70-130	01.08.2021 21:52	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.08.2021 21:52	



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-18** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-018 Date Collected: 01.07.2021 11:04 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	111	10.1	mg/kg	01.08.2021 13:19		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.09.2021 00:13	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.09.2021 00:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.09.2021 00:13	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.09.2021 00:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	115	%	70-135	01.09.2021 00:13		
o-Terphenyl	84-15-1	118	%	70-135	01.09.2021 00:13		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-18**
Lab Sample Id: 683820-018

Matrix: Soil
Date Collected: 01.07.2021 11:04

Date Received: 01.07.2021 14:23
Sample Depth: 4 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.07.2021 11:43

% Moisture:
Basis: Wet Weight

Seq Number: 3147337

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.08.2021 22:14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.08.2021 22:14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.08.2021 22:14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.08.2021 22:14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.08.2021 22:14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.08.2021 22:14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.08.2021 22:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.08.2021 22:14		
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.08.2021 22:14		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-19** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-019 Date Collected: 01.07.2021 11:06 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	109	10.1	mg/kg	01.08.2021 13:25		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	01.09.2021 00:33	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	01.09.2021 00:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.09.2021 00:33	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.09.2021 00:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	123	%	70-135	01.09.2021 00:33		
o-Terphenyl	84-15-1	94	%	70-135	01.09.2021 00:33		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-19** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-019 Date Collected: 01.07.2021 11:06 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.08.2021 22:37	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.08.2021 22:37	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.08.2021 22:37	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.08.2021 22:37	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.08.2021 22:37	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.08.2021 22:37	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.08.2021 22:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.08.2021 22:37		
4-Bromofluorobenzene	460-00-4	123	%	70-130	01.08.2021 22:37		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-20** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-020 Date Collected: 01.07.2021 11:08 Sample Depth: 4 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	108	10.1	mg/kg	01.08.2021 13:31		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: MAB
 Analyst: CAC Date Prep: 01.08.2021 14:00 % Moisture:
 Seq Number: 3147330 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.09.2021 00:53	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.09.2021 00:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.09.2021 00:53	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.09.2021 00:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-135	01.09.2021 00:53		
o-Terphenyl	84-15-1	118	%	70-135	01.09.2021 00:53		



Certificate of Analytical Results 683820

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-20** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683820-020 Date Collected: 01.07.2021 11:08 Sample Depth: 4 ft
 Analytical Method: BTEX by EPA 8021B Prep Method: SW5035A
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 11:43 % Moisture:
 Seq Number: 3147337 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 22:59	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 22:59	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 22:59	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.08.2021 22:59	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 22:59	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 22:59	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 22:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.08.2021 22:59		
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.08.2021 22:59		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



COG Operating LLC

Gold Coast SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3147124

MB Sample Id: 7718706-1-BLK

Matrix: Solid

LCS Sample Id: 7718706-1-BKS

Prep Method: E300P

Date Prep: 01.07.2021

LCSD Sample Id: 7718706-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	248	99	249	100	90-110	0	20	mg/kg	01.08.2021 00:36	

Analytical Method: Chloride by EPA 300

Seq Number: 3147186

MB Sample Id: 7718709-1-BLK

Matrix: Solid

LCS Sample Id: 7718709-1-BKS

Prep Method: E300P

Date Prep: 01.07.2021

LCSD Sample Id: 7718709-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	245	98	245	98	90-110	0	20	mg/kg	01.08.2021 10:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3147124

Parent Sample Id: 683730-061

Matrix: Soil

MS Sample Id: 683730-061 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683730-061 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	78.4	200	276	99	272	97	90-110	1	20	mg/kg	01.08.2021 00:54	

Analytical Method: Chloride by EPA 300

Seq Number: 3147124

Parent Sample Id: 683749-006

Matrix: Soil

MS Sample Id: 683749-006 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683749-006 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	3270	201	3470	100	3460	94	90-110	0	20	mg/kg	01.08.2021 02:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3147186

Parent Sample Id: 683820-004

Matrix: Soil

MS Sample Id: 683820-004 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683820-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1020	200	1210	95	1210	95	90-110	0	20	mg/kg	01.08.2021 10:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3147186

Parent Sample Id: 683820-014

Matrix: Soil

MS Sample Id: 683820-014 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683820-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	888	202	1070	90	1070	90	90-110	0	20	mg/kg	01.08.2021 12:14	

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



COG Operating LLC Gold Coast SWD

Analytical Method: TPH By SW8015 Mod

Seq Number: 3147330

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.08.2021

MB Sample Id: 7718840-1-BLK

LCS Sample Id: 7718840-1-BKS

LCSD Sample Id: 7718840-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	1060	106	1180	118	70-135	11	35	mg/kg	01.08.2021 16:53	
Diesel Range Organics	<50.0	1000	1070	107	1140	114	70-135	6	35	mg/kg	01.08.2021 16:53	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	81		93		103		70-135	%	01.08.2021 16:53
o-Terphenyl	83		98		99		70-135	%	01.08.2021 16:53

Analytical Method: TPH By SW8015 Mod

Seq Number: 3147330

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.08.2021

MB Sample Id: 7718840-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.08.2021 16:33	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3147330

Matrix: Soil

Prep Method: SW8015P

Date Prep: 01.08.2021

Parent Sample Id: 683820-001

MS Sample Id: 683820-001 S

MSD Sample Id: 683820-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<49.8	996	1190	119	1120	111	70-135	6	35	mg/kg	01.08.2021 17:53	
Diesel Range Organics	<49.8	996	1060	106	979	97	70-135	8	35	mg/kg	01.08.2021 17:53	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	103		105		70-135	%	01.08.2021 17:53
o-Terphenyl	114		106		70-135	%	01.08.2021 17:53

Analytical Method: BTEX by EPA 8021B

Seq Number: 3147337

Matrix: Solid

Prep Method: SW5035A

Date Prep: 01.07.2021

MB Sample Id: 7718765-1-BLK

LCS Sample Id: 7718765-1-BKS

LCSD Sample Id: 7718765-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0983	98	0.101	101	70-130	3	35	mg/kg	01.08.2021 12:51	
Toluene	<0.00200	0.100	0.0950	95	0.0953	95	70-130	0	35	mg/kg	01.08.2021 12:51	
Ethylbenzene	<0.00200	0.100	0.0984	98	0.100	100	71-129	2	35	mg/kg	01.08.2021 12:51	
m,p-Xylenes	<0.00400	0.200	0.204	102	0.207	104	70-135	1	35	mg/kg	01.08.2021 12:51	
o-Xylene	<0.00200	0.100	0.0989	99	0.102	102	71-133	3	35	mg/kg	01.08.2021 12:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	106		97		98		70-130	%	01.08.2021 12:51
4-Bromofluorobenzene	119		105		107		70-130	%	01.08.2021 12:51

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



COG Operating LLC

Gold Coast SWD

Analytical Method: BTEX by EPA 8021B

Seq Number: 3147337

Parent Sample Id: 683820-001

Matrix: Soil

MS Sample Id: 683820-001 S

Prep Method: SW5035A

Date Prep: 01.07.2021

MSD Sample Id: 683820-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.110	110	0.113	113	70-130	3	35	mg/kg	01.08.2021 13:36	
Toluene	<0.00200	0.0998	0.102	102	0.108	108	70-130	6	35	mg/kg	01.08.2021 13:36	
Ethylbenzene	<0.00200	0.0998	0.105	105	0.112	112	71-129	6	35	mg/kg	01.08.2021 13:36	
m,p-Xylenes	<0.00399	0.200	0.219	110	0.231	115	70-135	5	35	mg/kg	01.08.2021 13:36	
o-Xylene	<0.00200	0.0998	0.106	106	0.114	114	71-133	7	35	mg/kg	01.08.2021 13:36	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		103		70-130	%	01.08.2021 13:36
4-Bromofluorobenzene	114		112		70-130	%	01.08.2021 13:36

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



Chain of Custody

Work Order No: 1683820

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

Midland, TX (432) 704-5440 EL Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Crashtad, NM (432) 704-5440
Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Page 1 of 2

Project Manager:	Sheldon Hirschcock	Bill to: (if different)	
Company Name:	COG	Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	

Program: UST/PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐
State of Project:
Reporting Level: I ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐
Deliverables: EDD ☐ ADAPT ☐ Other:

Project Name:	Gold Coast SLD	Turn Around	
Project Number:		Routine ☐	
Project Location:	Lee, NM	Rush: 72hr	
Sampler's Name:		Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT	Temp Blank: ☒ Yes ☐ No	Wet Ice: ☒ Yes ☐ No
Temperature (°C):	1.2/1.0	Thermometer ID
Received Intact: ☒ Yes ☐ No		Correction Factor: -0.2
Cooler Custody Seals: ☒ Yes ☐ No		Total Containers: 86
Sample Custody Seals: ☒ Yes ☐ No		

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Analysis Request	Preservative Codes
B-1		S	1/7	10:30	4'	1	TPH 8015M	MeOH: Me
B-2				10:32				None: NO
B-3				10:34				HNO3: HN
B-4				10:36				H2SO4: H2
B-5				10:38				HCL: HL
B-6				10:40				NaOH: Na
B-7				10:42				Zn Acetate+ NaOH: Zn
B-8				10:44				
B-9				10:46				
B-10				10:48				

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Sheldon Hirschcock	Chae Cifra	1.7.21 1423			

Revised Date 02/26/19 Rev 2018.1



Chain of Custody

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334

Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Crashad, NM (432) 704-5440

Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Work Order No: 1653820

Project Manager:		Bill to: (if different)	
Company Name:		Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	

Project Name:	Gold Coast SWD	Turn Around	
Project Number:		Routine	☐
Project Location:		Rush:	72hr
Sampler's Name:		Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT				ANALYSIS REQUEST				Preservative Codes	
Temperature (°C):		Temp Blank:	Yes No	Wettest:	Yes No			MeOH: Me	
Received Intact:	Yes No	Thermometer ID						None: NO	
Cooler Custody Seals:	Yes No N/A	Correction Factor:						HNO3: HN	
Sample Custody Seals:	Yes No N/A	Total Containers:						H2SO4: H2	
								HCL: HL	
								NaOH: Na	
								Zn Acetate+ NaOH: Zn	
								TAT starts the day received by the lab, if received by 4:00pm	
								Sample Comments	

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM Texas 11	Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U	1631 / 245.1 / 7470 / 7471 : Hg

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>John P. ...</i>	<i>Joe ...</i>	1-7-21 1423			

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01.07.2021 02:23.00 PM

Work Order #: 683820

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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



Cloe Clifton

Date: 01.07.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.08.2021

Certificate of Analysis Summary 685561



COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Date Received in Lab: Thu 01.21.2021 12:55

Contact: Sheldon Hitchcock

Report Date: 01.25.2021 14:56

Project Location: Lea, New Mexico

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	685561-001	685561-002	685561-003	685561-004	685561-005	685561-006
	<i>Field Id:</i>	B-21	B-22	B-23	B-24	B-25	B-26
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	01.20.2021 09:00	01.20.2021 09:02	01.20.2021 09:04	01.20.2021 09:06	01.20.2021 09:08	01.20.2021 09:10
BTEX by EPA 8021B	<i>Extracted:</i>	01.21.2021 18:16	01.21.2021 18:16	01.21.2021 18:16	01.21.2021 18:16	01.21.2021 18:16	01.21.2021 18:16
	<i>Analyzed:</i>	01.21.2021 21:48	01.21.2021 22:10	01.21.2021 22:33	01.21.2021 22:55	01.21.2021 23:18	01.21.2021 23:40
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00399 0.00399	<0.00403 0.00403	<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	01.21.2021 18:12	01.21.2021 18:12	01.21.2021 18:12	01.21.2021 18:12	01.21.2021 18:12	01.21.2021 18:12
	<i>Analyzed:</i>	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *	*** ** *
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		2850 49.5	3010 49.6	3370 49.5	473 9.90	572 9.96	629 9.98
TPH By SW8015 Mod SUB: T104704400-20-21	<i>Extracted:</i>	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00
	<i>Analyzed:</i>	01.22.2021 22:45	01.22.2021 23:49	01.23.2021 00:10	01.23.2021 00:31	01.23.2021 00:52	01.23.2021 01:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<50.0 50.0

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 685561



COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Date Received in Lab: Thu 01.21.2021 12:55

Contact: Sheldon Hitchcock

Report Date: 01.25.2021 14:56

Project Location: Lea, New Mexico

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	685561-007	685561-008	685561-009	685561-010	685561-011	
	<i>Field Id:</i>	B-27	B-28	B-29	B-30	B-31	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	01.20.2021 09:12	01.20.2021 09:14	01.20.2021 09:16	01.20.2021 09:18	01.20.2021 09:20	
BTEX by EPA 8021B	<i>Extracted:</i>	01.21.2021 18:16	01.21.2021 18:16	01.21.2021 18:16	01.21.2021 18:16	01.21.2021 18:16	
	<i>Analyzed:</i>	01.22.2021 00:02	01.22.2021 00:25	01.22.2021 00:47	01.22.2021 01:10	01.22.2021 02:29	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00401 0.00401	<0.00397 0.00397	<0.00399 0.00399	
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	
Chloride by EPA 300	<i>Extracted:</i>	01.21.2021 18:12	01.21.2021 18:12	01.21.2021 18:12	01.21.2021 18:12	01.21.2021 18:12	
	<i>Analyzed:</i>	** * * * *	** * * * * *	** * * * * *	01.21.2021 18:17	01.21.2021 18:23	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		1590 49.9	1810 50.1	1530 49.9	1350 49.8	484 9.94	
TPH By SW8015 Mod SUB: T104704400-20-21	<i>Extracted:</i>	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	01.22.2021 17:00	
	<i>Analyzed:</i>	01.23.2021 01:35	01.23.2021 01:56	01.23.2021 02:18	01.23.2021 02:39	01.23.2021 03:22	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	
Diesel Range Organics		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	

BRL - Below Reporting Limit

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



Analytical Report 685561

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Gold Coast SWD

01.25.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.25.2021

Project Manager: **Sheldon Hitchcock**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **685561**

Gold Coast SWD

Project Address: Lea, New Mexico

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 685561. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 685561 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 685561****COG Operating LLC, Artesia, NM**

Gold Coast SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B-21	S	01.20.2021 09:00		685561-001
B-22	S	01.20.2021 09:02		685561-002
B-23	S	01.20.2021 09:04		685561-003
B-24	S	01.20.2021 09:06		685561-004
B-25	S	01.20.2021 09:08		685561-005
B-26	S	01.20.2021 09:10		685561-006
B-27	S	01.20.2021 09:12		685561-007
B-28	S	01.20.2021 09:14		685561-008
B-29	S	01.20.2021 09:16		685561-009
B-30	S	01.20.2021 09:18		685561-010
B-31	S	01.20.2021 09:20		685561-011



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Gold Coast SWD

Project ID:
Work Order Number(s): 685561

Report Date: 01.25.2021
Date Received: 01.21.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3148777 TPH By SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 685561-008,685561-002.



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-21** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-001 Date Collected: 01.20.2021 09:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2850	49.5	mg/kg	01.21.2021 17:03		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.22.2021 22:45	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.22.2021 22:45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.22.2021 22:45	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.22.2021 22:45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	110	%	70-130	01.22.2021 22:45		
o-Terphenyl	84-15-1	125	%	70-130	01.22.2021 22:45		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-21**
Lab Sample Id: 685561-001

Matrix: Soil
Date Collected: 01.20.2021 09:00

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.21.2021 21:48	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.2021 21:48	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.2021 21:48	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.21.2021 21:48	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.2021 21:48	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.2021 21:48	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.2021 21:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	111	%	70-130	01.21.2021 21:48		
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.21.2021 21:48		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-22** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-002 Date Collected: 01.20.2021 09:02
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3010	49.6	mg/kg	01.21.2021 17:20		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	01.22.2021 23:49	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	01.22.2021 23:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.22.2021 23:49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.22.2021 23:49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	114	%	70-130	01.22.2021 23:49		
o-Terphenyl	84-15-1	131	%	70-130	01.22.2021 23:49	**	



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-22**
Lab Sample Id: 685561-002

Matrix: Soil
Date Collected: 01.20.2021 09:02

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.21.2021 22:10	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.21.2021 22:10	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.21.2021 22:10	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.21.2021 22:10	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.21.2021 22:10	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.21.2021 22:10	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.21.2021 22:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.21.2021 22:10		
4-Bromofluorobenzene	460-00-4	119	%	70-130	01.21.2021 22:10		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-23** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-003 Date Collected: 01.20.2021 09:04
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3370	49.5	mg/kg	01.21.2021 17:26		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 00:10	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 00:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 00:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 00:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	108	%	70-130	01.23.2021 00:10		
o-Terphenyl	84-15-1	124	%	70-130	01.23.2021 00:10		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-23**
Lab Sample Id: 685561-003

Matrix: Soil
Date Collected: 01.20.2021 09:04

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.21.2021 22:33	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.2021 22:33	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.2021 22:33	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.21.2021 22:33	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.2021 22:33	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.2021 22:33	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.2021 22:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.21.2021 22:33		
4-Bromofluorobenzene	460-00-4	118	%	70-130	01.21.2021 22:33		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-24** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-004 Date Collected: 01.20.2021 09:06
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	473	9.90	mg/kg	01.21.2021 17:32		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 00:31	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 00:31	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 00:31	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 00:31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	112	%	70-130	01.23.2021 00:31		
o-Terphenyl	84-15-1	125	%	70-130	01.23.2021 00:31		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-24**
Lab Sample Id: 685561-004

Matrix: Soil
Date Collected: 01.20.2021 09:06

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.21.2021 22:55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.2021 22:55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.2021 22:55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.2021 22:55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.2021 22:55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.2021 22:55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.2021 22:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.21.2021 22:55		
4-Bromofluorobenzene	460-00-4	120	%	70-130	01.21.2021 22:55		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-25** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-005 Date Collected: 01.20.2021 09:08
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	572	9.96	mg/kg	01.21.2021 17:37		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 00:52	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.23.2021 00:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 00:52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.23.2021 00:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	113	%	70-130	01.23.2021 00:52		
o-Terphenyl	84-15-1	126	%	70-130	01.23.2021 00:52		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-25**
Lab Sample Id: 685561-005

Matrix: Soil
Date Collected: 01.20.2021 09:08

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.21.2021 23:18	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.21.2021 23:18	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.21.2021 23:18	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.21.2021 23:18	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.21.2021 23:18	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.21.2021 23:18	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.21.2021 23:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	01.21.2021 23:18		
4-Bromofluorobenzene	460-00-4	114	%	70-130	01.21.2021 23:18		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-26** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-006 Date Collected: 01.20.2021 09:10
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	629	9.98	mg/kg	01.21.2021 17:54		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 01:14	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 01:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 01:14	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 01:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	116	%	70-130	01.23.2021 01:14		
o-Terphenyl	84-15-1	128	%	70-130	01.23.2021 01:14		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-26**
Lab Sample Id: 685561-006

Matrix: Soil
Date Collected: 01.20.2021 09:10

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.21.2021 23:40	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.21.2021 23:40	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.21.2021 23:40	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.21.2021 23:40	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.21.2021 23:40	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.21.2021 23:40	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.21.2021 23:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.21.2021 23:40		
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.21.2021 23:40		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-27** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-007 Date Collected: 01.20.2021 09:12
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1590	49.9	mg/kg	01.21.2021 18:00		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 01:35	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 01:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 01:35	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 01:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	116	%	70-130	01.23.2021 01:35		
o-Terphenyl	84-15-1	128	%	70-130	01.23.2021 01:35		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-27**
Lab Sample Id: 685561-007

Matrix: Soil
Date Collected: 01.20.2021 09:12

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.22.2021 00:02	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.22.2021 00:02	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.22.2021 00:02	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.22.2021 00:02	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.22.2021 00:02	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.22.2021 00:02	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.22.2021 00:02	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	01.22.2021 00:02		
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.22.2021 00:02		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-28** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-008 Date Collected: 01.20.2021 09:14
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1810	50.1	mg/kg	01.21.2021 18:06		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 01:56	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.23.2021 01:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 01:56	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.23.2021 01:56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	120	%	70-130	01.23.2021 01:56		
o-Terphenyl	84-15-1	134	%	70-130	01.23.2021 01:56	**	



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-28**
Lab Sample Id: 685561-008

Matrix: Soil
Date Collected: 01.20.2021 09:14

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.2021 00:25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.2021 00:25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.2021 00:25	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.22.2021 00:25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.2021 00:25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.2021 00:25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.2021 00:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	01.22.2021 00:25		
4-Bromofluorobenzene	460-00-4	122	%	70-130	01.22.2021 00:25		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-29** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-009 Date Collected: 01.20.2021 09:16
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1530	49.9	mg/kg	01.21.2021 18:11		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 02:18	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 02:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 02:18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 02:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	114	%	70-130	01.23.2021 02:18		
o-Terphenyl	84-15-1	127	%	70-130	01.23.2021 02:18		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-29**
Lab Sample Id: 685561-009

Matrix: Soil
Date Collected: 01.20.2021 09:16

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.2021 00:47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.2021 00:47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.2021 00:47	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	01.22.2021 00:47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.2021 00:47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.2021 00:47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.2021 00:47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	01.22.2021 00:47		
4-Bromofluorobenzene	460-00-4	116	%	70-130	01.22.2021 00:47		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-30** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-010 Date Collected: 01.20.2021 09:18
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1350	49.8	mg/kg	01.21.2021 18:17		5

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 02:39	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 02:39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 02:39	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 02:39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-130	01.23.2021 02:39	
o-Terphenyl	84-15-1	127	%	70-130	01.23.2021 02:39	



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-30**
Lab Sample Id: 685561-010

Matrix: Soil
Date Collected: 01.20.2021 09:18

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.22.2021 01:10	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.22.2021 01:10	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.22.2021 01:10	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.22.2021 01:10	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.22.2021 01:10	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.22.2021 01:10	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.22.2021 01:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	107	%	70-130	01.22.2021 01:10		
4-Bromofluorobenzene	460-00-4	121	%	70-130	01.22.2021 01:10		



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-31** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685561-011 Date Collected: 01.20.2021 09:20
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	484	9.94	mg/kg	01.21.2021 18:23		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.23.2021 03:22	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.23.2021 03:22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.23.2021 03:22	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.23.2021 03:22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-130	01.23.2021 03:22	
o-Terphenyl	84-15-1	127	%	70-130	01.23.2021 03:22	



Certificate of Analytical Results 685561

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **B-31**
Lab Sample Id: 685561-011

Matrix: Soil
Date Collected: 01.20.2021 09:20

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.2021 02:29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.2021 02:29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.2021 02:29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.22.2021 02:29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.2021 02:29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.2021 02:29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.2021 02:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	106	%	70-130	01.22.2021 02:29		
4-Bromofluorobenzene	460-00-4	120	%	70-130	01.22.2021 02:29		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



COG Operating LLC Gold Coast SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3148605

MB Sample Id: 7719712-1-BLK

Matrix: Solid

LCS Sample Id: 7719712-1-BKS

Prep Method: E300P

Date Prep: 01.21.2021

LCSD Sample Id: 7719712-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	200	212	106	210	105	90-110	1	20	mg/kg	01.21.2021 16:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3148605

Parent Sample Id: 685561-001

Matrix: Soil

MS Sample Id: 685561-001 S

Prep Method: E300P

Date Prep: 01.21.2021

MSD Sample Id: 685561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2850	201	3040	95	3040	94	90-110	0	20	mg/kg	01.21.2021 17:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3148605

Parent Sample Id: 685561-011

Matrix: Soil

MS Sample Id: 685561-011 S

Prep Method: E300P

Date Prep: 01.21.2021

MSD Sample Id: 685561-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	484	200	696	106	698	106	90-110	0	20	mg/kg	01.21.2021 18:29	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148777

MB Sample Id: 7719881-1-BLK

Matrix: Solid

LCS Sample Id: 7719881-1-BKS

Prep Method: SW8015P

Date Prep: 01.22.2021

LCSD Sample Id: 7719881-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	1100	110	1150	115	70-130	4	20	mg/kg	01.22.2021 22:02	
Diesel Range Organics	<50.0	1000	1160	116	1130	113	70-130	3	20	mg/kg	01.22.2021 22:02	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		115		112		70-130	%	01.22.2021 22:02
o-Terphenyl	125		124		120		70-130	%	01.22.2021 22:02

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148777

Matrix: Solid

MB Sample Id: 7719881-1-BLK

Prep Method: SW8015P

Date Prep: 01.22.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.22.2021 21:41	

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



COG Operating LLC Gold Coast SWD

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148777

Parent Sample Id: 685561-001

Matrix: Soil

MS Sample Id: 685561-001 S

Prep Method: SW8015P

Date Prep: 01.22.2021

MSD Sample Id: 685561-001 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	<50.0	999	1080	108	1100	110	70-130	2	20	mg/kg	01.22.2021 23:06	
Diesel Range Organics	<50.0	999	1100	110	1110	111	70-130	1	20	mg/kg	01.22.2021 23:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		110		70-130	%	01.22.2021 23:06
o-Terphenyl	117		120		70-130	%	01.22.2021 23:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148598

MB Sample Id: 7719714-1-BLK

Matrix: Solid

LCS Sample Id: 7719714-1-BKS

Prep Method: SW5035A

Date Prep: 01.21.2021

LCSD Sample Id: 7719714-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0966	97	0.0929	93	70-130	4	35	mg/kg	01.21.2021 19:43	
Toluene	<0.00200	0.100	0.0864	86	0.0877	88	70-130	1	35	mg/kg	01.21.2021 19:43	
Ethylbenzene	<0.00200	0.100	0.0913	91	0.0944	94	71-129	3	35	mg/kg	01.21.2021 19:43	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.192	96	70-135	2	35	mg/kg	01.21.2021 19:43	
o-Xylene	<0.00200	0.100	0.0922	92	0.0959	96	71-133	4	35	mg/kg	01.21.2021 19:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		100		98		70-130	%	01.21.2021 19:43
4-Bromofluorobenzene	111		107		104		70-130	%	01.21.2021 19:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148598

Parent Sample Id: 685561-001

Matrix: Soil

MS Sample Id: 685561-001 S

Prep Method: SW5035A

Date Prep: 01.21.2021

MSD Sample Id: 685561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0920	92	0.0889	89	70-130	3	35	mg/kg	01.22.2021 12:15	
Toluene	<0.00200	0.100	0.0864	86	0.0809	81	70-130	7	35	mg/kg	01.22.2021 12:15	
Ethylbenzene	<0.00200	0.100	0.0902	90	0.0770	77	71-129	16	35	mg/kg	01.22.2021 12:15	
m,p-Xylenes	<0.00401	0.200	0.181	91	0.159	80	70-135	13	35	mg/kg	01.22.2021 12:15	
o-Xylene	<0.00200	0.100	0.0887	89	0.0818	82	71-133	8	35	mg/kg	01.22.2021 12:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	01.22.2021 12:15
4-Bromofluorobenzene	107		110		70-130	%	01.22.2021 12:15

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

Analysis Request of Chain of Custody Record

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

1685561

Client Name: COG-Artesia Site Manager: Sheldon Hitchcock

Project Name: Gold Coast SUD

Project Location: (county, state) Lea, NM Project #:

Invoice to: Sheldon Hitchcock

Receiving Laboratory: Keco Sampler Name: Sheldon Hitchcock

Comments:

2:38:39 PM

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX	PRESERVATIVE METHOD				# CONTAINERS	(C)omposite/(G)rab	TPH 8015M (GR	BTEX 8021B	Chloride																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Requested by: Sheldon Pitt Date: 01/21/21 Time: 12:55 Received by: [Signature] Date: 12/21 Time: 12:55

Requested by: Date: Time: Received by: Date: Time:

LAB USE ONLY

Sample Temperature

0.4/0.2

REMARKS:

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED

1 Analysis Request of Chain of Custody Record

[illegible]

5075

Inter-Office Shipment

IOS Number : **76899**

Date/Time: 01.22.2021

Created by: Cloe Clifton

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
685561-001	S	B-21	01.20.2021 09:00	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-002	S	B-22	01.20.2021 09:02	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-003	S	B-23	01.20.2021 09:04	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-004	S	B-24	01.20.2021 09:06	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-005	S	B-25	01.20.2021 09:08	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-006	S	B-26	01.20.2021 09:10	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-007	S	B-27	01.20.2021 09:12	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-008	S	B-28	01.20.2021 09:14	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-009	S	B-29	01.20.2021 09:16	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-010	S	B-30	01.20.2021 09:18	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	
685561-011	S	B-31	01.20.2021 09:20	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C35	

Inter Office Shipment or Sample Comments:

Relinquished By:



Cloe Clifton

Date Relinquished: 01.22.2021

Received By:



Jessica Kramer

Date Received: 01.22.2021

Cooler Temperature: 1.5

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 76899

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Cloe Clifton

Date Sent: 01.22.2021 10.06 AM

Received By: Jessica Kramer

Date Received: 01.22.2021 02.07 PM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:



Jessica Kramer

Date: 01.22.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01.21.2021 12.55.00 PM

Work Order #: 685561

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/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)?	Yes
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

TPH sent to Midland.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 01.22.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.22.2021

Certificate of Analysis Summary 683825



COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Date Received in Lab: Thu 01.07.2021 14:23

Contact: Sheldon Hitchcock

Report Date: 01.11.2021 16:19

Project Location: Lea, New Mexico

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	683825-001	683825-002	683825-003	683825-004	683825-005	683825-006
	<i>Field Id:</i>	SW-1	SW-2	SW-3	SW-4	SW-5	SW-6
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	01.07.2021 11:10	01.07.2021 11:12	01.07.2021 11:14	01.07.2021 11:16	01.07.2021 11:18	01.07.2021 11:20
BTEX by EPA 8021B	<i>Extracted:</i>	01.08.2021 11:46	01.08.2021 11:46	01.08.2021 11:46	01.08.2021 11:46	01.08.2021 11:46	01.08.2021 11:46
	<i>Analyzed:</i>	01.08.2021 14:22	01.08.2021 14:44	01.08.2021 15:07	01.08.2021 15:29	01.08.2021 15:52	01.08.2021 16:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00397 0.00397	<0.00399 0.00399	<0.00404 0.00404	<0.00403 0.00403	<0.00399 0.00399
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00202 0.00202	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 17:30	01.07.2021 18:10	01.07.2021 18:10	01.07.2021 18:10
	<i>Analyzed:</i>	01.08.2021 13:37	01.08.2021 13:43	01.08.2021 13:49	01.08.2021 07:57	01.08.2021 09:44	01.08.2021 08:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		137 9.94	158 10.0	236 10.1	19.9 10.1	14.5 10.1	14.7 10.0
TPH By SW8015 Mod	<i>Extracted:</i>	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00
	<i>Analyzed:</i>	01.08.2021 02:34	01.08.2021 02:54	01.08.2021 03:14	01.08.2021 03:34	01.08.2021 04:14	01.08.2021 04:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<49.8 49.8	<49.9 49.9
Diesel Range Organics		<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<49.8 49.8	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<49.8 49.8	<49.9 49.9
Total TPH		<50.2 50.2	<50.1 50.1	<50.2 50.2	<50.0 50.0	<49.8 49.8	<49.9 49.9

BRL - Below Reporting Limit

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



COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Date Received in Lab: Thu 01.07.2021 14:23

Contact: Sheldon Hitchcock

Report Date: 01.11.2021 16:19

Project Location: Lea, New Mexico

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	683825-007	683825-008	683825-009	683825-010	683825-011	683825-012
	<i>Field Id:</i>	SW-7	SW-8	SW-9	SW-10	SW-11	SW-12
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	01.07.2021 11:22	01.07.2021 11:24	01.07.2021 11:26	01.07.2021 11:28	01.07.2021 11:30	01.07.2021 11:32
BTEX by EPA 8021B	<i>Extracted:</i>	01.08.2021 11:46	01.08.2021 11:46	01.08.2021 11:46	01.08.2021 11:46	01.08.2021 11:46	01.08.2021 11:46
	<i>Analyzed:</i>	01.08.2021 16:37	01.08.2021 16:59	01.08.2021 17:21	01.08.2021 17:44	01.08.2021 19:24	01.08.2021 19:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Toluene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Ethylbenzene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
m,p-Xylenes		<0.00397 0.00397	<0.00396 0.00396	<0.00399 0.00399	<0.00399 0.00399	<0.00397 0.00397	<0.00400 0.00400
o-Xylene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total Xylenes		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total BTEX		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	01.07.2021 18:10	01.07.2021 18:10	01.07.2021 18:10	01.07.2021 18:10	01.07.2021 18:10	01.07.2021 18:10
	<i>Analyzed:</i>	01.08.2021 08:27	01.08.2021 08:33	01.08.2021 08:57	01.08.2021 09:03	01.08.2021 09:08	01.08.2021 09:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		14.6 9.96	710 10.1	33.7 10.1	<9.90 9.90	11.2 10.0	10.4 9.90
TPH By SW8015 Mod	<i>Extracted:</i>	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00	01.07.2021 17:00
	<i>Analyzed:</i>	01.08.2021 04:54	01.08.2021 05:14	01.08.2021 05:34	01.08.2021 05:54	01.08.2021 06:14	01.08.2021 06:34
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.1 50.1	<50.0 50.0	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.2 50.2
Diesel Range Organics		<50.1 50.1	<50.0 50.0	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.2 50.2
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1	<50.0 50.0	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.2 50.2
Total TPH		<50.1 50.1	<50.0 50.0	<50.3 50.3	<49.9 49.9	<50.1 50.1	<50.2 50.2

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 683825

COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, New Mexico

Date Received in Lab: Thu 01.07.2021 14:23

Report Date: 01.11.2021 16:19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	683825-013	683825-014				
	Field Id:	SW-13	SW-14				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	01.07.2021 11:34	01.07.2021 11:36				
BTEX by EPA 8021B	Extracted:	01.08.2021 11:46	01.08.2021 11:46				
	Analyzed:	01.08.2021 20:09	01.08.2021 20:31				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00201 0.00201	<0.00201 0.00201				
Toluene		<0.00201 0.00201	0.00335 0.00201				
Ethylbenzene		<0.00201 0.00201	0.00269 0.00201				
m,p-Xylenes		<0.00402 0.00402	0.0115 0.00402				
o-Xylene		<0.00201 0.00201	0.00738 0.00201				
Total Xylenes		<0.00201 0.00201	0.0189 0.00201				
Total BTEX		<0.00201 0.00201	0.0249 0.00201				
Chloride by EPA 300	Extracted:	01.07.2021 18:10	01.07.2021 18:10				
	Analyzed:	01.08.2021 09:20	01.08.2021 09:26				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		11.1 10.1	<10.0 10.0				
TPH By SW8015 Mod	Extracted:	01.07.2021 17:00	01.07.2021 17:00				
	Analyzed:	01.08.2021 06:54	01.08.2021 07:14				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons		<50.0 50.0	<50.2 50.2				
Diesel Range Organics		<50.0 50.0	<50.2 50.2				
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.2 50.2				
Total TPH		<50.0 50.0	<50.2 50.2				

BRL - Below Reporting Limit

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





Analytical Report 683825

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Gold Coast SWD

01.11.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.11.2021

Project Manager: **Sheldon Hitchcock**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **683825**

Gold Coast SWD

Project Address: Lea, New Mexico

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 683825. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 683825 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

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

**Sample Cross Reference 683825****COG Operating LLC, Artesia, NM**

Gold Coast SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-1	S	01.07.2021 11:10		683825-001
SW-2	S	01.07.2021 11:12		683825-002
SW-3	S	01.07.2021 11:14		683825-003
SW-4	S	01.07.2021 11:16		683825-004
SW-5	S	01.07.2021 11:18		683825-005
SW-6	S	01.07.2021 11:20		683825-006
SW-7	S	01.07.2021 11:22		683825-007
SW-8	S	01.07.2021 11:24		683825-008
SW-9	S	01.07.2021 11:26		683825-009
SW-10	S	01.07.2021 11:28		683825-010
SW-11	S	01.07.2021 11:30		683825-011
SW-12	S	01.07.2021 11:32		683825-012
SW-13	S	01.07.2021 11:34		683825-013
SW-14	S	01.07.2021 11:36		683825-014



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Gold Coast SWD

Project ID:
Work Order Number(s): 683825

Report Date: 01.11.2021
Date Received: 01.07.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-1** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-001 Date Collected: 01.07.2021 11:10
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	137	9.94	mg/kg	01.08.2021 13:37		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.08.2021 02:34	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.08.2021 02:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.08.2021 02:34	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.08.2021 02:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	110	%	70-135	01.08.2021 02:34		
o-Terphenyl	84-15-1	116	%	70-135	01.08.2021 02:34		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-1**
Lab Sample Id: 683825-001

Matrix: Soil
Date Collected: 01.07.2021 11:10

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 14:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 14:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 14:22	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.08.2021 14:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 14:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 14:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 14:22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	89	%	70-130	01.08.2021 14:22		
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.08.2021 14:22		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-2** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-002 Date Collected: 01.07.2021 11:12
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	158	10.0	mg/kg	01.08.2021 13:43		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	01.08.2021 02:54	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	01.08.2021 02:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.08.2021 02:54	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.08.2021 02:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	01.08.2021 02:54		
o-Terphenyl	84-15-1	102	%	70-135	01.08.2021 02:54		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-2**
Lab Sample Id: 683825-002

Matrix: Soil
Date Collected: 01.07.2021 11:12

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.08.2021 14:44	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.08.2021 14:44	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.08.2021 14:44	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.08.2021 14:44	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.08.2021 14:44	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.08.2021 14:44	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.08.2021 14:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	79	%	70-130	01.08.2021 14:44		
4-Bromofluorobenzene	460-00-4	103	%	70-130	01.08.2021 14:44		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-3** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-003 Date Collected: 01.07.2021 11:14
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 17:30 % Moisture:
 Seq Number: 3147186 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	236	10.1	mg/kg	01.08.2021 13:49		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.08.2021 03:14	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.08.2021 03:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.08.2021 03:14	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.08.2021 03:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-135	01.08.2021 03:14		
o-Terphenyl	84-15-1	104	%	70-135	01.08.2021 03:14		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-3**
Lab Sample Id: 683825-003

Matrix: Soil
Date Collected: 01.07.2021 11:14

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 15:07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 15:07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 15:07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 15:07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 15:07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 15:07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 15:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	80	%	70-130	01.08.2021 15:07		
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.08.2021 15:07		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-4** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-004 Date Collected: 01.07.2021 11:16
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	19.9	10.1	mg/kg	01.08.2021 07:57		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.08.2021 03:34	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.08.2021 03:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.08.2021 03:34	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.08.2021 03:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	113	%	70-135	01.08.2021 03:34		
o-Terphenyl	84-15-1	106	%	70-135	01.08.2021 03:34		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-4**
Lab Sample Id: 683825-004

Matrix: Soil
Date Collected: 01.07.2021 11:16

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.08.2021 15:29	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.08.2021 15:29	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.08.2021 15:29	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	01.08.2021 15:29	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.08.2021 15:29	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.08.2021 15:29	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.08.2021 15:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	97	%	70-130	01.08.2021 15:29		
1,4-Difluorobenzene	540-36-3	84	%	70-130	01.08.2021 15:29		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-5** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-005 Date Collected: 01.07.2021 11:18
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.5	10.1	mg/kg	01.08.2021 09:44		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	01.08.2021 04:14	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	01.08.2021 04:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	01.08.2021 04:14	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	01.08.2021 04:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	99	%	70-135	01.08.2021 04:14		
o-Terphenyl	84-15-1	112	%	70-135	01.08.2021 04:14		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-5**
Lab Sample Id: 683825-005

Matrix: Soil
Date Collected: 01.07.2021 11:18

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	01.08.2021 15:52	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	01.08.2021 15:52	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	01.08.2021 15:52	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	01.08.2021 15:52	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	01.08.2021 15:52	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	01.08.2021 15:52	U	1
Total BTEX		<0.00202	0.00202	mg/kg	01.08.2021 15:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	94	%	70-130	01.08.2021 15:52		
1,4-Difluorobenzene	540-36-3	97	%	70-130	01.08.2021 15:52		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-6** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-006 Date Collected: 01.07.2021 11:20
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.7	10.0	mg/kg	01.08.2021 08:21		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.08.2021 04:35	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.08.2021 04:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.08.2021 04:35	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.08.2021 04:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	118	%	70-135	01.08.2021 04:35		
o-Terphenyl	84-15-1	96	%	70-135	01.08.2021 04:35		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-6**
Lab Sample Id: 683825-006

Matrix: Soil
Date Collected: 01.07.2021 11:20

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 16:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 16:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 16:14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 16:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 16:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 16:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 16:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	01.08.2021 16:14		
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.08.2021 16:14		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-7** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-007 Date Collected: 01.07.2021 11:22
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.6	9.96	mg/kg	01.08.2021 08:27		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	01.08.2021 04:54	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	01.08.2021 04:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.08.2021 04:54	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.08.2021 04:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	01.08.2021 04:54		
o-Terphenyl	84-15-1	102	%	70-135	01.08.2021 04:54		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-7**
Lab Sample Id: 683825-007

Matrix: Soil
Date Collected: 01.07.2021 11:22

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.08.2021 16:37	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.08.2021 16:37	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.08.2021 16:37	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.08.2021 16:37	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.08.2021 16:37	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.08.2021 16:37	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.08.2021 16:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.08.2021 16:37		
4-Bromofluorobenzene	460-00-4	94	%	70-130	01.08.2021 16:37		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-8** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-008 Date Collected: 01.07.2021 11:24
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	710	10.1	mg/kg	01.08.2021 08:33		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.08.2021 05:14	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.08.2021 05:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.08.2021 05:14	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.08.2021 05:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	102	%	70-135	01.08.2021 05:14		
o-Terphenyl	84-15-1	116	%	70-135	01.08.2021 05:14		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-8**
Lab Sample Id: 683825-008

Matrix: Soil
Date Collected: 01.07.2021 11:24

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.08.2021 16:59	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.08.2021 16:59	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.08.2021 16:59	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	01.08.2021 16:59	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.08.2021 16:59	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.08.2021 16:59	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.08.2021 16:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.08.2021 16:59		
4-Bromofluorobenzene	460-00-4	94	%	70-130	01.08.2021 16:59		



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COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-9** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-009 Date Collected: 01.07.2021 11:26
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	33.7	10.1	mg/kg	01.08.2021 08:57		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.3	50.3	mg/kg	01.08.2021 05:34	U	1
Diesel Range Organics	C10C28DRO	<50.3	50.3	mg/kg	01.08.2021 05:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.3	50.3	mg/kg	01.08.2021 05:34	U	1
Total TPH	PHC635	<50.3	50.3	mg/kg	01.08.2021 05:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	109	%	70-135	01.08.2021 05:34		
o-Terphenyl	84-15-1	96	%	70-135	01.08.2021 05:34		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-9**
Lab Sample Id: 683825-009

Matrix: Soil
Date Collected: 01.07.2021 11:26

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 17:21	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 17:21	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 17:21	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 17:21	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 17:21	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 17:21	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 17:21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	01.08.2021 17:21		
1,4-Difluorobenzene	540-36-3	99	%	70-130	01.08.2021 17:21		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-10** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-010 Date Collected: 01.07.2021 11:28
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<9.90	9.90	mg/kg	01.08.2021 09:03	U	1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	01.08.2021 05:54	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	01.08.2021 05:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	01.08.2021 05:54	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	01.08.2021 05:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	01.08.2021 05:54	
o-Terphenyl	84-15-1	120	%	70-135	01.08.2021 05:54	



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-10**
Lab Sample Id: 683825-010

Matrix: Soil
Date Collected: 01.07.2021 11:28

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 17:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 17:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 17:44	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.08.2021 17:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 17:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 17:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 17:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.08.2021 17:44		
4-Bromofluorobenzene	460-00-4	90	%	70-130	01.08.2021 17:44		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-11** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-011 Date Collected: 01.07.2021 11:30
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.2	10.0	mg/kg	01.08.2021 09:08		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.1	50.1	mg/kg	01.08.2021 06:14	U	1
Diesel Range Organics	C10C28DRO	<50.1	50.1	mg/kg	01.08.2021 06:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	01.08.2021 06:14	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	01.08.2021 06:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	114	%	70-135	01.08.2021 06:14		
o-Terphenyl	84-15-1	96	%	70-135	01.08.2021 06:14		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-11**
Lab Sample Id: 683825-011

Matrix: Soil
Date Collected: 01.07.2021 11:30

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	01.08.2021 19:24	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	01.08.2021 19:24	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	01.08.2021 19:24	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	01.08.2021 19:24	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	01.08.2021 19:24	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	01.08.2021 19:24	U	1
Total BTEX		<0.00198	0.00198	mg/kg	01.08.2021 19:24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	01.08.2021 19:24		
1,4-Difluorobenzene	540-36-3	79	%	70-130	01.08.2021 19:24		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-12** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-012 Date Collected: 01.07.2021 11:32
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	10.4	9.90	mg/kg	01.08.2021 09:14		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.08.2021 06:34	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.08.2021 06:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.08.2021 06:34	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.08.2021 06:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	104	%	70-135	01.08.2021 06:34		
o-Terphenyl	84-15-1	98	%	70-135	01.08.2021 06:34		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-12**
Lab Sample Id: 683825-012

Matrix: Soil
Date Collected: 01.07.2021 11:32

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.08.2021 19:46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.08.2021 19:46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.08.2021 19:46	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	01.08.2021 19:46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.08.2021 19:46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.08.2021 19:46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.08.2021 19:46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	01.08.2021 19:46		
1,4-Difluorobenzene	540-36-3	101	%	70-130	01.08.2021 19:46		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-13** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-013 Date Collected: 01.07.2021 11:34
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.1	10.1	mg/kg	01.08.2021 09:20		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.08.2021 06:54	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.08.2021 06:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.08.2021 06:54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.08.2021 06:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	106	%	70-135	01.08.2021 06:54		
o-Terphenyl	84-15-1	118	%	70-135	01.08.2021 06:54		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-13**
Lab Sample Id: 683825-013

Matrix: Soil
Date Collected: 01.07.2021 11:34

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.08.2021 20:09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	01.08.2021 20:09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	01.08.2021 20:09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	01.08.2021 20:09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	01.08.2021 20:09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	01.08.2021 20:09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	01.08.2021 20:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	01.08.2021 20:09		
4-Bromofluorobenzene	460-00-4	90	%	70-130	01.08.2021 20:09		



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-14** Matrix: Soil Date Received: 01.07.2021 14:23
 Lab Sample Id: 683825-014 Date Collected: 01.07.2021 11:36
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.07.2021 18:10 % Moisture:
 Seq Number: 3147128 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<10.0	10.0	mg/kg	01.08.2021 09:26	U	1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: CAC
 Analyst: CAC Date Prep: 01.07.2021 17:00 % Moisture:
 Seq Number: 3147117 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.2	50.2	mg/kg	01.08.2021 07:14	U	1
Diesel Range Organics	C10C28DRO	<50.2	50.2	mg/kg	01.08.2021 07:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	01.08.2021 07:14	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	01.08.2021 07:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	01.08.2021 07:14	
o-Terphenyl	84-15-1	110	%	70-135	01.08.2021 07:14	



Certificate of Analytical Results 683825

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-14**
Lab Sample Id: 683825-014

Matrix: Soil
Date Collected: 01.07.2021 11:36

Date Received: 01.07.2021 14:23

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.08.2021 11:46

% Moisture:
Basis: Wet Weight

Seq Number: 3147339

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	01.08.2021 20:31	U	1
Toluene	108-88-3	0.00335	0.00201	mg/kg	01.08.2021 20:31		1
Ethylbenzene	100-41-4	0.00269	0.00201	mg/kg	01.08.2021 20:31		1
m,p-Xylenes	179601-23-1	0.0115	0.00402	mg/kg	01.08.2021 20:31		1
o-Xylene	95-47-6	0.00738	0.00201	mg/kg	01.08.2021 20:31		1
Total Xylenes	1330-20-7	0.0189	0.00201	mg/kg	01.08.2021 20:31		1
Total BTEX		0.0249	0.00201	mg/kg	01.08.2021 20:31		1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	92	%	70-130	01.08.2021 20:31		
1,4-Difluorobenzene	540-36-3	98	%	70-130	01.08.2021 20:31		

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. **ND** Not Detected.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



COG Operating LLC

Gold Coast SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3147186

MB Sample Id: 7718709-1-BLK

Matrix: Solid

LCS Sample Id: 7718709-1-BKS

Prep Method: E300P

Date Prep: 01.07.2021

LCSD Sample Id: 7718709-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	245	98	245	98	90-110	0	20	mg/kg	01.08.2021 10:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3147128

MB Sample Id: 7718710-1-BLK

Matrix: Solid

LCS Sample Id: 7718710-1-BKS

Prep Method: E300P

Date Prep: 01.07.2021

LCSD Sample Id: 7718710-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	247	99	246	98	90-110	0	20	mg/kg	01.08.2021 07:45	

Analytical Method: Chloride by EPA 300

Seq Number: 3147186

Parent Sample Id: 683820-004

Matrix: Soil

MS Sample Id: 683820-004 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683820-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1020	200	1210	95	1210	95	90-110	0	20	mg/kg	01.08.2021 10:26	

Analytical Method: Chloride by EPA 300

Seq Number: 3147186

Parent Sample Id: 683820-014

Matrix: Soil

MS Sample Id: 683820-014 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683820-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	888	202	1070	90	1070	90	90-110	0	20	mg/kg	01.08.2021 12:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3147128

Parent Sample Id: 683825-004

Matrix: Soil

MS Sample Id: 683825-004 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683825-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19.9	200	213	97	212	96	90-110	0	20	mg/kg	01.08.2021 08:03	

Analytical Method: Chloride by EPA 300

Seq Number: 3147128

Parent Sample Id: 683825-014

Matrix: Soil

MS Sample Id: 683825-014 S

Prep Method: E300P

Date Prep: 01.07.2021

MSD Sample Id: 683825-014 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<9.94	199	193	97	192	97	90-110	1	20	mg/kg	01.08.2021 09:32	

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



COG Operating LLC Gold Coast SWD

Analytical Method: TPH By SW8015 Mod

Seq Number: 3147117

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.07.2021

MB Sample Id: 7718698-1-BLK

LCS Sample Id: 7718698-1-BKS

LCSD Sample Id: 7718698-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	1040	104	1080	108	70-135	4	35	mg/kg	01.07.2021 23:13	
Diesel Range Organics	<50.0	1000	990	99	1090	109	70-135	10	35	mg/kg	01.07.2021 23:13	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		116		115		70-135	%	01.07.2021 23:13
o-Terphenyl	103		104		110		70-135	%	01.07.2021 23:13

Analytical Method: TPH By SW8015 Mod

Seq Number: 3147117

Matrix: Solid

Prep Method: SW8015P

Date Prep: 01.07.2021

MB Sample Id: 7718698-1-BLK

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.07.2021 22:53	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3147117

Matrix: Soil

Prep Method: SW8015P

Date Prep: 01.07.2021

Parent Sample Id: 683730-061

MS Sample Id: 683730-061 S

MSD Sample Id: 683730-061 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	<50.0	999	1160	116	1050	105	70-135	10	35	mg/kg	01.08.2021 00:14	
Diesel Range Organics	<50.0	999	1050	105	1140	114	70-135	8	35	mg/kg	01.08.2021 00:14	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		107		70-135	%	01.08.2021 00:14
o-Terphenyl	106		118		70-135	%	01.08.2021 00:14

Analytical Method: BTEX by EPA 8021B

Seq Number: 3147339

Matrix: Solid

Prep Method: SW5035A

Date Prep: 01.08.2021

MB Sample Id: 7718766-1-BLK

LCS Sample Id: 7718766-1-BKS

LCSD Sample Id: 7718766-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.108	108	0.103	103	70-130	5	35	mg/kg	01.08.2021 12:20	
Toluene	<0.00200	0.100	0.104	104	0.101	101	70-130	3	35	mg/kg	01.08.2021 12:20	
Ethylbenzene	<0.00200	0.100	0.0965	97	0.0935	94	71-129	3	35	mg/kg	01.08.2021 12:20	
m,p-Xylenes	<0.00400	0.200	0.197	99	0.190	95	70-135	4	35	mg/kg	01.08.2021 12:20	
o-Xylene	<0.00200	0.100	0.0956	96	0.0931	93	71-133	3	35	mg/kg	01.08.2021 12:20	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		96		96		70-130	%	01.08.2021 12:20
4-Bromofluorobenzene	86		88		88		70-130	%	01.08.2021 12:20

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

COG Operating LLC Gold Coast SWD

Analytical Method: BTEX by EPA 8021B

Seq Number: 3147339

Parent Sample Id: 683825-001

Matrix: Soil

MS Sample Id: 683825-001 S

Prep Method: SW5035A

Date Prep: 01.08.2021

MSD Sample Id: 683825-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.105	105	0.108	108	70-130	3	35	mg/kg	01.08.2021 13:04	
Toluene	<0.00200	0.100	0.101	101	0.104	104	70-130	3	35	mg/kg	01.08.2021 13:04	
Ethylbenzene	<0.00200	0.100	0.0943	94	0.0967	97	71-129	3	35	mg/kg	01.08.2021 13:04	
m,p-Xylenes	<0.00401	0.200	0.193	97	0.197	98	70-135	2	35	mg/kg	01.08.2021 13:04	
o-Xylene	<0.00200	0.100	0.0941	94	0.0970	97	71-133	3	35	mg/kg	01.08.2021 13:04	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	96		96		70-130	%	01.08.2021 13:04
4-Bromofluorobenzene	88		89		70-130	%	01.08.2021 13:04

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



Chain of Custody

Work Order No: 1683825

Project Manager:	Sheldon Hirschorn	Bill to: (if different)	
Company Name:	CEG	Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	

Program: ☐ UST/ST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project: _____ Reporting Level: ☐ Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐ Deliverables: EDD ☐ ADAPT ☐ Other: _____	Work Order Comments _____
---	------------------------------

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296 Corsland, NM (432) 704-5440
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Project Name:	Gold Coast Blvd	Turn Around	☐
Project Number:		Pres. Code	
Project Location:	LCU, NM	Rush:	72 hr
Sampler's Name:		Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT	Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):	12/1.2	Thermometer ID	7-WH-004	Correction Factor:	-0.2	
Received Intact:	Yes	No		Total Containers:	14	
Cooler Custody Seals:	Yes	No	N/A			
Sample Custody Seals:	Yes	No	N/A			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	ANALYSIS REQUEST																Preservative Codes			
6W-1		5	1/7	11:10	N/A	1																				
6W-2																										
6W-3																										
6W-4																										
6W-5																										
6W-6																										
6W-7																										
6W-8																										
6W-9																										
6W-10																										

Total 200.7 / 6010 200.8 / 6020:

Circle Method(s) and Metal(s) to be analyzed

 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Pb Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn
 TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U

1631 / 245.1 / 7470 / 7471 : Hg

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Shawn Pitt	Che Carter	1-7-21 1423			



Chain of Custody

Work Order No: 1683825

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334
 Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296
 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000 West Palm Beach, FL (561) 689-6701

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Page 2 of 2

Project Manager:	Selden Hirschorn	Bill to: (if different)	
Company Name:		Company Name:	
Address:		Address:	
City, State ZIP:		City, State ZIP:	
Phone:		Email:	

Program: ☐ PST ☐ PRP ☐ Brownfields ☐ RRC ☐ Superfund ☐ State of Project:	
Reporting: Level II ☐ Level III ☐ PST/UST ☐ TRRP ☐ Level IV ☐	
Deliverables: EDD ☐ ADAPT ☐ Other:	

Project Name:	Gold Coast Blvd	Turn Around	☐
Project Number:		Routine	☐
Project Location:	LCR, NM	Rush:	72hr
Sampler's Name:		Due Date:	
PO #:		Quote #:	

SAMPLE RECEIPT		Temp Blank:	Yes	No	Wet Ice:	Yes	No
Temperature (°C):		Thermometer ID					
Received Intact:	Yes	No	See tag				
Cooler Custody Seals:	Yes	No	N/A	Correction Factor:			
Sample Custody Seals:	Yes	No	N/A	Total Containers:			

Lab ID	Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers
--------	-----------------------	--------	--------------	--------------	-------	----------------------

SV-11		S	1/7	11:30	N/A	TPH
SV-12		S	1/7	11:32		BTEX
SV-13		S	1/7	11:34		Chlorides
SV-14		S	1/7	11:36		

ANALYSIS REQUEST													Preservative Codes	
													MeOH: Me	
													None: NO	
													HNO3: HN	
													H2SO4: H2	
													HCL: HL	
													NaOH: Na	
													Zn Acetate+ NaOH: Zn	
													TAT starts the day received by the lab, if received by 4:00pm	
													Sample Comments	

Total 200.7 / 6010	200.8 / 6020:	8RCRA 13PPM	Texas 11	Al	Sb	As	Ba	Be	B	Cd	Ca	Cr	Co	Cu	Fe	Pb	Mg	Mn	Mo	Ni	K	Se	Ag	SiO2	Na	Sr	Ti	Sn	U	V	Zn
Circle Method(s) and Metal(s) to be analyzed		TCLP / SPLP 6010: 8RCRA		SP	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Mn	Mo	Ni	Se	Ag	Ti	U												
				1631 / 245.1 / 7470 / 7471 : Hg																											

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

Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
<i>John Puri</i>	<i>Joe Linder</i>	1-7-21 1423			
		2			
		4			
		6			

Revised Date 02/26/19 Rev 2013.1

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01.07.2021 02:23.00 PM

Work Order #: 683825

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/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

Samples received in bulk containers.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 01.07.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.08.2021

Certificate of Analysis Summary 685567

COG Operating LLC, Artesia, NM

Project Name: Gold Coast SWD

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, New Mexico

Date Received in Lab: Thu 01.21.2021 12:55

Report Date: 01.25.2021 14:57

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	685567-001	685567-002				
	Field Id:	SW-15	SW-16				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	01.20.2021 10:00	01.20.2021 10:05				
BTEX by EPA 8021B	Extracted:	01.21.2021 18:16	01.21.2021 18:16				
	Analyzed:	01.22.2021 02:52	01.22.2021 03:14				
	Units/RL:	mg/kg RL	mg/kg RL				
		<0.00199 0.00199	<0.00200 0.00200				
Benzene		<0.00199 0.00199	<0.00200 0.00200				
Toluene		<0.00199 0.00199	<0.00200 0.00200				
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200				
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399				
o-Xylene		<0.00199 0.00199	<0.00200 0.00200				
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200				
Total BTEX		<0.00199 0.00199	<0.00200 0.00200				
Chloride by EPA 300	Extracted:	01.21.2021 18:12	01.21.2021 18:12				
	Analyzed:	01.21.2021 18:40	01.21.2021 18:57				
	Units/RL:	mg/kg RL	mg/kg RL				
		431 10.1	331 9.98				
Chloride							
TPH By SW8015 Mod SUB: T104704400-20-21	Extracted:	01.22.2021 17:00	01.22.2021 17:00				
	Analyzed:	01.23.2021 03:43	01.23.2021 04:04				
	Units/RL:	mg/kg RL	mg/kg RL				
		<50.0 50.0	<50.0 50.0				
Gasoline Range Hydrocarbons		<50.0 50.0	<50.0 50.0				
Diesel Range Organics		<50.0 50.0	<50.0 50.0				
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0				
Total TPH		<50.0 50.0	<50.0 50.0				

BRL - Below Reporting Limit

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





Analytical Report 685567

for

COG Operating LLC

Project Manager: Sheldon Hitchcock

Gold Coast SWD

01.25.2021

Collected By: Client

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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-20-18)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-20-24)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-20-21)
Xenco-Carlsbad (LELAP): Louisiana (05092)
Xenco-San Antonio (EPA Lab Code: TN102385): Texas (T104704534-20-8)
Xenco-Tampa: Florida (E87429), North Carolina (483)



01.25.2021

Project Manager: **Sheldon Hitchcock**

COG Operating LLC

2407 Pecos Avenue

Artesia, NM 88210

Reference: Eurofins Xenco, LLC Report No(s): **685567**

Gold Coast SWD

Project Address: Lea, New Mexico

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 685567. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 685567 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 685567

COG Operating LLC, Artesia, NM

Gold Coast SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SW-15	S	01.20.2021 10:00		685567-001
SW-16	S	01.20.2021 10:05		685567-002



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Gold Coast SWD

Project ID:
Work Order Number(s): 685567

Report Date: 01.25.2021
Date Received: 01.21.2021

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 685567

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-15** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685567-001 Date Collected: 01.20.2021 10:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	431	10.1	mg/kg	01.21.2021 18:40		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 03:43	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 03:43	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 03:43	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 03:43	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	01.23.2021 03:43	
o-Terphenyl	84-15-1	123	%	70-130	01.23.2021 03:43	



Certificate of Analytical Results 685567

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-15**
Lab Sample Id: 685567-001

Matrix: Soil
Date Collected: 01.20.2021 10:00

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	01.22.2021 02:52	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	01.22.2021 02:52	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	01.22.2021 02:52	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	01.22.2021 02:52	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	01.22.2021 02:52	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	01.22.2021 02:52	U	1
Total BTEX		<0.00199	0.00199	mg/kg	01.22.2021 02:52	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	01.22.2021 02:52		
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.22.2021 02:52		



Certificate of Analytical Results 685567

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-16** Matrix: Soil Date Received: 01.21.2021 12:55
 Lab Sample Id: 685567-002 Date Collected: 01.20.2021 10:05
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB
 Analyst: MAB Date Prep: 01.21.2021 18:12 % Moisture:
 Seq Number: 3148605 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	331	9.98	mg/kg	01.21.2021 18:57		1

Analytical Method: TPH By SW8015 Mod Prep Method: SW8015P
 Tech: DVM
 Analyst: ARM Date Prep: 01.22.2021 17:00 % Moisture:
 Seq Number: 3148777 Basis: Wet Weight
 SUB: T104704400-20-21

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	01.23.2021 04:04	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	01.23.2021 04:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	01.23.2021 04:04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	01.23.2021 04:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	112	%	70-130	01.23.2021 04:04		
o-Terphenyl	84-15-1	119	%	70-130	01.23.2021 04:04		



Certificate of Analytical Results 685567

COG Operating LLC, Artesia, NM Gold Coast SWD

Sample Id: **SW-16**
Lab Sample Id: 685567-002

Matrix: Soil
Date Collected: 01.20.2021 10:05

Date Received: 01.21.2021 12:55

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: MAB

Analyst: MAB

Date Prep: 01.21.2021 18:16

% Moisture:
Basis: Wet Weight

Seq Number: 3148598

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	01.22.2021 03:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	01.22.2021 03:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	01.22.2021 03:14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	01.22.2021 03:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	01.22.2021 03:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	01.22.2021 03:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	01.22.2021 03:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	01.22.2021 03:14		
4-Bromofluorobenzene	460-00-4	115	%	70-130	01.22.2021 03:14		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



COG Operating LLC Gold Coast SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3148605

MB Sample Id: 7719712-1-BLK

Matrix: Solid

LCS Sample Id: 7719712-1-BKS

Prep Method: E300P

Date Prep: 01.21.2021

LCSD Sample Id: 7719712-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	200	212	106	210	105	90-110	1	20	mg/kg	01.21.2021 16:52	

Analytical Method: Chloride by EPA 300

Seq Number: 3148605

Parent Sample Id: 685561-001

Matrix: Soil

MS Sample Id: 685561-001 S

Prep Method: E300P

Date Prep: 01.21.2021

MSD Sample Id: 685561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2850	201	3040	95	3040	94	90-110	0	20	mg/kg	01.21.2021 17:09	

Analytical Method: Chloride by EPA 300

Seq Number: 3148605

Parent Sample Id: 685561-011

Matrix: Soil

MS Sample Id: 685561-011 S

Prep Method: E300P

Date Prep: 01.21.2021

MSD Sample Id: 685561-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	484	200	696	106	698	106	90-110	0	20	mg/kg	01.21.2021 18:29	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148777

MB Sample Id: 7719881-1-BLK

Matrix: Solid

LCS Sample Id: 7719881-1-BKS

Prep Method: SW8015P

Date Prep: 01.22.2021

LCSD Sample Id: 7719881-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<50.0	1000	1100	110	1150	115	70-130	4	20	mg/kg	01.22.2021 22:02	
Diesel Range Organics	<50.0	1000	1160	116	1130	113	70-130	3	20	mg/kg	01.22.2021 22:02	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		115		112		70-130	%	01.22.2021 22:02
o-Terphenyl	125		124		120		70-130	%	01.22.2021 22:02

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148777

Matrix: Solid

MB Sample Id: 7719881-1-BLK

Prep Method: SW8015P

Date Prep: 01.22.2021

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	01.22.2021 21:41	

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



COG Operating LLC

Gold Coast SWD

Analytical Method: TPH By SW8015 Mod

Seq Number: 3148777

Parent Sample Id: 685561-001

Matrix: Soil

MS Sample Id: 685561-001 S

Prep Method: SW8015P

Date Prep: 01.22.2021

MSD Sample Id: 685561-001 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	<50.0	999	1080	108	1100	110	70-130	2	20	mg/kg	01.22.2021 23:06	
Diesel Range Organics	<50.0	999	1100	110	1110	111	70-130	1	20	mg/kg	01.22.2021 23:06	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	110		110		70-130	%	01.22.2021 23:06
o-Terphenyl	117		120		70-130	%	01.22.2021 23:06

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148598

MB Sample Id: 7719714-1-BLK

Matrix: Solid

LCS Sample Id: 7719714-1-BKS

Prep Method: SW5035A

Date Prep: 01.21.2021

LCSD Sample Id: 7719714-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0966	97	0.0929	93	70-130	4	35	mg/kg	01.21.2021 19:43	
Toluene	<0.00200	0.100	0.0864	86	0.0877	88	70-130	1	35	mg/kg	01.21.2021 19:43	
Ethylbenzene	<0.00200	0.100	0.0913	91	0.0944	94	71-129	3	35	mg/kg	01.21.2021 19:43	
m,p-Xylenes	<0.00400	0.200	0.189	95	0.192	96	70-135	2	35	mg/kg	01.21.2021 19:43	
o-Xylene	<0.00200	0.100	0.0922	92	0.0959	96	71-133	4	35	mg/kg	01.21.2021 19:43	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	105		100		98		70-130	%	01.21.2021 19:43
4-Bromofluorobenzene	111		107		104		70-130	%	01.21.2021 19:43

Analytical Method: BTEX by EPA 8021B

Seq Number: 3148598

Parent Sample Id: 685561-001

Matrix: Soil

MS Sample Id: 685561-001 S

Prep Method: SW5035A

Date Prep: 01.21.2021

MSD Sample Id: 685561-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0920	92	0.0889	89	70-130	3	35	mg/kg	01.22.2021 12:15	
Toluene	<0.00200	0.100	0.0864	86	0.0809	81	70-130	7	35	mg/kg	01.22.2021 12:15	
Ethylbenzene	<0.00200	0.100	0.0902	90	0.0770	77	71-129	16	35	mg/kg	01.22.2021 12:15	
m,p-Xylenes	<0.00401	0.200	0.181	91	0.159	80	70-135	13	35	mg/kg	01.22.2021 12:15	
o-Xylene	<0.00200	0.100	0.0887	89	0.0818	82	71-133	8	35	mg/kg	01.22.2021 12:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		102		70-130	%	01.22.2021 12:15
4-Bromofluorobenzene	107		110		70-130	%	01.22.2021 12:15

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

Analysis Request of Chain of Custody Record

Page 1 of 1

555555

Client Name:		COG-Artesia				Site Manager:		Sheldon Hitchcock									
Project Name:		COG Gold Coast SLD															
Project Location:		(county, state)															
Invoice to:		LCA, WA															
Receiving Laboratory:		Sheldon Hitchcock															
Comments:		Xenob															
Project #:		Sheldon Hitchcock															
Sampler Name:		Sheldon Hitchcock															
LAB #		SAMPLE IDENTIFICATION															
LAB USE ONLY		YEAR: 2021															
		DATE															
		TIME															
		WATER															
		SOIL															
		HCL															
		HNO3															
		ICE															
		# CONTAINERS															
		(C)omposite/(G)rab															
		TPH 8015M (GRO - DRO - MRO)															
		BTX 8021B															
		Chloride															
		Hold															
Requested by:		Date: 12/21 Time: 12:55															
Received by:		Date: 12/21 Time: 12:55															
Requested by:		Date: 12/21 Time: 12:55															
Received by:		Date: 12/21 Time: 12:55															
LAB USE ONLY		LAB USE ONLY															
REMARKS:		RUSH: Same Day 48 hr 72 hr															
		Rush Charges Authorized															
		Special Report Limits or TRRP Report															

ORIGINAL COPY

Inter-Office Shipment

IOS Number : **76898**

Date/Time: 01.22.2021

Created by: Cloe Clifton

Please send report to: Jessica Kramer

Lab# From: **Carlsbad**

Delivery Priority:

Address: 1089 N Canal Street

Lab# To: **Midland**

Air Bill No.:

E-Mail: jessica.kramer@eurofinset.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
685567-001	S	SW-15	01.20.2021 10:00	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C3	
685567-002	S	SW-16	01.20.2021 10:05	SW8015MOD_NM	TPH By SW8015 Mod	01.22.2021	02.03.2021	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By:



Cloe Clifton

Date Relinquished: 01.22.2021

Received By:



Jessica Kramer

Date Received: 01.22.2021

Cooler Temperature: 1.5

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 76898

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By: Cloe Clifton

Date Sent: 01.22.2021 10.04 AM

Received By: Jessica Kramer

Date Received: 01.22.2021 02.07 PM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#8 IOS agrees with sample label(s)/matrix?	Yes
#9 Sample matrix/ properties agree with IOS?	Yes
#10 Samples in proper container/ bottle?	Yes
#11 Samples properly preserved?	Yes
#12 Sample container(s) intact?	Yes
#13 Sufficient sample amount for indicated test(s)?	Yes
#14 All samples received within hold time?	Yes

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:



Jessica Kramer

Date: 01.22.2021

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: COG Operating LLC

Date/ Time Received: 01.21.2021 12.55.00 PM

Work Order #: 685567

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : T_NM_007

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?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/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)?	Yes
#18 Water VOC samples have zero headspace?	N/A

Samples received in bulk containers.

PTH sent to Midland.

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Cloe Clifton

Date: 01.22.2021

Checklist reviewed by:



Jessica Kramer

Date: 01.22.2021

APPENDIX D

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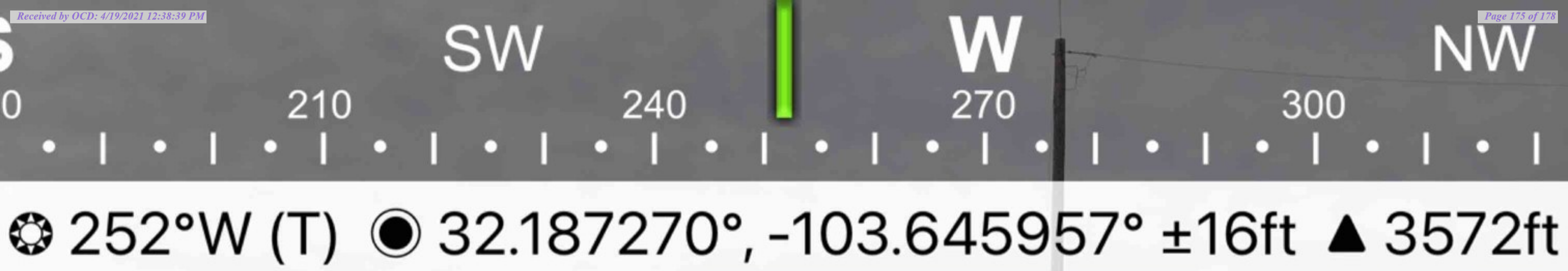
60

90

☉ 47°NE (T) ● 32.187775°, -103.646397° ±32ft ▲ 3566ft

COG OPERATING LLC
GOLD COAST 26 FEDERAL SWD #1
UL K SEC.26-T24S-R32E
2310' FSL & 2310' FWL
LEA COUNTY, NM
API #30-025-41570
NMNM120907

20 Jan 2021, 12:36:58



20 Jan 2021, 12:44:42



20 Jan 2021, 12:48:40



20 Jan 2021, 12:46:01

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720

District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720

District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170

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

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

CONDITIONS

Action 24640

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 24640
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
chensley	None	7/28/2021