



December 11, 2019

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

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

Closure Report:

Magnum Pronto State Com #004H

API#: 30-015-39951

RP#: ~~2RP-5253~~

1RP-5253

DOR: October 18, 2018

GPS: 32.610527 -103.7807999

**Unit Letter P, Section 32, Township 19 South, Range 32 East
Lea County, New Mexico**

To Whom It May Concern,

COG Operating, LLC (COG) is pleased to submit the following closure report in response to a release that occurred at the Magnum Pronto State Com #004H. The release was located in Unit Letter P, Section 32, Township 19 South and Range 32 East in Lea County, New Mexico. More specifically the latitude and longitude for the release are 32.610527 North and -103.7807999 West.

BACKGROUND

The release was discovered on October 18, 2018. A C-141 report was submitted to the New Mexico Oil Conservation Division (NMOCD) and the New Mexico State Land Office (NMSLO). The C-141 is presented in Appendix A. Following delineation of the site a remediation work plan was submitted to and subsequently approved by the NMOCD and NMSLO. The release was caused by sand blocking the dumps on the separator resulting in oil being sent to the flare. The release consisted of approximately seven (7) barrels (bbls) of oil. A vacuum truck was utilized to recover approximately three (3) bbls of oil.

GROUNDWATER AND REGULATORY FRAMEWORK

According to the United States Geological Survey (USGS) the nearest water well with measurement data (323641103444801) indicates that groundwater in the project vicinity is approximately two-hundred and forty-five (245) 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 are 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	245 feet

DELINEATION AND CLOSURE CRITERIA:

Table I Closure Criteria	
Chlorides	20,000 mg/kg
TPH (GRO and DRO and MRO)	2,500 mg/kg
TPH (GRO and DRO)	1,000 mg/kg
Benzene	10 mg/kg
Total BTEX	50 mg/kg

Remedial Actions

- The impacted area was excavated to depths ranging from one-half (0.5) to two (2) feet BGS based on the approved work plan and confirmation soil sampling results.
- 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 the approved alternate sampling plan.

- Upon receipt of acceptable analytical results from the confirmation soil sampling activities the excavation was backfilled with clean “like” material.

SITE RECLAMATION AND RESTORATION

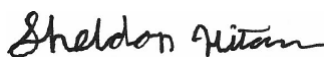
Per NMED 19.15.29.13 reclamation of the pasture area has been performed by removing the impacted soil containing chloride concentrations greater than 600 mg/kg within the first four (4) feet BGS. Once excavated, soil samples were collected from the sidewalls to confirm the removal of impacted soil greater than 600 mg/kg of chlorides. The backfill material was non-contaminated with concentrations below 600 mg/kg of chlorides. The surface was left in a rough condition to approximate natural surface deviations. The site will be mechanically seeded with the NMSLO Blow Sand seed mixture once proper seasonal conditions exist.

CLOSURE REQUEST

COG Operating, LLC respectfully requests that the New Mexico Oil Conservation Division and the New Mexico State Land Office grant closure approval for the Magnum Pronto State Com #004H incident that occurred on October 18, 2018.

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

Sincerely,

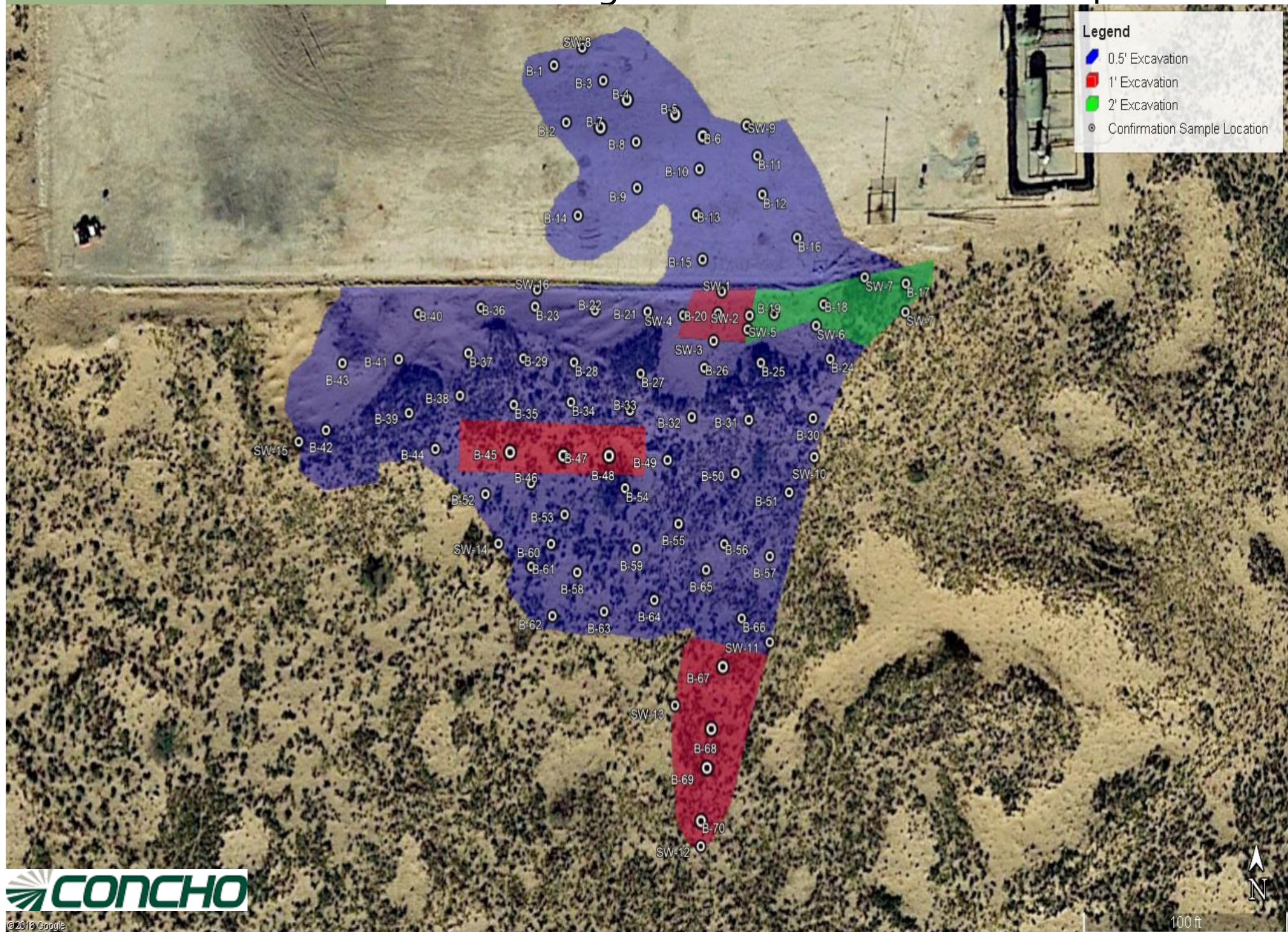


Sheldon L. Hitchcock
HSE Coordinator
slhitchcock@concho.com

FIGURES

October 18, 2018

Magnum Pronto State Com #004H



TABLES

Table 1
COG Operating LLC.
Magnum Pronto State #004H
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	20,000
B-1	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	92.7
B-2	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	113.0
B-3	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	39.8
B-4	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	146.0
B-5	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	163.0
B-6	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	100.0
B-7	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	166.0
B-8	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	210.0
B-9	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	170.0
B-10	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	244.0
B-11	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	285.0
B-12	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	259.0
B-13	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	221.0
B-14	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	282.0
B-15	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	225.0
B-16	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	206.0
B-17	2.0	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	204.0
B-18	2.0	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	247.0
B-19	2.0	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	190.0
B-20	1.0	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	244.0
B-21	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	206.0
B-22	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	283.0
B-23	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	379.0
B-24	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	127.0
B-25	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	187.0
B-26	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	146.0
B-27	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	85.5
B-28	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	183.0
B-29	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	142.0
B-30	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	171.0
B-31	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	70.6
B-32	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	248.0
B-33	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	97.1
B-34	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	65.4
B-35	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	87.4
B-36	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	131.0
B-37	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	98.5
B-38	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	65.7
B-39	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	91.4
B-40	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	78.0
B-41	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	138.0
B-42	0.5	9/17/2019	X		<50.0	69.0	<50.0	69.0	<50.0	69	69.0	<0.002	<0.002	221.0
B-43	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	125.0

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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			
B-44	0.5	9/17/2019	X		<50.0	57.2	<50.0	57.2	<50.0	57.2	57.2	<0.002	<0.002	155.0
B-45	0.5	9/17/2019		X	<50.0	147	<50.0	147.0	<50.0	147	147.0	<0.002	<0.002	335.0
B-46	0.5	9/17/2019	X		<50.0	77.6	<50.0	77.6	<50.0	77.6	77.6	<0.002	<0.002	289.0
B-47	0.5	9/17/2019		X	<50.0	113	<50.0	113.0	<50.0	113	113.0	<0.002	<0.002	378.0
B-48	0.5	9/17/2019		X	<50.0	120	<50.0	120.0	<50.0	120	120.0	<0.002	<0.002	310.0
B-49	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	25.2
B-50	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	20.0
B-51	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	21.4
B-52	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	32.6
B-53	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	11.9
B-54	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	34.4
B-55	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	22.3
B-56	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	25.0
B-57	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	21.5
B-58	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	21.1
B-59	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	17.0
B-60	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	23.6
B-61	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	24.2
B-62	0.5	9/17/2019	X		<50.0	51.9	<50.0	51.9	<50.0	51.9	51.9	<0.002	<0.002	24.7
B-63	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	26.2
B-64	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	24.9
B-65	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	23.1
B-66	0.5	9/17/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	<0.002	<0.002	25.4
B-67	0.5	9/17/2019		X	<50.0	132	<50.0	132.0	<50.0	132	132.0	<0.002	<0.002	17.4
B-68	0.5	9/17/2019		X	<50.0	226	<50.0	226.0	<50.0	226	226.0	<0.002	<0.002	27.2
B-69	0.5	9/17/2019		X	<50.0	129	<50.0	129.0	<50.0	129	129.0	<0.002	<0.002	21.4
B-70	0.5	9/17/2019		X	<50.0	338	69.5	407.5	<50.0	338	338.0	<0.002	<0.002	61.2
B-45	1	10/8/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	#	#	#
B-47	1	10/8/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	#	#	#
B-48	1	10/8/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	#	#	#
B-67	1	10/8/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	#	#	#
B-68	1	10/8/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	#	#	#
B-69	1	10/8/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	#	#	#
B-70	1	10/8/2019	X		<50.0	<50.0	<50.0	0.0	<50.0	<50.0	0.0	#	#	#
SW-1	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	128.0
SW-2	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	48.0
SW-3	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	96.0
SW-4	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-5	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-6	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-7	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-8	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	16.0

Table 1
COG Operating LLC.
Magnum Pronto State #004H
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-9	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-10	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-11	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-12	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-13	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-14	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-15	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	32.0
SW-16	N/A	12/6/2019	X		<10.0	<10.0	<10.0	0.0	<10.0	<10.0	0.0	<0.05	<0.300	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: <i>Each of the following items must be included in the report.</i> ☐ 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.

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: _____

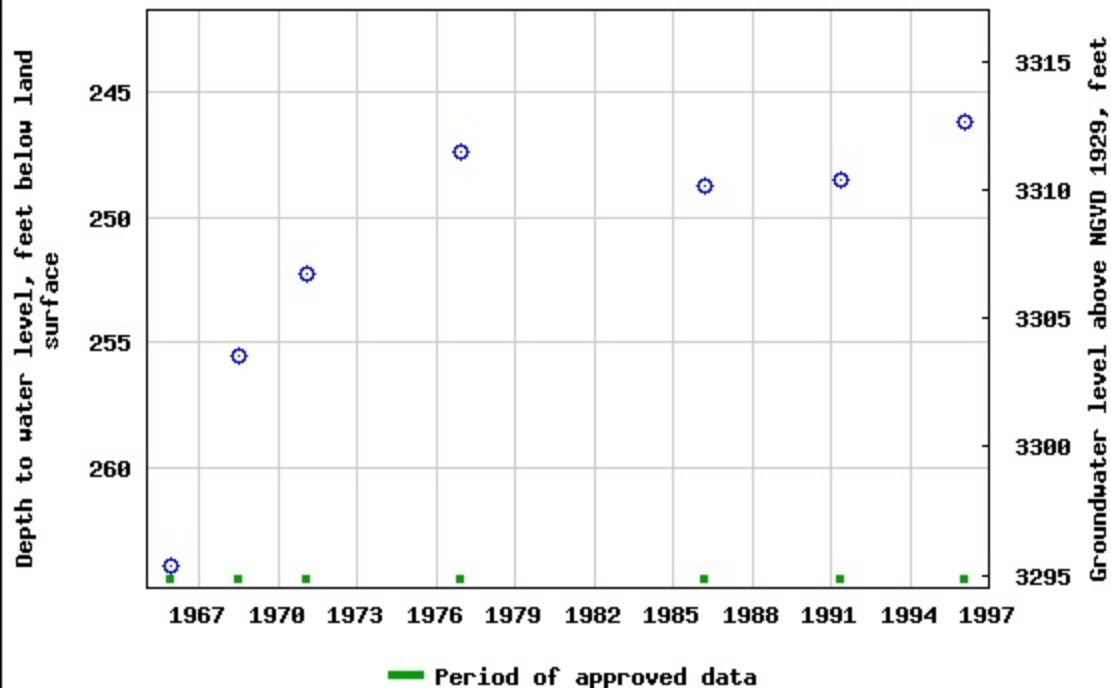
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX B

USGS 323641103444801 19S.32E.34.42322



APPENDIX C



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	637188-001	637188-002	637188-003	637188-004	637188-005	637188-006
	<i>Field Id:</i>	B-1	B-2	B-3	B-4	B-5	B-6
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Sep-17-19 08:00	Sep-17-19 08:05	Sep-17-19 08:10	Sep-17-19 08:15	Sep-17-19 08:20	Sep-17-19 08:25
BTEX by EPA 8021B SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45
	<i>Analyzed:</i>	Sep-21-19 07:30	Sep-21-19 07:50	Sep-21-19 08:10	Sep-21-19 08:30	Sep-21-19 08:51	Sep-21-19 09:11
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00398 0.00398	<0.00403 0.00403	<0.00398 0.00398	<0.00396 0.00396
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Chloride by EPA 300 SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 14:30	Sep-19-19 14:30	Sep-19-19 14:30	Sep-19-19 17:15	Sep-19-19 17:15	Sep-19-19 17:15
	<i>Analyzed:</i>	Sep-19-19 17:07	Sep-19-19 17:13	Sep-19-19 17:19	Sep-20-19 05:33	Sep-20-19 05:38	Sep-20-19 05:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		92.7 4.96	113 5.05	39.8 5.00	146 4.97	163 4.96	100 5.00
TPH By SW8015 Mod SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00
	<i>Analyzed:</i>	Sep-19-19 12:50	Sep-19-19 13:54	Sep-19-19 14:15	Sep-19-19 14:37	Sep-19-19 14:58	Sep-19-19 15:19
	<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	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8
Diesel Range Organics		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8
Total TPH		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.8 49.8

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637188-007	637188-008	637188-009	637188-010	637188-011	637188-012
	Field Id:	B-7	B-8	B-9	B-10	B-11	B-12
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-17-19 08:30	Sep-17-19 08:35	Sep-17-19 08:40	Sep-17-19 08:45	Sep-17-19 08:50	Sep-17-19 08:55
BTEX by EPA 8021B SUB: T104704400-18-18	Extracted:	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45
	Analyzed:	Sep-21-19 09:31	Sep-21-19 09:51	Sep-21-19 10:11	Sep-21-19 10:31	Sep-21-19 11:50	Sep-21-19 12:10
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00402 0.00402	<0.00401 0.00401	<0.00397 0.00397	<0.00400 0.00400	<0.00399 0.00399	<0.00398 0.00398
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-18	Extracted:	Sep-19-19 17:15	Sep-19-19 17:15	Sep-19-19 17:15	Sep-19-19 17:15	Sep-19-19 17:15	Sep-19-19 17:15
	Analyzed:	Sep-20-19 05:50	Sep-20-19 06:08	Sep-20-19 06:13	Sep-20-19 06:31	Sep-20-19 06:37	Sep-20-19 06:42
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		166 5.03	210 4.95	170 5.00	244 5.00	285 5.00	259 5.00
TPH By SW8015 Mod SUB: T104704400-18-18	Extracted:	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00
	Analyzed:	Sep-19-19 15:40	Sep-19-19 16:01	Sep-19-19 17:07	Sep-19-19 17:29	Sep-19-19 18:11	Sep-19-19 18:33
	Units/RL:	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	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637188-013	637188-014	637188-015	637188-016	637188-017	637188-018
	Field Id:	B-13	B-14	B-15	B-16	B-17	B-18
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-17-19 09:00	Sep-17-19 09:05	Sep-17-19 09:10	Sep-17-19 09:15	Sep-17-19 09:20	Sep-17-19 09:25
BTEx by EPA 8021B SUB: T104704400-18-18	Extracted:	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-19-19 11:45	Sep-23-19 14:15
	Analyzed:	Sep-21-19 12:30	Sep-21-19 12:50	Sep-21-19 01:10	Sep-21-19 01:31	Sep-21-19 01:51	Sep-24-19 05:08
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
m,p-Xylenes		<0.00399 0.00399	<0.00396 0.00396	<0.00402 0.00402	<0.00403 0.00403	<0.00398 0.00398	<0.00397 0.00397
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00198 0.00198
Chloride by EPA 300 SUB: T104704400-18-18	Extracted:	Sep-19-19 17:15	Sep-19-19 17:15	Sep-19-19 17:15	Sep-19-19 17:15	Sep-19-19 17:00	Sep-19-19 17:00
	Analyzed:	Sep-20-19 06:48	Sep-20-19 06:54	Sep-20-19 07:00	Sep-20-19 07:06	Sep-20-19 01:17	Sep-20-19 01:34
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		221 5.02	282 4.96	225 5.00	206 5.04	204 5.00	247 5.02
TPH By SW8015 Mod SUB: T104704400-18-18	Extracted:	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00
	Analyzed:	Sep-19-19 18:54	Sep-19-19 19:16	Sep-19-19 19:37	Sep-19-19 19:59	Sep-19-19 20:21	Sep-19-19 20:42
	Units/RL:	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	<49.9 49.9	<49.9 49.9	<50.0 50.0
Diesel Range Organics		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<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	<49.9 49.9	<49.9 49.9	<50.0 50.0
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637188-019	637188-020	637188-021	637188-022	637188-023	637188-024
	Field Id:	B-19	B-20	B-21	B-22	B-23	B-24
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-17-19 09:30	Sep-17-19 09:35	Sep-17-19 09:40	Sep-17-19 09:45	Sep-17-19 09:50	Sep-17-19 09:55
BTEx by EPA 8021B SUB: T104704400-18-18	Extracted:	Sep-23-19 14:15	Sep-23-19 14:15	Sep-19-19 12:00	Sep-23-19 14:15	Sep-19-19 12:00	Sep-23-19 14:15
	Analyzed:	Sep-24-19 05:29	Sep-24-19 05:49	Sep-20-19 08:42	Sep-24-19 12:25	Sep-20-19 09:22	Sep-24-19 12:45
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
m,p-Xylenes		<0.00400 0.00400	<0.00403 0.00403	<0.00400 0.00400	<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Total BTEx		<0.00200 0.00200	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-18	Extracted:	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00
	Analyzed:	Sep-20-19 01:40	Sep-20-19 01:46	Sep-20-19 01:51	Sep-20-19 02:09	Sep-20-19 02:15	Sep-20-19 02:21
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		190 4.96	244 5.00	206 4.95	283 5.05	379 5.05	127 5.05
TPH By SW8015 Mod SUB: T104704400-18-18	Extracted:	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00
	Analyzed:	Sep-19-19 21:04	Sep-19-19 21:26	Sep-19-19 12:50	Sep-19-19 13:54	Sep-19-19 14:15	Sep-19-19 14:37
	Units/RL:	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	<49.9 49.9
Diesel Range Organics		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9
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	<49.9 49.9
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.9 49.9

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637188-025	637188-026	637188-027	637188-028	637188-029	637188-030
	Field Id:	B-25	B-26	B-27	B-28	B-29	B-30
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-17-19 10:00	Sep-17-19 10:05	Sep-17-19 10:10	Sep-17-19 10:15	Sep-17-19 10:20	Sep-17-19 10:25
BTEX by EPA 8021B SUB: T104704400-18-18	Extracted:	Sep-19-19 12:00	Sep-19-19 12:00	Sep-23-19 14:15	Sep-19-19 12:00	Sep-19-19 12:00	Sep-23-19 14:15
	Analyzed:	Sep-20-19 10:03	Sep-20-19 10:23	Sep-24-19 01:05	Sep-20-19 11:03	Sep-20-19 11:23	Sep-24-19 01:26
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00201 0.00201
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00201 0.00201
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00201 0.00201
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00404 0.00404	<0.00396 0.00396	<0.00397 0.00397	<0.00402 0.00402
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00201 0.00201
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00201 0.00201
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-18-18	Extracted:	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00
	Analyzed:	Sep-20-19 02:26	Sep-20-19 02:32	Sep-20-19 02:38	Sep-20-19 02:55	Sep-20-19 03:01	Sep-20-19 03:19
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		187 4.98	146 4.95	85.5 4.95	183 5.02	142 4.95	171 4.99
TPH By SW8015 Mod SUB: T104704400-18-18	Extracted:	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00
	Analyzed:	Sep-19-19 14:58	Sep-19-19 15:19	Sep-19-19 15:40	Sep-19-19 16:01	Sep-19-19 17:07	Sep-19-19 17:29
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.8 49.8
Diesel Range Organics		<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.8 49.8
Total TPH		<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.8 49.8

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637188-031	637188-032	637188-033	637188-034	637188-035	637188-036
	Field Id:	B-31	B-32	B-33	B-34	B-35	B-36
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-17-19 10:30	Sep-17-19 10:35	Sep-17-19 10:40	Sep-17-19 10:45	Sep-17-19 10:50	Sep-17-19 10:55
BTEX by EPA 8021B SUB: T104704400-18-18	Extracted:	Sep-23-19 14:15	Sep-23-19 14:15	Sep-23-19 14:15	Sep-23-19 14:15	Sep-19-19 12:00	Sep-23-19 14:15
	Analyzed:	Sep-24-19 02:47	Sep-24-19 03:07	Sep-24-19 03:27	Sep-24-19 03:48	Sep-20-19 02:26	Sep-24-19 04:08
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Toluene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Ethylbenzene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
m,p-Xylenes		<0.00400 0.00400	<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398	<0.00397 0.00397	<0.00403 0.00403
o-Xylene		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Total Xylenes		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Total BTEX		<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00198 0.00198	<0.00202 0.00202
Chloride by EPA 300 SUB: T104704400-18-18	Extracted:	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00	Sep-19-19 17:00
	Analyzed:	Sep-20-19 03:25	Sep-20-19 03:30	Sep-20-19 03:36	Sep-20-19 03:42	Sep-20-19 03:48	Sep-20-19 03:54
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		70.6 4.97	248 5.04	97.1 4.95	65.4 4.99	87.4 4.98	131 5.00
TPH By SW8015 Mod SUB: T104704400-18-18	Extracted:	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00
	Analyzed:	Sep-19-19 18:11	Sep-19-19 18:33	Sep-19-19 18:54	Sep-19-19 19:16	Sep-19-19 19:37	Sep-19-19 19:59
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Diesel Range Organics		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637188-037	637188-038	637188-039	637188-040	637188-041	637188-042
	Field Id:	B-37	B-38	B-39	B-40	B-41	B-42
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-17-19 11:00	Sep-17-19 11:05	Sep-17-19 11:10	Sep-17-19 11:15	Sep-17-19 11:20	Sep-17-19 11:25
BTX by EPA 8021B SUB: T104704400-18-18	Extracted:	Sep-19-19 12:00	Sep-23-19 14:15	Sep-23-19 14:15	Sep-19-19 12:00	Sep-19-19 12:15	Sep-19-19 12:15
	Analyzed:	Sep-20-19 03:06	Sep-24-19 04:28	Sep-24-19 04:48	Sep-20-19 04:07	Sep-20-19 01:54	Sep-20-19 02:14
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201
m,p-Xylenes		<0.00399 0.00399	<0.00398 0.00398	<0.00398 0.00398	<0.00399 0.00399	<0.00404 0.00404	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201
Total BTX		<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-18-18	Extracted:	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10
	Analyzed:	Sep-20-19 09:42	Sep-20-19 10:05	Sep-20-19 10:12	Sep-20-19 10:20	Sep-20-19 10:27	Sep-20-19 11:05
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		98.5 5.01	65.7 4.97	91.4 4.99	78.0 5.03	138 5.04	221 5.04
TPH By SW8015 Mod SUB: T104704400-18-18	Extracted:	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 12:00	Sep-19-19 13:00	Sep-19-19 13:00
	Analyzed:	Sep-19-19 20:21	Sep-19-19 20:42	Sep-19-19 21:04	Sep-19-19 21:26	Sep-19-19 23:13	Sep-20-19 00:18
	Units/RL:	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	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0
Diesel Range Organics		<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	69.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	<50.0 50.0
Total TPH		<49.8 49.8	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9	69.0 50.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637188-043	637188-044	637188-045	637188-046	637188-047	637188-048
	Field Id:	B-43	B-44	B-45	B-46	B-47	B-48
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-17-19 11:30	Sep-17-19 11:35	Sep-17-19 11:40	Sep-17-19 11:45	Sep-17-19 11:50	Sep-17-19 11:55
BTEX by EPA 8021B SUB: T104704400-18-18	Extracted:	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15
	Analyzed:	Sep-20-19 02:34	Sep-20-19 02:54	Sep-20-19 03:15	Sep-20-19 03:35	Sep-20-19 03:55	Sep-20-19 04:15
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Toluene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Ethylbenzene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
m,p-Xylenes		<0.00400 0.00400	<0.00397 0.00397	<0.00399 0.00399	<0.00399 0.00399	<0.00402 0.00402	<0.00401 0.00401
o-Xylene		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total Xylenes		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Total BTEX		<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00200 0.00200
Chloride by EPA 300 SUB: T104704400-18-18	Extracted:	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10
	Analyzed:	Sep-20-19 11:12	Sep-20-19 11:20	Sep-20-19 11:27	Sep-20-19 11:34	Sep-20-19 11:42	Sep-20-19 12:34
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		125 5.01	155 5.02	335 5.02	289 4.97	378 4.96	310 4.96
TPH By SW8015 Mod SUB: T104704400-18-18	Extracted:	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00
	Analyzed:	Sep-20-19 00:39	Sep-20-19 01:01	Sep-20-19 01:22	Sep-20-19 01:44	Sep-20-19 02:05	Sep-20-19 02:27
	Units/RL:	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	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8
Diesel Range Organics		<49.9 49.9	57.2 49.9	147 50.0	77.6 49.9	113 50.0	120 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8
Total TPH		<49.9 49.9	57.2 49.9	147 50.0	77.6 49.9	113 50.0	120 49.8

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	637188-049	637188-050	637188-051	637188-052	637188-053	637188-054
	<i>Field Id:</i>	B-49	B-50	B-51	B-52	B-53	B-54
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Sep-17-19 12:00	Sep-17-19 12:05	Sep-17-19 12:10	Sep-17-19 12:15	Sep-17-19 12:20	Sep-17-19 12:25
BTEX by EPA 8021B SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15
	<i>Analyzed:</i>	Sep-20-19 04:35	Sep-20-19 04:55	Sep-20-19 06:14	Sep-20-19 06:34	Sep-20-19 06:54	Sep-20-19 07:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Toluene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Ethylbenzene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
m,p-Xylenes		<0.00402 0.00402	<0.00398 0.00398	<0.00399 0.00399	<0.00400 0.00400	<0.00402 0.00402	<0.00403 0.00403
o-Xylene		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Total Xylenes		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Total BTEX		<0.00201 0.00201	<0.00199 0.00199	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202
Chloride by EPA 300 SUB: T104704400-18-18	<i>Extracted:</i>	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:10
	<i>Analyzed:</i>	Sep-20-19 12:42	Sep-20-19 12:49	Sep-20-19 12:57	Sep-20-19 13:04	Sep-20-19 13:12	Sep-20-19 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		25.2 5.01	20.0 5.02	21.4 5.04	32.6 4.97	11.9 5.00	34.4 5.01
TPH By SW8015 Mod SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00
	<i>Analyzed:</i>	Sep-20-19 02:48	Sep-20-19 03:09	Sep-20-19 03:52	Sep-20-19 04:14	Sep-20-19 04:35	Sep-20-19 04:57
	<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	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Diesel Range Organics		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0
Total TPH		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<50.0 50.0

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	637188-055	637188-056	637188-057	637188-058	637188-059	637188-060
	Field Id:	B-55	B-56	B-57	B-58	B-59	B-60
	Depth:						
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Sep-17-19 12:30	Sep-17-19 12:35	Sep-17-19 12:40	Sep-17-19 12:45	Sep-17-19 12:50	Sep-17-19 12:55
BTX by EPA 8021B SUB: T104704400-18-18	Extracted:	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15	Sep-19-19 12:15
	Analyzed:	Sep-20-19 07:34	Sep-20-19 07:54	Sep-20-19 08:14	Sep-20-19 08:35	Sep-20-19 08:55	Sep-20-19 09:15
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Benzene	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
	Toluene	<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00401 0.00401	<0.00402 0.00402	<0.00397 0.00397	<0.00400 0.00400	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Total BTX		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300 SUB: T104704400-18-18	Extracted:	Sep-20-19 09:10	Sep-20-19 09:10	Sep-20-19 09:20	Sep-20-19 09:20	Sep-20-19 09:20	Sep-20-19 09:20
	Analyzed:	Sep-20-19 13:27	Sep-20-19 13:34	Sep-20-19 09:45	Sep-20-19 10:04	Sep-20-19 10:11	Sep-20-19 10:17
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Chloride	22.3 5.00	25.0 5.05	21.5 4.96	21.1 5.02	17.0 4.96	23.6 5.03
TPH By SW8015 Mod SUB: T104704400-18-18	Extracted:	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00	Sep-19-19 13:00
	Analyzed:	Sep-20-19 05:18	Sep-20-19 05:40	Sep-20-19 06:01	Sep-20-19 06:23	Sep-20-19 06:44	Sep-20-19 07:06
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
	Gasoline Range Hydrocarbons	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9
	Diesel Range Organics	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<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	<49.8 49.8	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	637188-061	637188-062	637188-063	637188-064	637188-065	637188-066
	<i>Field Id:</i>	B-61	B-62	B-63	B-64	B-65	B-66
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Sep-17-19 13:00	Sep-17-19 13:05	Sep-17-19 13:10	Sep-17-19 13:15	Sep-17-19 13:20	Sep-17-19 13:25
BTEX by EPA 8021B SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 11:30	Sep-19-19 11:30	Sep-19-19 11:30	Sep-19-19 11:30	Sep-19-19 11:30	Sep-19-19 11:30
	<i>Analyzed:</i>	Sep-19-19 19:35	Sep-19-19 19:55	Sep-19-19 20:15	Sep-19-19 20:35	Sep-19-19 20:56	Sep-19-19 21:16
	<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	<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201
Toluene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201
Ethylbenzene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201
m,p-Xylenes		<0.00396 0.00396	<0.00397 0.00397	<0.00400 0.00400	<0.00404 0.00404	<0.00402 0.00402	<0.00402 0.00402
o-Xylene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201
Total Xylenes		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201
Total BTEX		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00202 0.00202	<0.00201 0.00201	<0.00201 0.00201
Chloride by EPA 300 SUB: T104704400-18-18	<i>Extracted:</i>	Sep-20-19 09:20	Sep-20-19 09:20	Sep-20-19 09:20	Sep-20-19 09:20	Sep-20-19 09:20	Sep-20-19 09:20
	<i>Analyzed:</i>	Sep-20-19 10:23	Sep-20-19 10:43	Sep-20-19 10:49	Sep-20-19 10:56	Sep-20-19 11:02	Sep-20-19 11:09
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		24.2 5.01	24.7 4.99	26.2 4.98	24.9 5.01	23.1 5.02	25.4 5.02
TPH By SW8015 Mod SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 14:00	Sep-19-19 14:00	Sep-19-19 14:00	Sep-19-19 14:00	Sep-19-19 14:00	Sep-19-19 14:00
	<i>Analyzed:</i>	Sep-19-19 23:13	Sep-20-19 00:18	Sep-20-19 00:39	Sep-20-19 01:01	Sep-20-19 01:22	Sep-20-19 01:44
	<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	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0
Diesel Range Organics		<49.9 49.9	51.9 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0
Total TPH		<49.9 49.9	51.9 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 637188

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. #004 10/18/2018

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Sep-17-19 03:29 pm

Report Date: 26-SEP-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	637188-067	637188-068	637188-069	637188-070		
	<i>Field Id:</i>	B-67	B-68	B-69	B-70		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Sep-17-19 13:30	Sep-17-19 13:35	Sep-17-19 13:40	Sep-17-19 13:45		
BTEX by EPA 8021B SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 11:30	Sep-19-19 11:30	Sep-19-19 11:30	Sep-19-19 11:30		
	<i>Analyzed:</i>	Sep-19-19 21:36	Sep-19-19 21:56	Sep-19-19 22:16	Sep-19-19 22:36		
	<i>Units/RL:</i>	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		
Toluene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200		
Ethylbenzene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200		
m,p-Xylenes		<0.00397 0.00397	<0.00396 0.00396	<0.00399 0.00399	<0.00399 0.00399		
o-Xylene		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200		
Total Xylenes		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200		
Total BTEX		<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200		
Chloride by EPA 300 SUB: T104704400-18-18	<i>Extracted:</i>	Sep-20-19 09:20	Sep-20-19 09:20	Sep-20-19 09:20	Sep-20-19 09:20		
	<i>Analyzed:</i>	Sep-20-19 11:15	Sep-20-19 11:34	Sep-20-19 11:41	Sep-20-19 12:00		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		17.4 4.98	27.2 4.97	21.4 5.02	61.2 5.05		
TPH By SW8015 Mod SUB: T104704400-18-18	<i>Extracted:</i>	Sep-19-19 14:00	Sep-19-19 14:00	Sep-19-19 14:00	Sep-19-19 14:00		
	<i>Analyzed:</i>	Sep-20-19 02:05	Sep-20-19 02:27	Sep-20-19 02:48	Sep-20-19 03:09		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Gasoline Range Hydrocarbons		<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9		
Diesel Range Organics		132 49.8	226 50.0	129 49.9	338 49.9		
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	69.5 49.9		
Total TPH		132 49.8	226 50.0	129 49.9	408 49.9		

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Jessica Kramer
Project Assistant

Analytical Report 637188

for COG Operating LLC

Project Manager: Sheldon Hitchcock

Magnum Pronto St. #004 10/18/2018

26-SEP-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-21), Arizona (AZ0809), Arkansas (17-063-0)

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



26-SEP-19

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

Reference: XENCO Report No(s): **637188**
Magnum Pronto St. #004 10/18/2018
Project Address: Lea, NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 637188. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 637188 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer
Project Assistant

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Sample Cross Reference 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B-1	S	09-17-19 08:00		637188-001
B-2	S	09-17-19 08:05		637188-002
B-3	S	09-17-19 08:10		637188-003
B-4	S	09-17-19 08:15		637188-004
B-5	S	09-17-19 08:20		637188-005
B-6	S	09-17-19 08:25		637188-006
B-7	S	09-17-19 08:30		637188-007
B-8	S	09-17-19 08:35		637188-008
B-9	S	09-17-19 08:40		637188-009
B-10	S	09-17-19 08:45		637188-010
B-11	S	09-17-19 08:50		637188-011
B-12	S	09-17-19 08:55		637188-012
B-13	S	09-17-19 09:00		637188-013
B-14	S	09-17-19 09:05		637188-014
B-15	S	09-17-19 09:10		637188-015
B-16	S	09-17-19 09:15		637188-016
B-17	S	09-17-19 09:20		637188-017
B-18	S	09-17-19 09:25		637188-018
B-19	S	09-17-19 09:30		637188-019
B-20	S	09-17-19 09:35		637188-020
B-21	S	09-17-19 09:40		637188-021
B-22	S	09-17-19 09:45		637188-022
B-23	S	09-17-19 09:50		637188-023
B-24	S	09-17-19 09:55		637188-024
B-25	S	09-17-19 10:00		637188-025
B-26	S	09-17-19 10:05		637188-026
B-27	S	09-17-19 10:10		637188-027
B-28	S	09-17-19 10:15		637188-028
B-29	S	09-17-19 10:20		637188-029
B-30	S	09-17-19 10:25		637188-030
B-31	S	09-17-19 10:30		637188-031
B-32	S	09-17-19 10:35		637188-032
B-33	S	09-17-19 10:40		637188-033
B-34	S	09-17-19 10:45		637188-034
B-35	S	09-17-19 10:50		637188-035
B-36	S	09-17-19 10:55		637188-036
B-37	S	09-17-19 11:00		637188-037
B-38	S	09-17-19 11:05		637188-038
B-39	S	09-17-19 11:10		637188-039
B-40	S	09-17-19 11:15		637188-040
B-41	S	09-17-19 11:20		637188-041
B-42	S	09-17-19 11:25		637188-042
B-43	S	09-17-19 11:30		637188-043



Sample Cross Reference 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

B-44	S	09-17-19 11:35	637188-044
B-45	S	09-17-19 11:40	637188-045
B-46	S	09-17-19 11:45	637188-046
B-47	S	09-17-19 11:50	637188-047
B-48	S	09-17-19 11:55	637188-048
B-49	S	09-17-19 12:00	637188-049
B-50	S	09-17-19 12:05	637188-050
B-51	S	09-17-19 12:10	637188-051
B-52	S	09-17-19 12:15	637188-052
B-53	S	09-17-19 12:20	637188-053
B-54	S	09-17-19 12:25	637188-054
B-55	S	09-17-19 12:30	637188-055
B-56	S	09-17-19 12:35	637188-056
B-57	S	09-17-19 12:40	637188-057
B-58	S	09-17-19 12:45	637188-058
B-59	S	09-17-19 12:50	637188-059
B-60	S	09-17-19 12:55	637188-060
B-61	S	09-17-19 13:00	637188-061
B-62	S	09-17-19 13:05	637188-062
B-63	S	09-17-19 13:10	637188-063
B-64	S	09-17-19 13:15	637188-064
B-65	S	09-17-19 13:20	637188-065
B-66	S	09-17-19 13:25	637188-066
B-67	S	09-17-19 13:30	637188-067
B-68	S	09-17-19 13:35	637188-068
B-69	S	09-17-19 13:40	637188-069
B-70	S	09-17-19 13:45	637188-070



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Magnum Pronto St. #004 10/18/2018

Project ID:
Work Order Number(s): 637188

Report Date: 26-SEP-19
Date Received: 09/17/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3101988 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3101989 TPH By SW8015 Mod

Surrogate o-Terphenyl recovered above QC limits. Matrix interferences is suspected;

Samples affected are: 637188-016,637188-012.

Batch: LBA-3101993 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 637188-050.

Batch: LBA-3102006 Chloride by EPA 300

Lab Sample ID 637188-027 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 637188-017, -018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Magnum Pronto St. #004 10/18/2018

Project ID:
Work Order Number(s): 637188

Report Date: 26-SEP-19
Date Received: 09/17/2019

Batch: LBA-3102187 BTEX by EPA 8021B

Lab Sample ID 637188-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene recovered below QC limits in the Matrix Spike. Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 637188-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 637188-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Samples affected are: 7686477-1-BSD, 637188-001 SD, 637188-003, 637188-004, 637188-005, 637188-006, 637188-017, 637188-009, 637188-010, 637188-011, 637188-012, 637188-013, 637188-014, 637188-016, 637188-002, 637188-001, 637188-007.

Batch: LBA-3102347 BTEX by EPA 8021B

Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene Relative Percent Difference (RPD) between matrix spike and duplicate were above quality control limits.

Samples in the analytical batch are: 637188-021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039, -040

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 1,4-Difluorobenzene, Surrogate 4-Bromofluorobenzene recovered below QC limits. Matrix interferences is suspected; data confirmed by re-analysis.

Samples affected are: 637188-021 SD.

Lab Sample ID 637188-021 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 637188-021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039, -040.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-1**
Lab Sample Id: 637188-001

Matrix: Soil
Date Collected: 09.17.19 08.00

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102005

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92.7	4.96	mg/kg	09.19.19 17.07		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 12.50	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 12.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 12.50	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 12.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-135	09.19.19 12.50	
o-Terphenyl	84-15-1	121	%	70-135	09.19.19 12.50	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-1**
Lab Sample Id: 637188-001

Matrix: Soil
Date Collected: 09.17.19 08.00

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.21.19 07.30	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.21.19 07.30	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.21.19 07.30	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.21.19 07.30	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.21.19 07.30	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.21.19 07.30	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.21.19 07.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	09.21.19 07.30		
4-Bromofluorobenzene	460-00-4	134	%	70-130	09.21.19 07.30	**	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: B-2
Lab Sample Id: 637188-002

Matrix: Soil
Date Collected: 09.17.19 08.05

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102005

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	113	5.05	mg/kg	09.19.19 17.13		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 13.54	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 13.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 13.54	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 13.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	09.19.19 13.54	
o-Terphenyl	84-15-1	121	%	70-135	09.19.19 13.54	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-2**
Lab Sample Id: 637188-002

Matrix: Soil
Date Collected: 09.17.19 08.05

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.21.19 07.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.21.19 07.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.21.19 07.50	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.21.19 07.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.21.19 07.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.21.19 07.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.21.19 07.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	146	%	70-130	09.21.19 07.50	**	
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.21.19 07.50		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-3**
Lab Sample Id: 637188-003

Matrix: Soil
Date Collected: 09.17.19 08.10

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102005

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	39.8	5.00	mg/kg	09.19.19 17.19		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 14.15	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 14.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 14.15	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 14.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-135	09.19.19 14.15	
o-Terphenyl	84-15-1	127	%	70-135	09.19.19 14.15	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-3**
Lab Sample Id: 637188-003

Matrix: Soil
Date Collected: 09.17.19 08.10

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 11.45

Basis: Wet Weight

Seq Number: 3102187

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.21.19 08.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.21.19 08.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.21.19 08.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.21.19 08.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.21.19 08.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.21.19 08.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.21.19 08.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	141	%	70-130	09.21.19 08.10	**	
1,4-Difluorobenzene	540-36-3	92	%	70-130	09.21.19 08.10		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-4**
Lab Sample Id: 637188-004

Matrix: Soil
Date Collected: 09.17.19 08.15

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.15

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	146	4.97	mg/kg	09.20.19 05.33		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 14.37	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 14.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 14.37	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 14.37	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	110	%	70-135	09.19.19 14.37	
84-15-1	111	%	70-135	09.19.19 14.37	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-4**
Lab Sample Id: 637188-004

Matrix: Soil
Date Collected: 09.17.19 08.15

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.21.19 08.30	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.21.19 08.30	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.21.19 08.30	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.21.19 08.30	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.21.19 08.30	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.21.19 08.30	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.21.19 08.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	133	%	70-130	09.21.19 08.30	**	
1,4-Difluorobenzene	540-36-3	93	%	70-130	09.21.19 08.30		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: B-5
Lab Sample Id: 637188-005

Matrix: Soil
Date Collected: 09.17.19 08.20

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	163	4.96	mg/kg	09.20.19 05.38		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Date Prep: 09.19.19 12.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 14.58	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 14.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 14.58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 14.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	09.19.19 14.58	
o-Terphenyl	84-15-1	120	%	70-135	09.19.19 14.58	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-5**
Lab Sample Id: 637188-005

Matrix: Soil
Date Collected: 09.17.19 08.20

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.21.19 08.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.21.19 08.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.21.19 08.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.21.19 08.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.21.19 08.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.21.19 08.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.21.19 08.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	149	%	70-130	09.21.19 08.51	**	
1,4-Difluorobenzene	540-36-3	93	%	70-130	09.21.19 08.51		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-6**
Lab Sample Id: 637188-006

Matrix: Soil
Date Collected: 09.17.19 08.25

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	100	5.00	mg/kg	09.20.19 05.44		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 15.19	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 15.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 15.19	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 15.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-135	09.19.19 15.19	
o-Terphenyl	84-15-1	109	%	70-135	09.19.19 15.19	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-6**
Lab Sample Id: 637188-006

Matrix: Soil
Date Collected: 09.17.19 08.25

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.21.19 09.11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.21.19 09.11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.21.19 09.11	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.21.19 09.11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.21.19 09.11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.21.19 09.11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.21.19 09.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	132	%	70-130	09.21.19 09.11	**	
1,4-Difluorobenzene	540-36-3	93	%	70-130	09.21.19 09.11		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: B-7
Lab Sample Id: 637188-007

Matrix: Soil
Date Collected: 09.17.19 08.30

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	166	5.03	mg/kg	09.20.19 05.50		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 15.40	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 15.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 15.40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 15.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	09.19.19 15.40	
o-Terphenyl	84-15-1	113	%	70-135	09.19.19 15.40	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-7**
Lab Sample Id: 637188-007

Matrix: Soil
Date Collected: 09.17.19 08.30

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.21.19 09.31	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.21.19 09.31	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.21.19 09.31	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.21.19 09.31	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.21.19 09.31	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.21.19 09.31	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.21.19 09.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.21.19 09.31		
4-Bromofluorobenzene	460-00-4	136	%	70-130	09.21.19 09.31	**	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-8**
Lab Sample Id: 637188-008

Matrix: Soil
Date Collected: 09.17.19 08.35

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	210	4.95	mg/kg	09.20.19 06.08		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 16.01	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 16.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 16.01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	09.19.19 16.01	
o-Terphenyl	84-15-1	120	%	70-135	09.19.19 16.01	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-8**
Lab Sample Id: 637188-008

Matrix: Soil
Date Collected: 09.17.19 08.35

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.21.19 09.51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.21.19 09.51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.21.19 09.51	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.21.19 09.51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.21.19 09.51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.21.19 09.51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.21.19 09.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.21.19 09.51		
1,4-Difluorobenzene	540-36-3	90	%	70-130	09.21.19 09.51		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-9**
Lab Sample Id: 637188-009

Matrix: Soil
Date Collected: 09.17.19 08.40

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	170	5.00	mg/kg	09.20.19 06.13		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 17.07	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 17.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 17.07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 17.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	09.19.19 17.07	
o-Terphenyl	84-15-1	115	%	70-135	09.19.19 17.07	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-9**
Lab Sample Id: 637188-009

Matrix: Soil
Date Collected: 09.17.19 08.40

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.21.19 10.11	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.21.19 10.11	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.21.19 10.11	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.21.19 10.11	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.21.19 10.11	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.21.19 10.11	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.21.19 10.11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	138	%	70-130	09.21.19 10.11	**	
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.21.19 10.11		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-10**
Lab Sample Id: 637188-010

Matrix: Soil
Date Collected: 09.17.19 08.45

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	244	5.00	mg/kg	09.20.19 06.31		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 17.29	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 17.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 17.29	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 17.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-135	09.19.19 17.29	
o-Terphenyl	84-15-1	114	%	70-135	09.19.19 17.29	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-10**
Lab Sample Id: 637188-010

Matrix: Soil
Date Collected: 09.17.19 08.45

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.21.19 10.31	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.21.19 10.31	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.21.19 10.31	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.21.19 10.31	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.21.19 10.31	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.21.19 10.31	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.21.19 10.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	142	%	70-130	09.21.19 10.31	**	
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.21.19 10.31		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-11**
Lab Sample Id: 637188-011

Matrix: Soil
Date Collected: 09.17.19 08.50

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	285	5.00	mg/kg	09.20.19 06.37		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 18.11	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 18.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 18.11	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	120	%	70-135	09.19.19 18.11	
o-Terphenyl	84-15-1	123	%	70-135	09.19.19 18.11	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-11**
Lab Sample Id: 637188-011

Matrix: Soil
Date Collected: 09.17.19 08.50

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.21.19 11.50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.21.19 11.50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.21.19 11.50	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.21.19 11.50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.21.19 11.50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.21.19 11.50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.21.19 11.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	09.21.19 11.50		
4-Bromofluorobenzene	460-00-4	136	%	70-130	09.21.19 11.50	**	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-12**
Lab Sample Id: 637188-012

Matrix: Soil
Date Collected: 09.17.19 08.55

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	259	5.00	mg/kg	09.20.19 06.42		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 18.33	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 18.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 18.33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 18.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	09.19.19 18.33	
o-Terphenyl	84-15-1	136	%	70-135	09.19.19 18.33	**



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-12**
Lab Sample Id: 637188-012

Matrix: Soil
Date Collected: 09.17.19 08.55

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.21.19 12.10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.21.19 12.10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.21.19 12.10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.21.19 12.10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.21.19 12.10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.21.19 12.10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.21.19 12.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.21.19 12.10		
4-Bromofluorobenzene	460-00-4	134	%	70-130	09.21.19 12.10	**	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-13**
Lab Sample Id: 637188-013

Matrix: Soil
Date Collected: 09.17.19 09.00

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	221	5.02	mg/kg	09.20.19 06.48		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Date Prep: 09.19.19 12.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 18.54	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 18.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 18.54	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 18.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	09.19.19 18.54	
o-Terphenyl	84-15-1	118	%	70-135	09.19.19 18.54	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-13**
Lab Sample Id: 637188-013

Matrix: Soil
Date Collected: 09.17.19 09.00

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.21.19 12.30	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.21.19 12.30	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.21.19 12.30	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.21.19 12.30	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.21.19 12.30	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.21.19 12.30	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.21.19 12.30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	135	%	70-130	09.21.19 12.30	**	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.21.19 12.30		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-14**
Lab Sample Id: 637188-014

Matrix: Soil
Date Collected: 09.17.19 09.05

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	282	4.96	mg/kg	09.20.19 06.54		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 19.16	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 19.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 19.16	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 19.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	09.19.19 19.16	
o-Terphenyl	84-15-1	117	%	70-135	09.19.19 19.16	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-14**
Lab Sample Id: 637188-014

Matrix: Soil
Date Collected: 09.17.19 09.05

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.21.19 12.50	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.21.19 12.50	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.21.19 12.50	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.21.19 12.50	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.21.19 12.50	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.21.19 12.50	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.21.19 12.50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	141	%	70-130	09.21.19 12.50	**	
1,4-Difluorobenzene	540-36-3	88	%	70-130	09.21.19 12.50		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-15**
Lab Sample Id: 637188-015

Matrix: Soil
Date Collected: 09.17.19 09.10

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.15

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	225	5.00	mg/kg	09.20.19 07.00		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 19.37	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 19.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 19.37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 19.37	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	117	%	70-135	09.19.19 19.37	
84-15-1	120	%	70-135	09.19.19 19.37	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-15**
Lab Sample Id: 637188-015

Matrix: Soil
Date Collected: 09.17.19 09.10

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.21.19 01.10	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.21.19 01.10	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.21.19 01.10	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.21.19 01.10	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.21.19 01.10	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.21.19 01.10	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.21.19 01.10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	09.21.19 01.10		
1,4-Difluorobenzene	540-36-3	93	%	70-130	09.21.19 01.10		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-16**
Lab Sample Id: 637188-016

Matrix: Soil
Date Collected: 09.17.19 09.15

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102010

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	206	5.04	mg/kg	09.20.19 07.06		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Date Prep: 09.19.19 12.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 19.59	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 19.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 19.59	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 19.59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	128	%	70-135	09.19.19 19.59	
o-Terphenyl	84-15-1	139	%	70-135	09.19.19 19.59	**



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-16**
Lab Sample Id: 637188-016

Matrix: Soil
Date Collected: 09.17.19 09.15

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.21.19 01.31	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.21.19 01.31	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.21.19 01.31	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.21.19 01.31	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.21.19 01.31	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.21.19 01.31	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.21.19 01.31	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.21.19 01.31		
4-Bromofluorobenzene	460-00-4	148	%	70-130	09.21.19 01.31	**	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-17**
Lab Sample Id: 637188-017

Matrix: Soil
Date Collected: 09.17.19 09.20

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Date Prep: 09.19.19 17.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	204	5.00	mg/kg	09.20.19 01.17		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 20.21	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 20.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 20.21	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 20.21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-135	09.19.19 20.21	
o-Terphenyl	84-15-1	118	%	70-135	09.19.19 20.21	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-17**
Lab Sample Id: 637188-017

Matrix: Soil
Date Collected: 09.17.19 09.20

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.45

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.21.19 01.51	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.21.19 01.51	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.21.19 01.51	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.21.19 01.51	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.21.19 01.51	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.21.19 01.51	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.21.19 01.51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.21.19 01.51		
4-Bromofluorobenzene	460-00-4	136	%	70-130	09.21.19 01.51	**	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-18**
Lab Sample Id: 637188-018

Matrix: Soil
Date Collected: 09.17.19 09.25

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	247	5.02	mg/kg	09.20.19 01.34		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 20.42	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 20.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 20.42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 20.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-135	09.19.19 20.42	
o-Terphenyl	84-15-1	116	%	70-135	09.19.19 20.42	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-18**
Lab Sample Id: 637188-018

Matrix: Soil
Date Collected: 09.17.19 09.25

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.23.19 14.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.24.19 05.08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.24.19 05.08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.24.19 05.08	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.24.19 05.08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.24.19 05.08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.24.19 05.08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.24.19 05.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	145	%	70-130	09.24.19 05.08	**	
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.24.19 05.08		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-19**
Lab Sample Id: 637188-019

Matrix: Soil
Date Collected: 09.17.19 09.30

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	190	4.96	mg/kg	09.20.19 01.40		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 21.04	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 21.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 21.04	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 21.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	129	%	70-135	09.19.19 21.04	
o-Terphenyl	84-15-1	134	%	70-135	09.19.19 21.04	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-19**
Lab Sample Id: 637188-019

Matrix: Soil
Date Collected: 09.17.19 09.30

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102187

Prep Method: SW5030B

% Moisture:

Date Prep: 09.23.19 14.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.24.19 05.29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.24.19 05.29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.24.19 05.29	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.24.19 05.29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.24.19 05.29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.24.19 05.29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.24.19 05.29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	142	%	70-130	09.24.19 05.29	**	
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.24.19 05.29		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-20**
Lab Sample Id: 637188-020

Matrix: Soil
Date Collected: 09.17.19 09.35

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	244	5.00	mg/kg	09.20.19 01.46		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101989

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 21.26	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 21.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 21.26	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 21.26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-135	09.19.19 21.26	
o-Terphenyl	84-15-1	115	%	70-135	09.19.19 21.26	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-20**
Lab Sample Id: 637188-020

Matrix: Soil
Date Collected: 09.17.19 09.35

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.23.19 14.15

Basis: Wet Weight

Seq Number: 3102187

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.24.19 05.49	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.24.19 05.49	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.24.19 05.49	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.24.19 05.49	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.24.19 05.49	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.24.19 05.49	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.24.19 05.49	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.24.19 05.49		
4-Bromofluorobenzene	460-00-4	142	%	70-130	09.24.19 05.49	**	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-21**
Lab Sample Id: 637188-021

Matrix: Soil
Date Collected: 09.17.19 09.40

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Date Prep: 09.19.19 17.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	206	4.95	mg/kg	09.20.19 01.51		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 12.50	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 12.50	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 12.50	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 12.50	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.19.19 12.50	
o-Terphenyl	84-15-1	102	%	70-135	09.19.19 12.50	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-21**
Lab Sample Id: 637188-021

Matrix: Soil
Date Collected: 09.17.19 09.40

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 08.42	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 08.42	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 08.42	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.20.19 08.42	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 08.42	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 08.42	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 08.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	129	%	70-130	09.20.19 08.42		
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.20.19 08.42		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-22**
Lab Sample Id: 637188-022

Matrix: Soil
Date Collected: 09.17.19 09.45

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	283	5.05	mg/kg	09.20.19 02.09		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 13.54	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 13.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 13.54	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 13.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	09.19.19 13.54	
o-Terphenyl	84-15-1	104	%	70-135	09.19.19 13.54	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-22**
Lab Sample Id: 637188-022

Matrix: Soil
Date Collected: 09.17.19 09.45

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.23.19 14.15

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.24.19 12.25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.24.19 12.25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.24.19 12.25	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.24.19 12.25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.24.19 12.25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.24.19 12.25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.24.19 12.25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	151	%	70-130	09.24.19 12.25	**	
1,4-Difluorobenzene	540-36-3	90	%	70-130	09.24.19 12.25		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-23**
Lab Sample Id: 637188-023

Matrix: Soil
Date Collected: 09.17.19 09.50

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	379	5.05	mg/kg	09.20.19 02.15		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 14.15	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 14.15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 14.15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 14.15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	09.19.19 14.15	
o-Terphenyl	84-15-1	108	%	70-135	09.19.19 14.15	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-23**
Lab Sample Id: 637188-023

Matrix: Soil
Date Collected: 09.17.19 09.50

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.00

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.20.19 09.22	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.20.19 09.22	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.20.19 09.22	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.20.19 09.22	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.20.19 09.22	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.20.19 09.22	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.20.19 09.22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.20.19 09.22		
4-Bromofluorobenzene	460-00-4	127	%	70-130	09.20.19 09.22		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-24**
Lab Sample Id: 637188-024

Matrix: Soil
Date Collected: 09.17.19 09.55

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	127	5.05	mg/kg	09.20.19 02.21		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 14.37	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 14.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 14.37	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 14.37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.19.19 14.37	
o-Terphenyl	84-15-1	105	%	70-135	09.19.19 14.37	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-24**
Lab Sample Id: 637188-024

Matrix: Soil
Date Collected: 09.17.19 09.55

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.23.19 14.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.24.19 12.45	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.24.19 12.45	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.24.19 12.45	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.24.19 12.45	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.24.19 12.45	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.24.19 12.45	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.24.19 12.45	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	89	%	70-130	09.24.19 12.45		
4-Bromofluorobenzene	460-00-4	144	%	70-130	09.24.19 12.45	**	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-25**
Lab Sample Id: 637188-025

Matrix: Soil
Date Collected: 09.17.19 10.00

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	187	4.98	mg/kg	09.20.19 02.26		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 14.58	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 14.58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 14.58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 14.58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.19.19 14.58	
o-Terphenyl	84-15-1	106	%	70-135	09.19.19 14.58	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-25**
Lab Sample Id: 637188-025

Matrix: Soil
Date Collected: 09.17.19 10.00

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.20.19 10.03	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.20.19 10.03	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.20.19 10.03	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.20.19 10.03	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.20.19 10.03	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.20.19 10.03	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.20.19 10.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	09.20.19 10.03		
4-Bromofluorobenzene	460-00-4	128	%	70-130	09.20.19 10.03		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-26**
Lab Sample Id: 637188-026

Matrix: Soil
Date Collected: 09.17.19 10.05

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	146	4.95	mg/kg	09.20.19 02.32		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 15.19	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 15.19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 15.19	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 15.19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	09.19.19 15.19	
o-Terphenyl	84-15-1	111	%	70-135	09.19.19 15.19	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-26**
Lab Sample Id: 637188-026

Matrix: Soil
Date Collected: 09.17.19 10.05

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.20.19 10.23	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.20.19 10.23	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.20.19 10.23	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.20.19 10.23	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.20.19 10.23	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.20.19 10.23	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.20.19 10.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	09.20.19 10.23		
4-Bromofluorobenzene	460-00-4	122	%	70-130	09.20.19 10.23		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: B-27
Lab Sample Id: 637188-027

Matrix: Soil
Date Collected: 09.17.19 10.10

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	85.5	4.95	mg/kg	09.20.19 02.38		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 15.40	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 15.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 15.40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 15.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	09.19.19 15.40	
o-Terphenyl	84-15-1	104	%	70-135	09.19.19 15.40	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-27**
Lab Sample Id: 637188-027

Matrix: Soil
Date Collected: 09.17.19 10.10

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.23.19 14.15

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.24.19 01.05	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.24.19 01.05	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.24.19 01.05	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	09.24.19 01.05	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.24.19 01.05	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.24.19 01.05	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.24.19 01.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	09.24.19 01.05		
4-Bromofluorobenzene	460-00-4	145	%	70-130	09.24.19 01.05	**	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-28**
Lab Sample Id: 637188-028

Matrix: Soil
Date Collected: 09.17.19 10.15

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	183	5.02	mg/kg	09.20.19 02.55		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 16.01	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 16.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 16.01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 16.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	09.19.19 16.01	
o-Terphenyl	84-15-1	110	%	70-135	09.19.19 16.01	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-28**
Lab Sample Id: 637188-028

Matrix: Soil
Date Collected: 09.17.19 10.15

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.20.19 11.03	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.20.19 11.03	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.20.19 11.03	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.20.19 11.03	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.20.19 11.03	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.20.19 11.03	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.20.19 11.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.20.19 11.03		
4-Bromofluorobenzene	460-00-4	124	%	70-130	09.20.19 11.03		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-29**
Lab Sample Id: 637188-029

Matrix: Soil
Date Collected: 09.17.19 10.20

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	142	4.95	mg/kg	09.20.19 03.01		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 17.07	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 17.07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 17.07	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 17.07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.19.19 17.07	
o-Terphenyl	84-15-1	106	%	70-135	09.19.19 17.07	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-29**
Lab Sample Id: 637188-029

Matrix: Soil
Date Collected: 09.17.19 10.20

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.20.19 11.23	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.20.19 11.23	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.20.19 11.23	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.20.19 11.23	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.20.19 11.23	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.20.19 11.23	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.20.19 11.23	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	128	%	70-130	09.20.19 11.23		
1,4-Difluorobenzene	540-36-3	106	%	70-130	09.20.19 11.23		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-30**
Lab Sample Id: 637188-030

Matrix: Soil
Date Collected: 09.17.19 10.25

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	171	4.99	mg/kg	09.20.19 03.19		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 17.29	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 17.29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 17.29	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 17.29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-135	09.19.19 17.29	
o-Terphenyl	84-15-1	120	%	70-135	09.19.19 17.29	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-30**
Lab Sample Id: 637188-030

Matrix: Soil
Date Collected: 09.17.19 10.25

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.23.19 14.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.24.19 01.26	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.24.19 01.26	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.24.19 01.26	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.24.19 01.26	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.24.19 01.26	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.24.19 01.26	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.24.19 01.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	86	%	70-130	09.24.19 01.26		
4-Bromofluorobenzene	460-00-4	143	%	70-130	09.24.19 01.26	**	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-31**
Lab Sample Id: 637188-031

Matrix: Soil
Date Collected: 09.17.19 10.30

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Date Prep: 09.19.19 17.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	70.6	4.97	mg/kg	09.20.19 03.25		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 18.11	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 18.11	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 18.11	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 18.11	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-135	09.19.19 18.11	
o-Terphenyl	84-15-1	99	%	70-135	09.19.19 18.11	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-31**
Lab Sample Id: 637188-031

Matrix: Soil
Date Collected: 09.17.19 10.30

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.23.19 14.15

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.24.19 02.47	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.24.19 02.47	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.24.19 02.47	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.24.19 02.47	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.24.19 02.47	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.24.19 02.47	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.24.19 02.47	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	90	%	70-130	09.24.19 02.47		
4-Bromofluorobenzene	460-00-4	133	%	70-130	09.24.19 02.47	**	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-32**
Lab Sample Id: 637188-032

Matrix: Soil
Date Collected: 09.17.19 10.35

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Date Prep: 09.19.19 17.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	248	5.04	mg/kg	09.20.19 03.30		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 18.33	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 18.33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 18.33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 18.33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	09.19.19 18.33	
o-Terphenyl	84-15-1	100	%	70-135	09.19.19 18.33	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-32**
Lab Sample Id: 637188-032

Matrix: Soil
Date Collected: 09.17.19 10.35

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.23.19 14.15

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.24.19 03.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.24.19 03.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.24.19 03.07	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.24.19 03.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.24.19 03.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.24.19 03.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.24.19 03.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	92	%	70-130	09.24.19 03.07		
4-Bromofluorobenzene	460-00-4	138	%	70-130	09.24.19 03.07	**	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-33**
Lab Sample Id: 637188-033

Matrix: Soil
Date Collected: 09.17.19 10.40

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	97.1	4.95	mg/kg	09.20.19 03.36		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 18.54	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 18.54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 18.54	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 18.54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	09.19.19 18.54	
o-Terphenyl	84-15-1	112	%	70-135	09.19.19 18.54	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-33**
Lab Sample Id: 637188-033

Matrix: Soil
Date Collected: 09.17.19 10.40

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.23.19 14.15

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.24.19 03.27	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.24.19 03.27	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.24.19 03.27	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.24.19 03.27	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.24.19 03.27	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.24.19 03.27	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.24.19 03.27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	161	%	70-130	09.24.19 03.27	**	
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.24.19 03.27		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-34**
Lab Sample Id: 637188-034

Matrix: Soil
Date Collected: 09.17.19 10.45

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	65.4	4.99	mg/kg	09.20.19 03.42		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 19.16	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 19.16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 19.16	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 19.16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-135	09.19.19 19.16	
o-Terphenyl	84-15-1	110	%	70-135	09.19.19 19.16	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-34**
Lab Sample Id: 637188-034

Matrix: Soil
Date Collected: 09.17.19 10.45

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.23.19 14.15

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.24.19 03.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.24.19 03.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.24.19 03.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.24.19 03.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.24.19 03.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.24.19 03.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.24.19 03.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	148	%	70-130	09.24.19 03.48	**	
1,4-Difluorobenzene	540-36-3	92	%	70-130	09.24.19 03.48		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-35**
Lab Sample Id: 637188-035

Matrix: Soil
Date Collected: 09.17.19 10.50

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	87.4	4.98	mg/kg	09.20.19 03.48		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 19.37	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 19.37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 19.37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 19.37	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	99	%	70-135	09.19.19 19.37	
84-15-1	98	%	70-135	09.19.19 19.37	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-35**
Lab Sample Id: 637188-035

Matrix: Soil
Date Collected: 09.17.19 10.50

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.00

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.20.19 02.26	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.20.19 02.26	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.20.19 02.26	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.20.19 02.26	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.20.19 02.26	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.20.19 02.26	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.20.19 02.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	122	%	70-130	09.20.19 02.26		
1,4-Difluorobenzene	540-36-3	102	%	70-130	09.20.19 02.26		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-36**
Lab Sample Id: 637188-036

Matrix: Soil
Date Collected: 09.17.19 10.55

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102006

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 17.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	131	5.00	mg/kg	09.20.19 03.54		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 12.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 19.59	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 19.59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 19.59	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 19.59	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	101	%	70-135	09.19.19 19.59	
84-15-1	99	%	70-135	09.19.19 19.59	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-36**
Lab Sample Id: 637188-036

Matrix: Soil
Date Collected: 09.17.19 10.55

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.23.19 14.15

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.24.19 04.08	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.24.19 04.08	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.24.19 04.08	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.24.19 04.08	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.24.19 04.08	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.24.19 04.08	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.24.19 04.08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	143	%	70-130	09.24.19 04.08	**	
1,4-Difluorobenzene	540-36-3	89	%	70-130	09.24.19 04.08		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-37**
Lab Sample Id: 637188-037

Matrix: Soil
Date Collected: 09.17.19 11.00

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	98.5	5.01	mg/kg	09.20.19 09.42		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 20.21	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 20.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 20.21	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 20.21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	100	%	70-135	09.19.19 20.21		
o-Terphenyl	84-15-1	100	%	70-135	09.19.19 20.21		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-37**
Lab Sample Id: 637188-037

Matrix: Soil
Date Collected: 09.17.19 11.00

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.00

Basis: Wet Weight

Seq Number: 3102347

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 03.06	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 03.06	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 03.06	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.20.19 03.06	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 03.06	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 03.06	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 03.06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.20.19 03.06		
4-Bromofluorobenzene	460-00-4	107	%	70-130	09.20.19 03.06		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-38**
Lab Sample Id: 637188-038

Matrix: Soil
Date Collected: 09.17.19 11.05

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	65.7	4.97	mg/kg	09.20.19 10.05		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 20.42	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 20.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 20.42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 20.42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.19.19 20.42	
o-Terphenyl	84-15-1	98	%	70-135	09.19.19 20.42	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-38**
Lab Sample Id: 637188-038

Matrix: Soil
Date Collected: 09.17.19 11.05

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.23.19 14.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.24.19 04.28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.24.19 04.28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.24.19 04.28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.24.19 04.28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.24.19 04.28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.24.19 04.28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.24.19 04.28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	147	%	70-130	09.24.19 04.28	**	
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.24.19 04.28		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-39**
Lab Sample Id: 637188-039

Matrix: Soil
Date Collected: 09.17.19 11.10

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	91.4	4.99	mg/kg	09.20.19 10.12		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.19.19 21.04	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.19.19 21.04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.19.19 21.04	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.19.19 21.04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-135	09.19.19 21.04	
o-Terphenyl	84-15-1	95	%	70-135	09.19.19 21.04	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-39**
Lab Sample Id: 637188-039

Matrix: Soil
Date Collected: 09.17.19 11.10

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.23.19 14.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.24.19 04.48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.24.19 04.48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.24.19 04.48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.24.19 04.48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.24.19 04.48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.24.19 04.48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.24.19 04.48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	93	%	70-130	09.24.19 04.48		
4-Bromofluorobenzene	460-00-4	136	%	70-130	09.24.19 04.48	**	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-40**
Lab Sample Id: 637188-040

Matrix: Soil
Date Collected: 09.17.19 11.15

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	78.0	5.03	mg/kg	09.20.19 10.20		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101991

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.19.19 21.26	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.19.19 21.26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.19.19 21.26	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.19.19 21.26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	101	%	70-135	09.19.19 21.26		
o-Terphenyl	84-15-1	100	%	70-135	09.19.19 21.26		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-40**
Lab Sample Id: 637188-040

Matrix: Soil
Date Collected: 09.17.19 11.15

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3102347

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 04.07	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 04.07	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 04.07	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.20.19 04.07	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 04.07	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 04.07	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 04.07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	09.20.19 04.07		
4-Bromofluorobenzene	460-00-4	123	%	70-130	09.20.19 04.07		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-41**
Lab Sample Id: 637188-041

Matrix: Soil
Date Collected: 09.17.19 11.20

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	138	5.04	mg/kg	09.20.19 10.27		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 13.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 23.13	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 23.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 23.13	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.19.19 23.13	
o-Terphenyl	84-15-1	103	%	70-135	09.19.19 23.13	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-41**
Lab Sample Id: 637188-041

Matrix: Soil
Date Collected: 09.17.19 11.20

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101993

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.20.19 01.54	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.20.19 01.54	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.20.19 01.54	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	09.20.19 01.54	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.20.19 01.54	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.20.19 01.54	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.20.19 01.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	09.20.19 01.54		
1,4-Difluorobenzene	540-36-3	94	%	70-130	09.20.19 01.54		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-42**
Lab Sample Id: 637188-042

Matrix: Soil
Date Collected: 09.17.19 11.25

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.20.19 09.10

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	221	5.04	mg/kg	09.20.19 11.05		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 13.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 00.18	U	1
Diesel Range Organics	C10C28DRO	69.0	50.0	mg/kg	09.20.19 00.18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 00.18	U	1
Total TPH	PHC635	69.0	50.0	mg/kg	09.20.19 00.18		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-135	09.20.19 00.18	
o-Terphenyl	84-15-1	118	%	70-135	09.20.19 00.18	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-42**
Lab Sample Id: 637188-042

Matrix: Soil
Date Collected: 09.17.19 11.25

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.20.19 02.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.20.19 02.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.20.19 02.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.20.19 02.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.20.19 02.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.20.19 02.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.20.19 02.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	09.20.19 02.14		
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.20.19 02.14		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-43**
Lab Sample Id: 637188-043

Matrix: Soil
Date Collected: 09.17.19 11.30

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	125	5.01	mg/kg	09.20.19 11.12		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 13.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 00.39	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.20.19 00.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 00.39	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.20.19 00.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.20.19 00.39	
o-Terphenyl	84-15-1	106	%	70-135	09.20.19 00.39	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-43**
Lab Sample Id: 637188-043

Matrix: Soil
Date Collected: 09.17.19 11.30

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 02.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 02.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 02.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.20.19 02.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 02.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 02.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 02.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	09.20.19 02.34		
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.20.19 02.34		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-44**
Lab Sample Id: 637188-044

Matrix: Soil
Date Collected: 09.17.19 11.35

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.20.19 09.10

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	155	5.02	mg/kg	09.20.19 11.20		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 13.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 01.01	U	1
Diesel Range Organics	C10C28DRO	57.2	49.9	mg/kg	09.20.19 01.01		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 01.01	U	1
Total TPH	PHC635	57.2	49.9	mg/kg	09.20.19 01.01		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.20.19 01.01	
o-Terphenyl	84-15-1	106	%	70-135	09.20.19 01.01	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-44**
Lab Sample Id: 637188-044

Matrix: Soil
Date Collected: 09.17.19 11.35

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101993

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.20.19 02.54	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.20.19 02.54	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.20.19 02.54	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.20.19 02.54	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.20.19 02.54	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.20.19 02.54	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.20.19 02.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.20.19 02.54		
4-Bromofluorobenzene	460-00-4	116	%	70-130	09.20.19 02.54		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-45**
Lab Sample Id: 637188-045

Matrix: Soil
Date Collected: 09.17.19 11.40

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	335	5.02	mg/kg	09.20.19 11.27		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 13.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 01.22	U	1
Diesel Range Organics	C10C28DRO	147	50.0	mg/kg	09.20.19 01.22		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 01.22	U	1
Total TPH	PHC635	147	50.0	mg/kg	09.20.19 01.22		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	09.20.19 01.22	
o-Terphenyl	84-15-1	112	%	70-135	09.20.19 01.22	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-45**
Lab Sample Id: 637188-045

Matrix: Soil
Date Collected: 09.17.19 11.40

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101993

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 03.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 03.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 03.15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.20.19 03.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 03.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 03.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 03.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.20.19 03.15		
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.20.19 03.15		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-46**
Lab Sample Id: 637188-046

Matrix: Soil
Date Collected: 09.17.19 11.45

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	289	4.97	mg/kg	09.20.19 11.34		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 13.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 01.44	U	1
Diesel Range Organics	C10C28DRO	77.6	49.9	mg/kg	09.20.19 01.44		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 01.44	U	1
Total TPH	PHC635	77.6	49.9	mg/kg	09.20.19 01.44		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	09.20.19 01.44	
o-Terphenyl	84-15-1	112	%	70-135	09.20.19 01.44	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-46**
Lab Sample Id: 637188-046

Matrix: Soil
Date Collected: 09.17.19 11.45

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101993

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 03.35	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 03.35	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 03.35	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.20.19 03.35	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 03.35	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 03.35	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 03.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.20.19 03.35		
4-Bromofluorobenzene	460-00-4	121	%	70-130	09.20.19 03.35		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-47**
Lab Sample Id: 637188-047

Matrix: Soil
Date Collected: 09.17.19 11.50

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	378	4.96	mg/kg	09.20.19 11.42		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 13.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 02.05	U	1
Diesel Range Organics	C10C28DRO	113	50.0	mg/kg	09.20.19 02.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 02.05	U	1
Total TPH	PHC635	113	50.0	mg/kg	09.20.19 02.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-135	09.20.19 02.05	
o-Terphenyl	84-15-1	109	%	70-135	09.20.19 02.05	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-47**
Lab Sample Id: 637188-047

Matrix: Soil
Date Collected: 09.17.19 11.50

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101993

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.20.19 03.55	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.20.19 03.55	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.20.19 03.55	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.20.19 03.55	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.20.19 03.55	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.20.19 03.55	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.20.19 03.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	09.20.19 03.55		
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.20.19 03.55		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-48**
Lab Sample Id: 637188-048

Matrix: Soil
Date Collected: 09.17.19 11.55

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	310	4.96	mg/kg	09.20.19 12.34		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 13.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.20.19 02.27	U	1
Diesel Range Organics	C10C28DRO	120	49.8	mg/kg	09.20.19 02.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.20.19 02.27	U	1
Total TPH	PHC635	120	49.8	mg/kg	09.20.19 02.27		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.20.19 02.27	
o-Terphenyl	84-15-1	106	%	70-135	09.20.19 02.27	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-48**
Lab Sample Id: 637188-048

Matrix: Soil
Date Collected: 09.17.19 11.55

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101993

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 04.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 04.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 04.15	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.20.19 04.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 04.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 04.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 04.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.20.19 04.15		
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.20.19 04.15		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-49**
Lab Sample Id: 637188-049

Matrix: Soil
Date Collected: 09.17.19 12.00

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.2	5.01	mg/kg	09.20.19 12.42		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 02.48	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 02.48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 02.48	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 02.48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.20.19 02.48	
o-Terphenyl	84-15-1	104	%	70-135	09.20.19 02.48	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-49**
Lab Sample Id: 637188-049

Matrix: Soil
Date Collected: 09.17.19 12.00

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.20.19 04.35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.20.19 04.35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.20.19 04.35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.20.19 04.35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.20.19 04.35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.20.19 04.35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.20.19 04.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	09.20.19 04.35		
1,4-Difluorobenzene	540-36-3	97	%	70-130	09.20.19 04.35		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-50**
Lab Sample Id: 637188-050

Matrix: Soil
Date Collected: 09.17.19 12.05

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.0	5.02	mg/kg	09.20.19 12.49		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.20.19 03.09	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.20.19 03.09	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.20.19 03.09	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.20.19 03.09	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	99	%	70-135	09.20.19 03.09	
o-Terphenyl	84-15-1	99	%	70-135	09.20.19 03.09	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-50**
Lab Sample Id: 637188-050

Matrix: Soil
Date Collected: 09.17.19 12.05

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.20.19 04.55	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.20.19 04.55	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.20.19 04.55	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.20.19 04.55	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.20.19 04.55	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.20.19 04.55	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.20.19 04.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	133	%	70-130	09.20.19 04.55	**	
1,4-Difluorobenzene	540-36-3	72	%	70-130	09.20.19 04.55		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-51**
Lab Sample Id: 637188-051

Matrix: Soil
Date Collected: 09.17.19 12.10

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.10

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.4	5.04	mg/kg	09.20.19 12.57		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 13.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 03.52	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 03.52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 03.52	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 03.52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-135	09.20.19 03.52	
o-Terphenyl	84-15-1	112	%	70-135	09.20.19 03.52	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-51**
Lab Sample Id: 637188-051

Matrix: Soil
Date Collected: 09.17.19 12.10

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101993

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 06.14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 06.14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 06.14	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.20.19 06.14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 06.14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 06.14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 06.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	09.20.19 06.14		
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.20.19 06.14		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-52**
Lab Sample Id: 637188-052

Matrix: Soil
Date Collected: 09.17.19 12.15

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	32.6	4.97	mg/kg	09.20.19 13.04		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 04.14	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.20.19 04.14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 04.14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.20.19 04.14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-135	09.20.19 04.14	
o-Terphenyl	84-15-1	109	%	70-135	09.20.19 04.14	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-52**
Lab Sample Id: 637188-052

Matrix: Soil
Date Collected: 09.17.19 12.15

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 06.34	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 06.34	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 06.34	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.20.19 06.34	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 06.34	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 06.34	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 06.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	95	%	70-130	09.20.19 06.34		
4-Bromofluorobenzene	460-00-4	103	%	70-130	09.20.19 06.34		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-53**
Lab Sample Id: 637188-053

Matrix: Soil
Date Collected: 09.17.19 12.20

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11.9	5.00	mg/kg	09.20.19 13.12		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 04.35	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.20.19 04.35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 04.35	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.20.19 04.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	105	%	70-135	09.20.19 04.35		
o-Terphenyl	84-15-1	108	%	70-135	09.20.19 04.35		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-53**
Lab Sample Id: 637188-053

Matrix: Soil
Date Collected: 09.17.19 12.20

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.20.19 06.54	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.20.19 06.54	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.20.19 06.54	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.20.19 06.54	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.20.19 06.54	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.20.19 06.54	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.20.19 06.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.20.19 06.54		
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.20.19 06.54		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-54**
Lab Sample Id: 637188-054

Matrix: Soil
Date Collected: 09.17.19 12.25

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.20.19 09.10

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	34.4	5.01	mg/kg	09.20.19 13.19		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 13.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 04.57	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 04.57	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 04.57	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 04.57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	102	%	70-135	09.20.19 04.57		
o-Terphenyl	84-15-1	102	%	70-135	09.20.19 04.57		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-54**
Lab Sample Id: 637188-054

Matrix: Soil
Date Collected: 09.17.19 12.25

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.20.19 07.14	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.20.19 07.14	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.20.19 07.14	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	09.20.19 07.14	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.20.19 07.14	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.20.19 07.14	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.20.19 07.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.20.19 07.14		
1,4-Difluorobenzene	540-36-3	93	%	70-130	09.20.19 07.14		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-55**
Lab Sample Id: 637188-055

Matrix: Soil
Date Collected: 09.17.19 12.30

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	22.3	5.00	mg/kg	09.20.19 13.27		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 05.18	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 05.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 05.18	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 05.18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-135	09.20.19 05.18	
o-Terphenyl	84-15-1	100	%	70-135	09.20.19 05.18	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-55**
Lab Sample Id: 637188-055

Matrix: Soil
Date Collected: 09.17.19 12.30

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.20.19 07.34	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.20.19 07.34	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.20.19 07.34	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.20.19 07.34	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.20.19 07.34	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.20.19 07.34	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.20.19 07.34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	96	%	70-130	09.20.19 07.34		
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.20.19 07.34		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-56**
Lab Sample Id: 637188-056

Matrix: Soil
Date Collected: 09.17.19 12.35

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102104

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.20.19 09.10

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.0	5.05	mg/kg	09.20.19 13.34		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 13.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 05.40	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.20.19 05.40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 05.40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.20.19 05.40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.20.19 05.40	
o-Terphenyl	84-15-1	104	%	70-135	09.20.19 05.40	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-56**
Lab Sample Id: 637188-056

Matrix: Soil
Date Collected: 09.17.19 12.35

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 07.54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 07.54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 07.54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	09.20.19 07.54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 07.54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 07.54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 07.54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	09.20.19 07.54		
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.20.19 07.54		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-57**
Lab Sample Id: 637188-057

Matrix: Soil
Date Collected: 09.17.19 12.40

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.5	4.96	mg/kg	09.20.19 09.45		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 06.01	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 06.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 06.01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 06.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	09.20.19 06.01	
o-Terphenyl	84-15-1	101	%	70-135	09.20.19 06.01	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-57**
Lab Sample Id: 637188-057

Matrix: Soil
Date Collected: 09.17.19 12.40

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.20.19 08.14	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.20.19 08.14	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.20.19 08.14	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.20.19 08.14	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.20.19 08.14	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.20.19 08.14	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.20.19 08.14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.20.19 08.14		
4-Bromofluorobenzene	460-00-4	115	%	70-130	09.20.19 08.14		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-58**
Lab Sample Id: 637188-058

Matrix: Soil
Date Collected: 09.17.19 12.45

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.1	5.02	mg/kg	09.20.19 10.04		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.20.19 06.23	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	09.20.19 06.23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.20.19 06.23	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	09.20.19 06.23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.20.19 06.23	
o-Terphenyl	84-15-1	104	%	70-135	09.20.19 06.23	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-58**
Lab Sample Id: 637188-058

Matrix: Soil
Date Collected: 09.17.19 12.45

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101993

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 12.15

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.20.19 08.35	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.20.19 08.35	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.20.19 08.35	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.20.19 08.35	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.20.19 08.35	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.20.19 08.35	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.20.19 08.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.20.19 08.35		
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.20.19 08.35		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-59**
Lab Sample Id: 637188-059

Matrix: Soil
Date Collected: 09.17.19 12.50

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Date Prep: 09.20.19 09.20

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.0	4.96	mg/kg	09.20.19 10.11		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Date Prep: 09.19.19 13.00

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 06.44	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 06.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 06.44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 06.44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	09.20.19 06.44	
o-Terphenyl	84-15-1	104	%	70-135	09.20.19 06.44	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-59**
Lab Sample Id: 637188-059

Matrix: Soil
Date Collected: 09.17.19 12.50

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.20.19 08.55	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.20.19 08.55	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.20.19 08.55	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.20.19 08.55	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.20.19 08.55	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.20.19 08.55	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.20.19 08.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.20.19 08.55		
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.20.19 08.55		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-60**
Lab Sample Id: 637188-060

Matrix: Soil
Date Collected: 09.17.19 12.55

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.6	5.03	mg/kg	09.20.19 10.17		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101990

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 07.06	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.20.19 07.06	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 07.06	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.20.19 07.06	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	101	%	70-135	09.20.19 07.06	
o-Terphenyl	84-15-1	99	%	70-135	09.20.19 07.06	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-60**
Lab Sample Id: 637188-060

Matrix: Soil
Date Collected: 09.17.19 12.55

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 12.15

Basis: Wet Weight

Seq Number: 3101993

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	09.20.19 09.15	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	09.20.19 09.15	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	09.20.19 09.15	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	09.20.19 09.15	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	09.20.19 09.15	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	09.20.19 09.15	U	1
Total BTEX		<0.00199	0.00199	mg/kg	09.20.19 09.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.20.19 09.15		
4-Bromofluorobenzene	460-00-4	111	%	70-130	09.20.19 09.15		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-61**
Lab Sample Id: 637188-061

Matrix: Soil
Date Collected: 09.17.19 13.00

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.2	5.01	mg/kg	09.20.19 10.23		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Date Prep: 09.19.19 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.19.19 23.13	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.19.19 23.13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.19.19 23.13	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.19.19 23.13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-135	09.19.19 23.13	
o-Terphenyl	84-15-1	90	%	70-135	09.19.19 23.13	



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-61**
Lab Sample Id: 637188-061

Matrix: Soil
Date Collected: 09.17.19 13.00

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101988

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.30

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.19.19 19.35	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.19.19 19.35	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.19.19 19.35	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.19.19 19.35	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.19.19 19.35	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.19.19 19.35	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.19.19 19.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.19.19 19.35		
4-Bromofluorobenzene	460-00-4	101	%	70-130	09.19.19 19.35		



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COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-62**
Lab Sample Id: 637188-062

Matrix: Soil
Date Collected: 09.17.19 13.05

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.20.19 09.20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.7	4.99	mg/kg	09.20.19 10.43		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 14.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 00.18	U	1
Diesel Range Organics	C10C28DRO	51.9	50.0	mg/kg	09.20.19 00.18		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 00.18	U	1
Total TPH	PHC635	51.9	50.0	mg/kg	09.20.19 00.18		1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	102	%	70-135	09.20.19 00.18	
84-15-1	103	%	70-135	09.20.19 00.18	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-62**
Lab Sample Id: 637188-062

Matrix: Soil
Date Collected: 09.17.19 13.05

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101988

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.30

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.19.19 19.55	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.19.19 19.55	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.19.19 19.55	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.19.19 19.55	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.19.19 19.55	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.19.19 19.55	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.19.19 19.55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	99	%	70-130	09.19.19 19.55		
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.19.19 19.55		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-63**
Lab Sample Id: 637188-063

Matrix: Soil
Date Collected: 09.17.19 13.10

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	26.2	4.98	mg/kg	09.20.19 10.49		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 00.39	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.20.19 00.39	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 00.39	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.20.19 00.39	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	104	%	70-135	09.20.19 00.39	
o-Terphenyl	84-15-1	105	%	70-135	09.20.19 00.39	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-63**
Lab Sample Id: 637188-063

Matrix: Soil
Date Collected: 09.17.19 13.10

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101988

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.30

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.19.19 20.15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.19.19 20.15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.19.19 20.15	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	09.19.19 20.15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.19.19 20.15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.19.19 20.15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.19.19 20.15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	101	%	70-130	09.19.19 20.15		
4-Bromofluorobenzene	460-00-4	114	%	70-130	09.19.19 20.15		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-64**
Lab Sample Id: 637188-064

Matrix: Soil
Date Collected: 09.17.19 13.15

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	24.9	5.01	mg/kg	09.20.19 10.56		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Date Prep: 09.19.19 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 01.01	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 01.01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 01.01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 01.01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	09.20.19 01.01	
o-Terphenyl	84-15-1	90	%	70-135	09.20.19 01.01	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-64**
Lab Sample Id: 637188-064

Matrix: Soil
Date Collected: 09.17.19 13.15

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 11.30

Basis: Wet Weight

Seq Number: 3101988

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	09.19.19 20.35	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	09.19.19 20.35	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	09.19.19 20.35	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	09.19.19 20.35	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	09.19.19 20.35	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	09.19.19 20.35	U	1
Total BTEX		<0.00202	0.00202	mg/kg	09.19.19 20.35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	108	%	70-130	09.19.19 20.35		
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.19.19 20.35		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-65**
Lab Sample Id: 637188-065

Matrix: Soil
Date Collected: 09.17.19 13.20

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	23.1	5.02	mg/kg	09.20.19 11.02		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Date Prep: 09.19.19 14.00

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 01.22	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	09.20.19 01.22	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 01.22	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	09.20.19 01.22	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	90	%	70-135	09.20.19 01.22	
o-Terphenyl	84-15-1	90	%	70-135	09.20.19 01.22	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-65**
Lab Sample Id: 637188-065

Matrix: Soil
Date Collected: 09.17.19 13.20

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101988

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.30

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.19.19 20.56	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.19.19 20.56	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.19.19 20.56	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.19.19 20.56	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.19.19 20.56	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.19.19 20.56	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.19.19 20.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	100	%	70-130	09.19.19 20.56		
4-Bromofluorobenzene	460-00-4	112	%	70-130	09.19.19 20.56		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-66**
Lab Sample Id: 637188-066

Matrix: Soil
Date Collected: 09.17.19 13.25

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.20.19 09.20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	25.4	5.02	mg/kg	09.20.19 11.09		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 14.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 01.44	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	09.20.19 01.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 01.44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	09.20.19 01.44	U	1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	90	%	70-135	09.20.19 01.44	
84-15-1	89	%	70-135	09.20.19 01.44	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-66**
Lab Sample Id: 637188-066

Matrix: Soil
Date Collected: 09.17.19 13.25

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101988

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.30

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	09.19.19 21.16	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	09.19.19 21.16	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	09.19.19 21.16	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	09.19.19 21.16	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	09.19.19 21.16	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	09.19.19 21.16	U	1
Total BTEX		<0.00201	0.00201	mg/kg	09.19.19 21.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	98	%	70-130	09.19.19 21.16		
4-Bromofluorobenzene	460-00-4	105	%	70-130	09.19.19 21.16		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-67**
Lab Sample Id: 637188-067

Matrix: Soil
Date Collected: 09.17.19 13.30

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	17.4	4.98	mg/kg	09.20.19 11.15		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	09.20.19 02.05	U	1
Diesel Range Organics	C10C28DRO	132	49.8	mg/kg	09.20.19 02.05		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	09.20.19 02.05	U	1
Total TPH	PHC635	132	49.8	mg/kg	09.20.19 02.05		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-135	09.20.19 02.05	
o-Terphenyl	84-15-1	96	%	70-135	09.20.19 02.05	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-67**
Lab Sample Id: 637188-067

Matrix: Soil
Date Collected: 09.17.19 13.30

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 11.30

Basis: Wet Weight

Seq Number: 3101988

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.19.19 21.36	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.19.19 21.36	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.19.19 21.36	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	09.19.19 21.36	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.19.19 21.36	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.19.19 21.36	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.19.19 21.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	119	%	70-130	09.19.19 21.36		
1,4-Difluorobenzene	540-36-3	84	%	70-130	09.19.19 21.36		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-68**
Lab Sample Id: 637188-068

Matrix: Soil
Date Collected: 09.17.19 13.35

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.20.19 09.20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	27.2	4.97	mg/kg	09.20.19 11.34		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 14.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	09.20.19 02.27	U	1
Diesel Range Organics	C10C28DRO	226	50.0	mg/kg	09.20.19 02.27		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	09.20.19 02.27	U	1
Total TPH	PHC635	226	50.0	mg/kg	09.20.19 02.27		1

Surrogate

1-Chlorooctane

o-Terphenyl

Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
111-85-3	97	%	70-135	09.20.19 02.27	
84-15-1	103	%	70-135	09.20.19 02.27	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-68**
Lab Sample Id: 637188-068

Matrix: Soil
Date Collected: 09.17.19 13.35

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 09.19.19 11.30

Basis: Wet Weight

Seq Number: 3101988

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	09.19.19 21.56	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	09.19.19 21.56	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	09.19.19 21.56	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	09.19.19 21.56	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	09.19.19 21.56	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	09.19.19 21.56	U	1
Total BTEX		<0.00198	0.00198	mg/kg	09.19.19 21.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	120	%	70-130	09.19.19 21.56		
1,4-Difluorobenzene	540-36-3	80	%	70-130	09.19.19 21.56		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-69**
Lab Sample Id: 637188-069

Matrix: Soil
Date Collected: 09.17.19 13.40

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	21.4	5.02	mg/kg	09.20.19 11.41		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 02.48	U	1
Diesel Range Organics	C10C28DRO	129	49.9	mg/kg	09.20.19 02.48		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	09.20.19 02.48	U	1
Total TPH	PHC635	129	49.9	mg/kg	09.20.19 02.48		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-135	09.20.19 02.48	
o-Terphenyl	84-15-1	94	%	70-135	09.20.19 02.48	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-69**
Lab Sample Id: 637188-069

Matrix: Soil
Date Collected: 09.17.19 13.40

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101988

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.30

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.19.19 22.16	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.19.19 22.16	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.19.19 22.16	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.19.19 22.16	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.19.19 22.16	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.19.19 22.16	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.19.19 22.16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	09.19.19 22.16		
1,4-Difluorobenzene	540-36-3	80	%	70-130	09.19.19 22.16		



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-70**
Lab Sample Id: 637188-070

Matrix: Soil
Date Collected: 09.17.19 13.45

Date Received: 09.17.19 15.29

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3102105

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.20.19 09.20

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	61.2	5.05	mg/kg	09.20.19 12.00		1

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3101992

Prep Method: SW8015P

% Moisture:

Basis: Wet Weight

SUB: T104704400-18-18

Date Prep: 09.19.19 14.00

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	09.20.19 03.09	U	1
Diesel Range Organics	C10C28DRO	338	49.9	mg/kg	09.20.19 03.09		1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	69.5	49.9	mg/kg	09.20.19 03.09		1
Total TPH	PHC635	408	49.9	mg/kg	09.20.19 03.09		1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	83	%	70-135	09.20.19 03.09	
o-Terphenyl	84-15-1	87	%	70-135	09.20.19 03.09	



Certificate of Analytical Results 637188

COG Operating LLC, Artesia, NM

Magnum Pronto St. #004 10/18/2018

Sample Id: **B-70**
Lab Sample Id: 637188-070

Matrix: Soil
Date Collected: 09.17.19 13.45

Date Received: 09.17.19 15.29

Analytical Method: BTEX by EPA 8021B

Tech: KTL

Analyst: KTL

Seq Number: 3101988

Prep Method: SW5030B

% Moisture:

Date Prep: 09.19.19 11.30

Basis: Wet Weight

SUB: T104704400-18-18

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	09.19.19 22.36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	09.19.19 22.36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	09.19.19 22.36	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	09.19.19 22.36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	09.19.19 22.36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	09.19.19 22.36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	09.19.19 22.36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	117	%	70-130	09.19.19 22.36		
1,4-Difluorobenzene	540-36-3	75	%	70-130	09.19.19 22.36		

Flagging Criteria

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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

COG Operating LLC
Magnum Pronto St. #004 10/18/2018**Analytical Method: Chloride by EPA 300**

Seq Number: 3102005

MB Sample Id: 7686542-1-BLK

Matrix: Solid

LCS Sample Id: 7686542-1-BKS

Prep Method: E300P

Date Prep: 09.19.19

LCSD Sample Id: 7686542-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	236	94	236	94	90-110	0	20	mg/kg	09.19.19 14:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3102006

MB Sample Id: 7686551-1-BLK

Matrix: Solid

LCS Sample Id: 7686551-1-BKS

Prep Method: E300P

Date Prep: 09.19.19

LCSD Sample Id: 7686551-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	254	102	251	100	90-110	1	20	mg/kg	09.20.19 01:05	

Analytical Method: Chloride by EPA 300

Seq Number: 3102010

MB Sample Id: 7686552-1-BLK

Matrix: Solid

LCS Sample Id: 7686552-1-BKS

Prep Method: E300P

Date Prep: 09.19.19

LCSD Sample Id: 7686552-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	252	101	248	99	90-110	2	20	mg/kg	09.20.19 04:17	

Analytical Method: Chloride by EPA 300

Seq Number: 3102104

MB Sample Id: 7686587-1-BLK

Matrix: Solid

LCS Sample Id: 7686587-1-BKS

Prep Method: E300P

Date Prep: 09.20.19

LCSD Sample Id: 7686587-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	240	96	240	96	90-110	0	20	mg/kg	09.20.19 09:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3102105

MB Sample Id: 7686588-1-BLK

Matrix: Solid

LCS Sample Id: 7686588-1-BKS

Prep Method: E300P

Date Prep: 09.20.19

LCSD Sample Id: 7686588-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	240	96	240	96	90-110	0	20	mg/kg	09.20.19 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 ResultMS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec



QC Summary 637188

COG Operating LLC Magnum Pronto St. #004 10/18/2018

Analytical Method: Chloride by EPA 300

Seq Number: 3102005

Parent Sample Id: 637051-002

Matrix: Soil

MS Sample Id: 637051-002 S

Prep Method: E300P

Date Prep: 09.19.19

MSD Sample Id: 637051-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	54.3	249	309	102	310	103	90-110	0	20	mg/kg	09.19.19 16:10	

Analytical Method: Chloride by EPA 300

Seq Number: 3102005

Parent Sample Id: 637358-061

Matrix: Soil

MS Sample Id: 637358-061 S

Prep Method: E300P

Date Prep: 09.19.19

MSD Sample Id: 637358-061 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	2.21	251	249	98	251	99	90-110	1	20	mg/kg	09.19.19 14:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3102006

Parent Sample Id: 637188-017

Matrix: Soil

MS Sample Id: 637188-017 S

Prep Method: E300P

Date Prep: 09.19.19

MSD Sample Id: 637188-017 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	204	250	449	98	447	97	90-110	0	20	mg/kg	09.20.19 01:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3102006

Parent Sample Id: 637188-027

Matrix: Soil

MS Sample Id: 637188-027 S

Prep Method: E300P

Date Prep: 09.19.19

MSD Sample Id: 637188-027 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	85.5	248	260	70	261	71	90-110	0	20	mg/kg	09.20.19 02:44	X

Analytical Method: Chloride by EPA 300

Seq Number: 3102010

Parent Sample Id: 637188-007

Matrix: Soil

MS Sample Id: 637188-007 S

Prep Method: E300P

Date Prep: 09.19.19

MSD Sample Id: 637188-007 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	166	252	418	100	418	100	90-110	0	20	mg/kg	09.20.19 05:56	

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

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

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

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



QC Summary 637188

COG Operating LLC Magnum Pronto St. #004 10/18/2018

Analytical Method: Chloride by EPA 300

Seq Number: 3102010

Parent Sample Id: 637453-009

Matrix: Soil

MS Sample Id: 637453-009 S

Prep Method: E300P

Date Prep: 09.19.19

MSD Sample Id: 637453-009 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	191	252	445	101	441	99	90-110	1	20	mg/kg	09.20.19 04:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3102104

Parent Sample Id: 637188-037

Matrix: Soil

MS Sample Id: 637188-037 S

Prep Method: E300P

Date Prep: 09.20.19

MSD Sample Id: 637188-037 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	98.5	251	326	91	327	91	90-110	0	20	mg/kg	09.20.19 10:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3102104

Parent Sample Id: 637188-047

Matrix: Soil

MS Sample Id: 637188-047 S

Prep Method: E300P

Date Prep: 09.20.19

MSD Sample Id: 637188-047 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	378	248	612	94	612	94	90-110	0	20	mg/kg	09.20.19 11:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3102105

Parent Sample Id: 637188-057

Matrix: Soil

MS Sample Id: 637188-057 S

Prep Method: E300P

Date Prep: 09.20.19

MSD Sample Id: 637188-057 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	21.5	248	269	100	263	97	90-110	2	20	mg/kg	09.20.19 09:51	

Analytical Method: Chloride by EPA 300

Seq Number: 3102105

Parent Sample Id: 637188-067

Matrix: Soil

MS Sample Id: 637188-067 S

Prep Method: E300P

Date Prep: 09.20.19

MSD Sample Id: 637188-067 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	17.4	249	265	99	264	99	90-110	0	20	mg/kg	09.20.19 11:21	

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

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Analytical Method: TPH By SW8015 Mod

Seq Number: 3101989

MB Sample Id: 7686531-1-BLK

Matrix: Solid

LCS Sample Id: 7686531-1-BKS

Prep Method: SW8015P

Date Prep: 09.19.19

LCSD Sample Id: 7686531-1-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	<15.0	1000	1070	107	1130	113	70-135	5	20	mg/kg	09.19.19 12:07	
Diesel Range Organics	<15.0	1000	1080	108	1060	106	70-135	2	20	mg/kg	09.19.19 12:07	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	119		126		128		70-135	%	09.19.19 12:07			
o-Terphenyl	128		127		122		70-135	%	09.19.19 12:07			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3101991

MB Sample Id: 7686533-1-BLK

Matrix: Solid

LCS Sample Id: 7686533-1-BKS

Prep Method: SW8015P

Date Prep: 09.19.19

LCSD Sample Id: 7686533-1-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	<15.0	1000	960	96	937	94	70-135	2	20	mg/kg	09.19.19 12:07	
Diesel Range Organics	<15.0	1000	989	99	955	96	70-135	3	20	mg/kg	09.19.19 12:07	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	100		111		107		70-135	%	09.19.19 12:07			
o-Terphenyl	106		108		104		70-135	%	09.19.19 12:07			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3101990

MB Sample Id: 7686534-1-BLK

Matrix: Solid

LCS Sample Id: 7686534-1-BKS

Prep Method: SW8015P

Date Prep: 09.19.19

LCSD Sample Id: 7686534-1-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	<15.0	1000	1070	107	1030	103	70-135	4	20	mg/kg	09.19.19 22:30	
Diesel Range Organics	<15.0	1000	1070	107	1040	104	70-135	3	20	mg/kg	09.19.19 22:30	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	110		125		123		70-135	%	09.19.19 22:30			
o-Terphenyl	116		123		121		70-135	%	09.19.19 22:30			

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



QC Summary 637188

COG Operating LLC Magnum Pronto St. #004 10/18/2018

Analytical Method: TPH By SW8015 Mod

Seq Number: 3101992

MB Sample Id: 7686536-1-BLK

Matrix: Solid

LCS Sample Id: 7686536-1-BKS

Prep Method: SW8015P

Date Prep: 09.19.19

LCSD Sample Id: 7686536-1-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	<15.0	1000	952	95	951	95	70-135	0	20	mg/kg	09.19.19 22:30	
Diesel Range Organics	<15.0	1000	957	96	925	93	70-135	3	20	mg/kg	09.19.19 22:30	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane	104		107		110		70-135	%	09.19.19 22:30			
o-Terphenyl	108		105		111		70-135	%	09.19.19 22:30			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3101989

Parent Sample Id: 637188-001

Matrix: Soil

MS Sample Id: 637188-001 S

Prep Method: SW8015P

Date Prep: 09.19.19

MSD Sample Id: 637188-001 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	<14.9	996	1030	103	1090	109	70-135	6	20	mg/kg	09.19.19 13:11	
Diesel Range Organics	<14.9	996	1050	105	1160	116	70-135	10	20	mg/kg	09.19.19 13:11	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			126		130		70-135	%	09.19.19 13:11			
o-Terphenyl			123		127		70-135	%	09.19.19 13:11			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3101991

Parent Sample Id: 637188-021

Matrix: Soil

MS Sample Id: 637188-021 S

Prep Method: SW8015P

Date Prep: 09.19.19

MSD Sample Id: 637188-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons	<14.9	996	904	91	896	90	70-135	1	20	mg/kg	09.19.19 13:11	
Diesel Range Organics	27.8	996	904	88	892	87	70-135	1	20	mg/kg	09.19.19 13:11	
Surrogate			MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date			
1-Chlorooctane			109		108		70-135	%	09.19.19 13:11			
o-Terphenyl			108		105		70-135	%	09.19.19 13:11			

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

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

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

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



QC Summary 637188

COG Operating LLC Magnum Pronto St. #004 10/18/2018

Analytical Method: TPH By SW8015 Mod

Seq Number: 3101990

Parent Sample Id: 637188-041

Matrix: Soil

MS Sample Id: 637188-041 S

Prep Method: SW8015P

Date Prep: 09.19.19

MSD Sample Id: 637188-041 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	<15.0	999	963	96	992	100	70-135	3	20	mg/kg	09.19.19 23:35	
Diesel Range Organics	46.9	999	982	94	1020	98	70-135	4	20	mg/kg	09.19.19 23:35	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	109		112		70-135	%	09.19.19 23:35
o-Terphenyl	106		111		70-135	%	09.19.19 23:35

Analytical Method: TPH By SW8015 Mod

Seq Number: 3101992

Parent Sample Id: 637188-061

Matrix: Soil

MS Sample Id: 637188-061 S

Prep Method: SW8015P

Date Prep: 09.19.19

MSD Sample Id: 637188-061 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	<14.9	996	874	88	1010	101	70-135	14	20	mg/kg	09.19.19 23:35	
Diesel Range Organics	<14.9	996	884	89	1030	103	70-135	15	20	mg/kg	09.19.19 23:35	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	96		110		70-135	%	09.19.19 23:35
o-Terphenyl	91		106		70-135	%	09.19.19 23:35

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101988

MB Sample Id: 7686490-1-BLK

Matrix: Solid

LCS Sample Id: 7686490-1-BKS

Prep Method: SW5030B

Date Prep: 09.19.19

LCSD Sample Id: 7686490-1-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	0.105	105	0.103	103	70-130	2	35	mg/kg	09.19.19 13:16	
Toluene	<0.00200	0.100	0.103	103	0.101	101	70-130	2	35	mg/kg	09.19.19 13:16	
Ethylbenzene	<0.00200	0.100	0.111	111	0.107	107	70-130	4	35	mg/kg	09.19.19 13:16	
m,p-Xylenes	<0.00400	0.200	0.218	109	0.211	106	70-130	3	35	mg/kg	09.19.19 13:16	
o-Xylene	<0.00200	0.100	0.111	111	0.108	108	70-130	3	35	mg/kg	09.19.19 13:16	

Surrogate

	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		99		100		70-130	%	09.19.19 13:16
4-Bromofluorobenzene	94		106		110		70-130	%	09.19.19 13:16

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

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

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

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

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Analytical Method: BTEX by EPA 8021B

Seq Number: 3102187

MB Sample Id: 7686477-1-BLK

Matrix: Solid

LCS Sample Id: 7686477-1-BKS

Prep Method: SW5030B

Date Prep: 09.19.19

LCSD Sample Id: 7686477-1-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	0.104	104	0.0995	100	70-130	4	35	mg/kg	09.21.19 05:30	
Toluene	<0.00200	0.100	0.102	102	0.0989	99	70-130	3	35	mg/kg	09.21.19 05:30	
Ethylbenzene	<0.00200	0.100	0.121	121	0.117	117	70-130	3	35	mg/kg	09.21.19 05:30	
m,p-Xylenes	<0.00400	0.200	0.249	125	0.243	122	70-130	2	35	mg/kg	09.21.19 05:30	
o-Xylene	<0.00200	0.100	0.120	120	0.119	119	70-130	1	35	mg/kg	09.21.19 05:30	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits			Units	Analysis Date	
1,4-Difluorobenzene	89		94		96		70-130			%	09.21.19 05:30	
4-Bromofluorobenzene	123		128		136	**	70-130			%	09.21.19 05:30	

Analytical Method: BTEX by EPA 8021B

Seq Number: 3102347

MB Sample Id: 7686482-1-BLK

Matrix: Solid

LCS Sample Id: 7686482-1-BKS

Prep Method: SW5030B

Date Prep: 09.19.19

LCSD Sample Id: 7686482-1-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	0.103	103	0.0969	97	70-130	6	35	mg/kg	09.20.19 06:42	
Toluene	<0.00200	0.100	0.101	101	0.0930	93	70-130	8	35	mg/kg	09.20.19 06:42	
Ethylbenzene	<0.00200	0.100	0.120	120	0.103	103	70-130	15	35	mg/kg	09.20.19 06:42	
m,p-Xylenes	<0.00400	0.200	0.250	125	0.216	108	70-130	15	35	mg/kg	09.20.19 06:42	
o-Xylene	<0.00200	0.100	0.124	124	0.107	107	70-130	15	35	mg/kg	09.20.19 06:42	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1,4-Difluorobenzene	94		94		98		70-130	%	09.20.19 06:42			
4-Bromofluorobenzene	111		126		128		70-130	%	09.20.19 06:42			

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101993

MB Sample Id: 7686485-1-BLK

Matrix: Solid

LCS Sample Id: 7686485-1-BKS

Prep Method: SW5030B

Date Prep: 09.19.19

LCSD Sample Id: 7686485-1-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	0.0998	100	0.0946	95	70-130	5	35	mg/kg	09.19.19 23:54	
Toluene	<0.00200	0.100	0.0992	99	0.0967	97	70-130	3	35	mg/kg	09.19.19 23:54	
Ethylbenzene	<0.00200	0.100	0.107	107	0.105	105	70-130	2	35	mg/kg	09.19.19 23:54	
m,p-Xylenes	<0.00400	0.200	0.209	105	0.208	104	70-130	0	35	mg/kg	09.19.19 23:54	
o-Xylene	<0.00200	0.100	0.108	108	0.109	109	70-130	1	35	mg/kg	09.19.19 23:54	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1,4-Difluorobenzene	95		97		97		70-130	%	09.19.19 23:54			
4-Bromofluorobenzene	100		110		115		70-130	%	09.19.19 23:54			

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



QC Summary 637188

COG Operating LLC Magnum Pronto St. #004 10/18/2018

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101988

Parent Sample Id: 637358-001

Matrix: Soil

MS Sample Id: 637358-001 S

Prep Method: SW5030B

Date Prep: 09.19.19

MSD Sample Id: 637358-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00201	0.100	0.0874	87	0.0444	44	70-130	65	35	mg/kg	09.19.19 13:56	XF
Toluene	<0.00201	0.100	0.0856	86	0.0424	42	70-130	68	35	mg/kg	09.19.19 13:56	XF
Ethylbenzene	<0.00201	0.100	0.0894	89	0.0397	39	70-130	77	35	mg/kg	09.19.19 13:56	XF
m,p-Xylenes	<0.00402	0.201	0.175	87	0.0761	38	70-130	79	35	mg/kg	09.19.19 13:56	XF
o-Xylene	<0.00201	0.100	0.0899	90	0.0390	39	70-130	79	35	mg/kg	09.19.19 13:56	XF

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		101		70-130	%	09.19.19 13:56
4-Bromofluorobenzene	111		107		70-130	%	09.19.19 13:56

Analytical Method: BTEX by EPA 8021B

Seq Number: 3102187

Parent Sample Id: 637188-001

Matrix: Soil

MS Sample Id: 637188-001 S

Prep Method: SW5030B

Date Prep: 09.19.19

MSD Sample Id: 637188-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00198	0.0992	0.0259	26	0.0710	71	70-130	93	35	mg/kg	09.21.19 06:10	XF
Toluene	<0.00198	0.0992	0.0315	32	0.0494	49	70-130	44	35	mg/kg	09.21.19 06:10	XF
Ethylbenzene	<0.00198	0.0992	0.0233	23	0.0421	42	70-130	57	35	mg/kg	09.21.19 06:10	XF
m,p-Xylenes	<0.00397	0.198	0.0484	24	0.0848	42	70-130	55	35	mg/kg	09.21.19 06:10	XF
o-Xylene	<0.00198	0.0992	0.0306	31	0.0477	48	70-130	44	35	mg/kg	09.21.19 06:10	XF

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	82		95		70-130	%	09.21.19 06:10
4-Bromofluorobenzene	95		145	**	70-130	%	09.21.19 06:10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3102347

Parent Sample Id: 637188-021

Matrix: Soil

MS Sample Id: 637188-021 S

Prep Method: SW5030B

Date Prep: 09.19.19

MSD Sample Id: 637188-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0936	94	<0.00200	0	70-130	200	35	mg/kg	09.20.19 07:22	XF
Toluene	<0.00199	0.0994	0.0911	92	<0.00200	0	70-130	200	35	mg/kg	09.20.19 07:22	XF
Ethylbenzene	<0.00199	0.0994	0.0809	81	<0.00200	0	70-130	200	35	mg/kg	09.20.19 07:22	XF
m,p-Xylenes	<0.00398	0.199	0.212	107	<0.00400	0	70-130	200	35	mg/kg	09.20.19 07:22	XF
o-Xylene	<0.00199	0.0994	0.108	109	<0.00200	0	70-130	200	35	mg/kg	09.20.19 07:22	XF

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	97		0	**	70-130	%	09.20.19 07:22
4-Bromofluorobenzene	141	**	0	**	70-130	%	09.20.19 07:22

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

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

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

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



QC Summary 637188

COG Operating LLC Magnum Pronto St. #004 10/18/2018

Analytical Method: BTEX by EPA 8021B

Seq Number: 3101993

Parent Sample Id: 637188-041

Matrix: Soil

MS Sample Id: 637188-041 S

Prep Method: SW5030B

Date Prep: 09.19.19

MSD Sample Id: 637188-041 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	0.0799	80	0.0753	76	70-130	6	35	mg/kg	09.20.19 00:35	
Toluene	<0.00200	0.0998	0.0811	81	0.0785	79	70-130	3	35	mg/kg	09.20.19 00:35	
Ethylbenzene	<0.00200	0.0998	0.0825	83	0.0820	83	70-130	1	35	mg/kg	09.20.19 00:35	
m,p-Xylenes	<0.00399	0.200	0.167	84	0.164	83	70-130	2	35	mg/kg	09.20.19 00:35	
o-Xylene	<0.00200	0.0998	0.0871	87	0.0858	86	70-130	2	35	mg/kg	09.20.19 00:35	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	98		97		70-130	%	09.20.19 00:35
4-Bromofluorobenzene	120		123		70-130	%	09.20.19 00:35

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

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

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

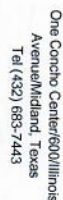
MS = Matrix Spike
B = Spike Added
D = MSD/LCSD % Rec

CONCHO

637 188

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Sheldon Hitchcock

Comments:

ANALYSIS REQUEST
(Circle or Specify Method No.)

U37-139

Hold

1.001

6.

☐ Special Report Limits or TRRP Report

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Analysis Request of Chain of Custody Record



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

637188

Client Name:		COG-Artesia		Site Manager:		Sheldon Hitchcock	
Project Name:		Macho Nacho St. #004 10/18/2018					
Project Location:		(county, state) Lee, NM		Project #:			
Invoice to:		Sheldon Hitchcock					
Receiving Laboratory:		Xenco		Sampler Name:		Sheldon Hitchcock	
Comments:							

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	(C)omposite/(G)rab	ANALYSIS REQUEST (Circle or Specify Method No.)	
		YEAR: 2019		WATER	SOIL	HCL	HNO ₃				ICE
		DATE	TIME								
B-21		9/17/2019	9:40	X				X	C	TPH 8015M (GRO - DRO - MRO)	
B-22		9/17/2019	9:45	X				X	C	BTEX 8021B	
B-23		9/17/2019	9:50	X				X	C	Chloride	
B-24		9/17/2019	9:55	X				X	C		
B-25		9/17/2019	10:00	X				X	C		
B-26		9/17/2019	10:05	X				X	C		
B-27		9/17/2019	10:10	X				X	C		
B-28		9/17/2019	10:15	X				X	C		
B-29		9/17/2019	10:20	X				X	C		
B-30		9/17/2019	10:25	X				X	C		

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Sheldon Hitchcock	9/17/19	15:29	Sheldon Hitchcock	9/17/19	15:29
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY	REMARKS:
☐ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report	

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(Circle) HAND DELIVERED FEDEX UPS Tracking #

Analysis Request of Chain of Custody Record



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

63-188

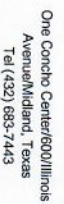
Client Name: COG-Artesia		Site Manager: Sheldon Hitchcock	
Project Name: Macho Nacho St. #004 10/18/2018			
Project Location: (county, state) Lea, NM		Project #:	
Invoice to: Sheldon Hitchcock		Sampler Name: Sheldon Hitchcock	
Receiving Laboratory: Xenco		Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	(C)omposite/(G)rab	ANALYSIS REQUEST (Circle or Specify Method No.)	
		YEAR: 2019		WATER	SOIL	HCL	HNO ₃				ICE
		DATE	TIME								
B-31		9/17/2019	10:30	X				X	C	TPH 8015M (GRO - DRO - MRO)	
B-32		9/17/2019	10:35	X				X	C	BTEX 8021B	
B-33		9/17/2019	10:40	X				X	C	Chloride	
B-34		9/17/2019	10:45	X				X	C		
B-35		9/17/2019	10:50	X				X	C		
B-36		9/17/2019	10:55	X				X	C		
B-37		9/17/2019	11:00	X				X	C		
B-38		9/17/2019	11:05	X				X	C		
B-39		9/17/2019	11:10	X				X	C		
B-40		9/17/2019	11:15	X				X	C		

Relinquished by: <i>Sheldon Hitchcock</i> Date: 9/17/19 Time: 15:29	Received by: <i>Sheldon Hitchcock</i> Date: 9/17/19 Time: 15:29	REMARKS: ☐ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report
Relinquished by: _____ Date: _____ Time: _____	Received by: _____ Date: _____ Time: _____	

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(Circle) HAND DELIVERED FEDEX UPS Tracking #:

1.001

Analysis Request of Chain of Custody Record



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

1037189

Client Name: COG-Artesia		Site Manager: Sheldon Hitchcock	
Project Name: Macho Nacho St. #004 10/18/2018			
Project Location: (county, state) Lea, NM		Project #:	
Invoice to: Sheldon Hitchcock		Sampler Name: Sheldon Hitchcock	
Receiving Laboratory: Xenco		Comments:	

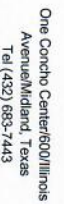
LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	(C)omposite/(G)rab	
		YEAR: 2019		WATER	SOIL	HCL	HNO ₃			ICE
		DATE	TIME							
B-51		9/17/2019	12:10	X				1	C	
B-52		9/17/2019	12:15	X				1	C	
B-53		9/17/2019	12:20	X				1	C	
B-54		9/17/2019	12:25	X				1	C	
B-55		9/17/2019	12:30	X				1	C	
B-56		9/17/2019	12:35	X				1	C	
B-57		9/17/2019	12:40	X				1	C	
B-58		9/17/2019	12:45	X				1	C	
B-59		9/17/2019	12:50	X				1	C	
B-60		9/17/2019	12:55	X				1	C	

LAB USE ONLY		REMARKS:	
Relinquished by: <u>Sheldon Hitchcock</u>	Date: <u>9/17/19</u> Time: <u>15:29</u>	Received by: <u>[Signature]</u> Date: <u>9/17/19</u> Time: <u>15:29</u>	
Relinquished by: <u>[Signature]</u>	Date: <u>9/17/19</u> Time: <u>15:29</u>	Received by: <u>[Signature]</u> Date: <u>9/17/19</u> Time: <u>15:29</u>	
Relinquished by: <u>[Signature]</u>	Date: <u>9/17/19</u> Time: <u>15:29</u>	Received by: <u>[Signature]</u> Date: <u>9/17/19</u> Time: <u>15:29</u>	

(Circle) HAND DELIVERED	FEDEX	UPS	Tracking #:	Special Report Limits or TRRP Report	RUSH: Same Day 24 hr 48 hr 72 hr	Rush Charges Authorized	Special Report Limits or TRRP Report	REMARKS:

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(Circle) HAND DELIVERED FEDEX UPS Tracking #:

1.001



Inter-Office Shipment

Page 1 of 9

IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-001	S	B-1	09/17/19 08:00	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-001	S	B-1	09/17/19 08:00	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-001	S	B-1	09/17/19 08:00	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-002	S	B-2	09/17/19 08:05	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-002	S	B-2	09/17/19 08:05	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-002	S	B-2	09/17/19 08:05	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-003	S	B-3	09/17/19 08:10	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-003	S	B-3	09/17/19 08:10	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-003	S	B-3	09/17/19 08:10	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-004	S	B-4	09/17/19 08:15	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-004	S	B-4	09/17/19 08:15	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-004	S	B-4	09/17/19 08:15	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-005	S	B-5	09/17/19 08:20	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-005	S	B-5	09/17/19 08:20	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-005	S	B-5	09/17/19 08:20	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-006	S	B-6	09/17/19 08:25	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-006	S	B-6	09/17/19 08:25	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-006	S	B-6	09/17/19 08:25	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-007	S	B-7	09/17/19 08:30	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-007	S	B-7	09/17/19 08:30	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-007	S	B-7	09/17/19 08:30	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-008	S	B-8	09/17/19 08:35	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-008	S	B-8	09/17/19 08:35	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-008	S	B-8	09/17/19 08:35	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-009	S	B-9	09/17/19 08:40	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	



Inter-Office Shipment

Page 2 of 9

IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-009	S	B-9	09/17/19 08:40	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-009	S	B-9	09/17/19 08:40	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-010	S	B-10	09/17/19 08:45	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-010	S	B-10	09/17/19 08:45	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-010	S	B-10	09/17/19 08:45	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-011	S	B-11	09/17/19 08:50	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-011	S	B-11	09/17/19 08:50	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-011	S	B-11	09/17/19 08:50	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-012	S	B-12	09/17/19 08:55	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-012	S	B-12	09/17/19 08:55	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-012	S	B-12	09/17/19 08:55	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-013	S	B-13	09/17/19 09:00	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-013	S	B-13	09/17/19 09:00	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-013	S	B-13	09/17/19 09:00	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-014	S	B-14	09/17/19 09:05	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-014	S	B-14	09/17/19 09:05	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-014	S	B-14	09/17/19 09:05	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-015	S	B-15	09/17/19 09:10	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-015	S	B-15	09/17/19 09:10	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-015	S	B-15	09/17/19 09:10	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-016	S	B-16	09/17/19 09:15	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-016	S	B-16	09/17/19 09:15	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-016	S	B-16	09/17/19 09:15	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-017	S	B-17	09/17/19 09:20	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-017	S	B-17	09/17/19 09:20	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

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IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-017	S	B-17	09/17/19 09:20	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-018	S	B-18	09/17/19 09:25	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-018	S	B-18	09/17/19 09:25	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-018	S	B-18	09/17/19 09:25	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-019	S	B-19	09/17/19 09:30	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-019	S	B-19	09/17/19 09:30	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-019	S	B-19	09/17/19 09:30	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-020	S	B-20	09/17/19 09:35	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-020	S	B-20	09/17/19 09:35	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-020	S	B-20	09/17/19 09:35	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-021	S	B-21	09/17/19 09:40	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-021	S	B-21	09/17/19 09:40	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-021	S	B-21	09/17/19 09:40	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-022	S	B-22	09/17/19 09:45	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-022	S	B-22	09/17/19 09:45	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-022	S	B-22	09/17/19 09:45	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-023	S	B-23	09/17/19 09:50	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-023	S	B-23	09/17/19 09:50	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-023	S	B-23	09/17/19 09:50	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-024	S	B-24	09/17/19 09:55	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-024	S	B-24	09/17/19 09:55	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-024	S	B-24	09/17/19 09:55	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-025	S	B-25	09/17/19 10:00	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-025	S	B-25	09/17/19 10:00	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-025	S	B-25	09/17/19 10:00	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:



Inter-Office Shipment

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IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-026	S	B-26	09/17/19 10:05	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-026	S	B-26	09/17/19 10:05	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-026	S	B-26	09/17/19 10:05	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-027	S	B-27	09/17/19 10:10	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-027	S	B-27	09/17/19 10:10	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-027	S	B-27	09/17/19 10:10	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-028	S	B-28	09/17/19 10:15	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-028	S	B-28	09/17/19 10:15	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-028	S	B-28	09/17/19 10:15	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-029	S	B-29	09/17/19 10:20	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-029	S	B-29	09/17/19 10:20	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-029	S	B-29	09/17/19 10:20	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-030	S	B-30	09/17/19 10:25	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-030	S	B-30	09/17/19 10:25	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-030	S	B-30	09/17/19 10:25	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-031	S	B-31	09/17/19 10:30	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-031	S	B-31	09/17/19 10:30	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-031	S	B-31	09/17/19 10:30	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-032	S	B-32	09/17/19 10:35	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-032	S	B-32	09/17/19 10:35	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-032	S	B-32	09/17/19 10:35	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-033	S	B-33	09/17/19 10:40	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-033	S	B-33	09/17/19 10:40	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-033	S	B-33	09/17/19 10:40	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-034	S	B-34	09/17/19 10:45	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	

Inter Office Shipment or Sample Comments:

Date Relinquished:

Date Received:



Inter-Office Shipment

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IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-034	S	B-34	09/17/19 10:45	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-034	S	B-34	09/17/19 10:45	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-035	S	B-35	09/17/19 10:50	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-035	S	B-35	09/17/19 10:50	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-035	S	B-35	09/17/19 10:50	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-036	S	B-36	09/17/19 10:55	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-036	S	B-36	09/17/19 10:55	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-036	S	B-36	09/17/19 10:55	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-037	S	B-37	09/17/19 11:00	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-037	S	B-37	09/17/19 11:00	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-037	S	B-37	09/17/19 11:00	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-038	S	B-38	09/17/19 11:05	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-038	S	B-38	09/17/19 11:05	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-038	S	B-38	09/17/19 11:05	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-039	S	B-39	09/17/19 11:10	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-039	S	B-39	09/17/19 11:10	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-039	S	B-39	09/17/19 11:10	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-040	S	B-40	09/17/19 11:15	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-040	S	B-40	09/17/19 11:15	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-040	S	B-40	09/17/19 11:15	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-041	S	B-41	09/17/19 11:20	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-041	S	B-41	09/17/19 11:20	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-041	S	B-41	09/17/19 11:20	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-042	S	B-42	09/17/19 11:25	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-042	S	B-42	09/17/19 11:25	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Cooler Temperature:



Inter-Office Shipment

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IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-042	S	B-42	09/17/19 11:25	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-043	S	B-43	09/17/19 11:30	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-043	S	B-43	09/17/19 11:30	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ	X
637188-043	S	B-43	09/17/19 11:30	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-044	S	B-44	09/17/19 11:35	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-044	S	B-44	09/17/19 11:35	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ	X
637188-044	S	B-44	09/17/19 11:35	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-045	S	B-45	09/17/19 11:40	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-045	S	B-45	09/17/19 11:40	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ	X
637188-045	S	B-45	09/17/19 11:40	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-046	S	B-46	09/17/19 11:45	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ	X
637188-046	S	B-46	09/17/19 11:45	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-046	S	B-46	09/17/19 11:45	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-047	S	B-47	09/17/19 11:50	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ	X
637188-047	S	B-47	09/17/19 11:50	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-047	S	B-47	09/17/19 11:50	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-048	S	B-48	09/17/19 11:55	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-048	S	B-48	09/17/19 11:55	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ	X
637188-048	S	B-48	09/17/19 11:55	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-049	S	B-49	09/17/19 12:00	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-049	S	B-49	09/17/19 12:00	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ	X
637188-049	S	B-49	09/17/19 12:00	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-050	S	B-50	09/17/19 12:05	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-050	S	B-50	09/17/19 12:05	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ	X
637188-050	S	B-50	09/17/19 12:05	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

Page 7 of 9

IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-051	S	B-51	09/17/19 12:10	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-051	S	B-51	09/17/19 12:10	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-051	S	B-51	09/17/19 12:10	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-052	S	B-52	09/17/19 12:15	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-052	S	B-52	09/17/19 12:15	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-052	S	B-52	09/17/19 12:15	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-053	S	B-53	09/17/19 12:20	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-053	S	B-53	09/17/19 12:20	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-053	S	B-53	09/17/19 12:20	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-054	S	B-54	09/17/19 12:25	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-054	S	B-54	09/17/19 12:25	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-054	S	B-54	09/17/19 12:25	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-055	S	B-55	09/17/19 12:30	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-055	S	B-55	09/17/19 12:30	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-055	S	B-55	09/17/19 12:30	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-056	S	B-56	09/17/19 12:35	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-056	S	B-56	09/17/19 12:35	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-056	S	B-56	09/17/19 12:35	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-057	S	B-57	09/17/19 12:40	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-057	S	B-57	09/17/19 12:40	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-057	S	B-57	09/17/19 12:40	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-058	S	B-58	09/17/19 12:45	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-058	S	B-58	09/17/19 12:45	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-058	S	B-58	09/17/19 12:45	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-059	S	B-59	09/17/19 12:50	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

Page 8 of 9

IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-059	S	B-59	09/17/19 12:50	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-059	S	B-59	09/17/19 12:50	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-060	S	B-60	09/17/19 12:55	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-060	S	B-60	09/17/19 12:55	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-060	S	B-60	09/17/19 12:55	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-061	S	B-61	09/17/19 13:00	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-061	S	B-61	09/17/19 13:00	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-061	S	B-61	09/17/19 13:00	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-062	S	B-62	09/17/19 13:05	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-062	S	B-62	09/17/19 13:05	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-062	S	B-62	09/17/19 13:05	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-063	S	B-63	09/17/19 13:10	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-063	S	B-63	09/17/19 13:10	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-063	S	B-63	09/17/19 13:10	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-064	S	B-64	09/17/19 13:15	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-064	S	B-64	09/17/19 13:15	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-064	S	B-64	09/17/19 13:15	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-065	S	B-65	09/17/19 13:20	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-065	S	B-65	09/17/19 13:20	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-065	S	B-65	09/17/19 13:20	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-066	S	B-66	09/17/19 13:25	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-066	S	B-66	09/17/19 13:25	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-066	S	B-66	09/17/19 13:25	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-067	S	B-67	09/17/19 13:30	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35 ↓	
637188-067	S	B-67	09/17/19 13:30	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:



Inter-Office Shipment

Page 9 of 9

IOS Number **48290**

Date/Time: 09/18/19 10:52

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
637188-067	S	B-67	09/17/19 13:30	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-068	S	B-68	09/17/19 13:35	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-068	S	B-68	09/17/19 13:35	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-068	S	B-68	09/17/19 13:35	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-069	S	B-69	09/17/19 13:40	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-069	S	B-69	09/17/19 13:40	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	
637188-069	S	B-69	09/17/19 13:40	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-070	S	B-70	09/17/19 13:45	SW8015MOD_NM	TPH By SW8015 Mod	09/23/19	10/01/19	JKR	PHCC10C28 PHCC28C35	
637188-070	S	B-70	09/17/19 13:45	E300_CL	Chloride by EPA 300	09/23/19	03/15/20	JKR	CL	
637188-070	S	B-70	09/17/19 13:45	SW8021B	BTEX by EPA 8021B	09/23/19	10/01/19	JKR	BR4FBZ BZ BZME EBZ X	

Inter Office Shipment or Sample Comments:

Elizabeth McClellan

09/18/2019

Brianna Teel

09/19/2019 11:41

0.4



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 48290

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 09/18/2019 10:52 AM

Received By: Brianna Teel

Date Received: 09/19/2019 11:41 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	.4
#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:

Brianna Teel

Date: 09/19/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: COG Operating LLC

Date/ Time Received: 09/17/2019 03:29:00 PM

Work Order #: 637188

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)?	6
#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 Midland
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Elizabeth McClellan

Date: 09/18/2019

Checklist reviewed by:

Jessica Kramer

Date: 09/18/2019



Certificate of Analysis Summary 639399

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. Com #4H

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Oct-08-19 03:22 pm

Report Date: 15-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	639399-001	639399-002	639399-003	639399-004	639399-005	639399-006
	<i>Field Id:</i>	B-45	B-47	B-48	B-67	B-69	B-70
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-08-19 13:00	Oct-08-19 13:02	Oct-08-19 13:04	Oct-08-19 13:10	Oct-08-19 13:12	Oct-08-19 13:14
TPH By SW8015 Mod SUB: T104704400-19-19	<i>Extracted:</i>	Oct-11-19 11:00	Oct-11-19 11:00	Oct-11-19 11:00	Oct-11-19 11:00	Oct-11-19 11:00	Oct-11-19 11:00
	<i>Analyzed:</i>	Oct-11-19 13:18	Oct-11-19 14:21	Oct-11-19 14:42	Oct-11-19 15:03	Oct-11-19 15:24	Oct-11-19 15:44
	<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	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Diesel Range Organics		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8
Total TPH		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8

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

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 639399

COG Operating LLC, Artesia, NM

Project Name: Magnum Pronto St. Com #4H

Project Id:

Contact: Sheldon Hitchcock

Project Location: Lea, NM

Date Received in Lab: Tue Oct-08-19 03:22 pm

Report Date: 15-OCT-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	639399-007					
	Field Id:	B-68					
	Depth:						
	Matrix:	SOIL					
	Sampled:	Oct-08-19 00:00					
TPH By SW8015 Mod SUB: T104704400-19-19	Extracted:	Oct-11-19 11:00					
	Analyzed:	Oct-11-19 16:05					
	Units/RL:	mg/kg RL					
Gasoline Range Hydrocarbons		<50.0 50.0					
Diesel Range Organics		<50.0 50.0					
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0					
Total TPH		<50.0 50.0					

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

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

Jessica Kramer
Project Assistant

Analytical Report 639399

**for
COG Operating LLC**

Project Manager: Sheldon Hitchcock

Magnum Pronto St. Com #4H

15-OCT-19

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Tampa: Florida (E87429), North Carolina (483)



15-OCT-19

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

Reference: XENCO Report No(s): **639399**
Magnum Pronto St. Com #4H
Project Address: Lea, NM

Sheldon Hitchcock:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 639399. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 639399 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads 'Jessica Kramer'. The signature is written in a cursive, flowing style.

Jessica Kramer
Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 639399

COG Operating LLC, Artesia, NM

Magnum Pronto St. Com #4H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B-45	S	10-08-19 13:00		639399-001
B-47	S	10-08-19 13:02		639399-002
B-48	S	10-08-19 13:04		639399-003
B-67	S	10-08-19 13:10		639399-004
B-69	S	10-08-19 13:12		639399-005
B-70	S	10-08-19 13:14		639399-006
B-68	S	10-08-19 00:00		639399-007



CASE NARRATIVE

Client Name: COG Operating LLC

Project Name: Magnum Pronto St. Com #4H

Project ID:
Work Order Number(s): 639399

Report Date: 15-OCT-19
Date Received: 10/08/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results 639399

COG Operating LLC, Artesia, NM

Magnum Pronto St. Com #4H

Sample Id: **B-45**
Lab Sample Id: 639399-001

Matrix: Soil
Date Collected: 10.08.19 13.00

Date Received: 10.08.19 15.22

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3104204

Prep Method: SW8015P

% Moisture:

Date Prep: 10.11.19 11.00

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	10.11.19 13.18	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	10.11.19 13.18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.11.19 13.18	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.11.19 13.18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	99	%	70-135	10.11.19 13.18		
o-Terphenyl	84-15-1	106	%	70-135	10.11.19 13.18		



Certificate of Analytical Results 639399

COG Operating LLC, Artesia, NM

Magnum Pronto St. Com #4H

Sample Id: **B-47**
Lab Sample Id: 639399-002

Matrix: Soil
Date Collected: 10.08.19 13.02

Date Received: 10.08.19 15.22

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3104204

Prep Method: SW8015P

% Moisture:

Date Prep: 10.11.19 11.00

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	10.11.19 14.21	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	10.11.19 14.21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.11.19 14.21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.11.19 14.21	U	1
Surrogate	Cas Number	% Recovery		Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107		%	70-135	10.11.19 14.21	
o-Terphenyl	84-15-1	116		%	70-135	10.11.19 14.21	



Certificate of Analytical Results 639399

COG Operating LLC, Artesia, NM

Magnum Pronto St. Com #4H

Sample Id: **B-48**
Lab Sample Id: 639399-003

Matrix: Soil
Date Collected: 10.08.19 13.04

Date Received: 10.08.19 15.22

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3104204

Prep Method: SW8015P

% Moisture:

Date Prep: 10.11.19 11.00

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	10.11.19 14.42	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	10.11.19 14.42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.11.19 14.42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.11.19 14.42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	97	%	70-135	10.11.19 14.42		
o-Terphenyl	84-15-1	104	%	70-135	10.11.19 14.42		



Certificate of Analytical Results 639399

COG Operating LLC, Artesia, NM

Magnum Pronto St. Com #4H

Sample Id: **B-67**
Lab Sample Id: 639399-004

Matrix: Soil
Date Collected: 10.08.19 13.10

Date Received: 10.08.19 15.22

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3104204

Prep Method: SW8015P

% Moisture:

Date Prep: 10.11.19 11.00

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	10.11.19 15.03	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	10.11.19 15.03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.11.19 15.03	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.11.19 15.03	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	10.11.19 15.03		
o-Terphenyl	84-15-1	97	%	70-135	10.11.19 15.03		



Certificate of Analytical Results 639399

COG Operating LLC, Artesia, NM

Magnum Pronto St. Com #4H

Sample Id: **B-69**
Lab Sample Id: 639399-005

Matrix: Soil
Date Collected: 10.08.19 13.12

Date Received: 10.08.19 15.22

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3104204

Prep Method: SW8015P

% Moisture:

Date Prep: 10.11.19 11.00

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.9	49.9	mg/kg	10.11.19 15.24	U	1
Diesel Range Organics	C10C28DRO	<49.9	49.9	mg/kg	10.11.19 15.24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	10.11.19 15.24	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	10.11.19 15.24	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	96	%	70-135	10.11.19 15.24		
o-Terphenyl	84-15-1	102	%	70-135	10.11.19 15.24		



Certificate of Analytical Results 639399

COG Operating LLC, Artesia, NM

Magnum Pronto St. Com #4H

Sample Id: **B-70**
Lab Sample Id: 639399-006

Matrix: Soil
Date Collected: 10.08.19 13.14

Date Received: 10.08.19 15.22

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3104204

Prep Method: SW8015P

% Moisture:

Date Prep: 10.11.19 11.00

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<49.8	49.8	mg/kg	10.11.19 15.44	U	1
Diesel Range Organics	C10C28DRO	<49.8	49.8	mg/kg	10.11.19 15.44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	10.11.19 15.44	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	10.11.19 15.44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	94	%	70-135	10.11.19 15.44		
o-Terphenyl	84-15-1	101	%	70-135	10.11.19 15.44		



Certificate of Analytical Results 639399

COG Operating LLC, Artesia, NM

Magnum Pronto St. Com #4H

Sample Id: **B-68**
Lab Sample Id: 639399-007

Matrix: Soil
Date Collected: 10.08.19 00.00

Date Received: 10.08.19 15.22

Analytical Method: TPH By SW8015 Mod

Tech: DVM

Analyst: ARM

Seq Number: 3104204

Prep Method: SW8015P

% Moisture:

Date Prep: 10.11.19 11.00

Basis: Wet Weight

SUB: T104704400-19-19

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons	PHC610	<50.0	50.0	mg/kg	10.11.19 16.05	U	1
Diesel Range Organics	C10C28DRO	<50.0	50.0	mg/kg	10.11.19 16.05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	10.11.19 16.05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	10.11.19 16.05	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1-Chlorooctane	111-85-3	92	%	70-135	10.11.19 16.05		
o-Terphenyl	84-15-1	97	%	70-135	10.11.19 16.05		

Flagging Criteria

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

****** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



QC Summary 639399

COG Operating LLC Magnum Pronto St. Com #4H

Analytical Method: TPH By SW8015 Mod

Seq Number: 3104204

MB Sample Id: 7687940-1-BLK

Matrix: Solid

LCS Sample Id: 7687940-1-BKS

Prep Method: SW8015P

Date Prep: 10.11.19

LCSD Sample Id: 7687940-1-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	<15.0	1000	1190	119	1180	118	70-135	1	20	mg/kg	10.11.19 12:37	
Diesel Range Organics	<50.0	1000	1150	115	1200	120	70-135	4	20	mg/kg	10.11.19 12:37	
Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date	Flag		
1-Chlorooctane	108		124		113		70-135	%	10.11.19 12:37			
o-Terphenyl	118		112		97		70-135	%	10.11.19 12:37			

Analytical Method: TPH By SW8015 Mod

Seq Number: 3104204

Matrix: Solid

MB Sample Id: 7687940-1-BLK

Prep Method: SW8015P

Date Prep: 10.11.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.11.19 12:16	

Analytical Method: TPH By SW8015 Mod

Seq Number: 3104204

Parent Sample Id: 639399-001

Matrix: Soil

MS Sample Id: 639399-001 S

Prep Method: SW8015P

Date Prep: 10.11.19

MSD Sample Id: 639399-001 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	<15.0	999	1190	119	1180	118	70-135	1	20	mg/kg	10.11.19 13:39	
Diesel Range Organics	28.8	999	1160	113	1140	111	70-135	2	20	mg/kg	10.11.19 13:39	
Surrogate				MS %Rec	MS Flag	MSD %Rec	MSD Flag		Limits	Units	Analysis Date	
1-Chlorooctane				106		121			70-135	%	10.11.19 13:39	
o-Terphenyl				88		103			70-135	%	10.11.19 13:39	

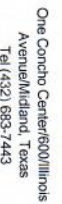
MS/MSD Percent Recovery
Relative Percent Difference
LCS/LCSD Recovery
Log Difference

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

Page 1 of 1



Sheldon Hitchcock

Project #:

Linear, RM

Sheldon Hitchcock

539 390

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Final 1.000

Inter-Office Shipment

IOS Number : 49712

Date/Time: 10.08.2019

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
639399-001	S	B-45	10.08.2019 13:00	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	
639399-002	S	B-47	10.08.2019 13:02	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	
639399-003	S	B-48	10.08.2019 13:04	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	
639399-004	S	B-67	10.08.2019 13:10	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	
639399-005	S	B-69	10.08.2019 13:12	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	
639399-006	S	B-70	10.08.2019 13:14	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By:



Elizabeth McClellan

Date Relinquished: 10.08.2019

Received By: _____

Date Received: _____

Cooler Temperature: _____



Inter-Office Shipment

Page 1 of 1

IOS Number **49716**

Date/Time: 10/08/19 18:29

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
639399-001	S	B-45	10/08/19 13:00	SW8015MOD_NM	TPH By SW8015 Mod	10/14/19	10/22/19	JKR	PHCC10C28 PHCC28C35 ↓	
639399-002	S	B-47	10/08/19 13:02	SW8015MOD_NM	TPH By SW8015 Mod	10/14/19	10/22/19	JKR	PHCC10C28 PHCC28C35 ↓	
639399-003	S	B-48	10/08/19 13:04	SW8015MOD_NM	TPH By SW8015 Mod	10/14/19	10/22/19	JKR	PHCC10C28 PHCC28C35 ↓	
639399-004	S	B-67	10/08/19 13:10	SW8015MOD_NM	TPH By SW8015 Mod	10/14/19	10/22/19	JKR	PHCC10C28 PHCC28C35 ↓	
639399-006	S	B-69	10/08/19 13:12	SW8015MOD_NM	TPH By SW8015 Mod	10/14/19	10/22/19	JKR	PHCC10C28 PHCC28C35 ↓	
639399-007	S	B-70	10/08/19 13:14	SW8015MOD_NM	TPH By SW8015 Mod	10/14/19	10/22/19	JKR	PHCC10C28 PHCC28C35 ↓	

Inter Office Shipment or Sample Comments:

Relinquished By:

Elizabeth McClellan

Date Relinquished: 10/08/2019

Received By:

Brianna Teel

Date Received: 10/09/2019 10:10

Cooler Temperature: 4.6

Inter-Office Shipment

IOS Number : 49739

Date/Time: 10.09.2019

Created by: Elizabeth McClellan

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@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
639399-005	S	B-69	10.08.2019 13:12	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	
639399-006	S	B-70	10.08.2019 13:14	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	
639399-007	S	B-68	10.08.2019 00:00	SW8015MOD_NM	TPH By SW8015 Mod	10.14.2019	10.22.2019	JKR	PHCC10C28 PHCC28C3	

Inter Office Shipment or Sample Comments:

Relinquished By:



Elizabeth McClellan

Date Relinquished: 10.09.2019

Received By: _____

Date Received: _____

Cooler Temperature: _____



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 49716

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 10/08/2019 06:29 PM

Received By: Brianna Teel

Date Received: 10/09/2019 10:10 AM

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	4.6
#2 *Shipping container in good condition?	Yes
#3 *Samples received with appropriate temperature?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 *Custody Seals Signed and dated for Containers/coolers	Yes
#6 *IOS present?	Yes
#7 Any missing/extra samples?	No
#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:

Brianna Teel

Brianna Teel

Date: 10/09/2019



XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Midland

IOS #: 49739

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sent By: Elizabeth McClellan

Date Sent: 10/09/2019 10:46 AM

Received By: Brianna Teel

Date Received: 10/09/2019 10:51 AM

Sample Receipt Checklist

Comments

- | | |
|---|-----|
| #1 *Temperature of cooler(s)? | |
| #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:

Brianna Teel

Date: 10/09/2019



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 09, 2019

SHELDON HITCHCOCK

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: MAGNUM PRONTO STATE #4

Enclosed are the results of analyses for samples received by the laboratory on 12/06/19 12:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-19-12. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received:	12/06/2019	Sampling Date:	12/06/2019
Reported:	12/09/2019	Sampling Type:	Soil
Project Name:	MAGNUM PRONTO STATE #4	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	LEA CO NM		

Sample ID: SW - 1 (H904087-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/07/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/07/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/07/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/07/2019	ND	5.41	90.2	6.00	2.04	
Total BTEX	<0.300	0.300	12/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	128	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 96.1 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 2 (H904087-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/07/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/07/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/07/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/07/2019	ND	5.41	90.2	6.00	2.04	
Total BTX	<0.300	0.300	12/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 104 % 41-142

Surrogate: 1-Chlorooctadecane 111 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 3 (H904087-03)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/07/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/07/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/07/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/07/2019	ND	5.41	90.2	6.00	2.04	
Total BTEx	<0.300	0.300	12/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 111 % 41-142

Surrogate: 1-Chlorooctadecane 117 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 4 (H904087-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/07/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/07/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/07/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/07/2019	ND	5.41	90.2	6.00	2.04	
Total BTEx	<0.300	0.300	12/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.0 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 112 % 41-142

Surrogate: 1-Chlorooctadecane 120 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 5 (H904087-05)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/07/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/07/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/07/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/07/2019	ND	5.41	90.2	6.00	2.04	
Total BTX	<0.300	0.300	12/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 113 % 41-142

Surrogate: 1-Chlorooctadecane 120 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 6 (H904087-06)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/07/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/07/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/07/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/07/2019	ND	5.41	90.2	6.00	2.04	
Total BTEx	<0.300	0.300	12/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	228	114	200	0.419	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	232	116	200	2.33	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 118 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 7 (H904087-07)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/07/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/07/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/07/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/07/2019	ND	5.41	90.2	6.00	2.04	
Total BTEx	<0.300	0.300	12/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 91.4 % 41-142

Surrogate: 1-Chlorooctadecane 91.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 8 (H904087-08)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/07/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/07/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/07/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/07/2019	ND	5.41	90.2	6.00	2.04	
Total BTX	<0.300	0.300	12/07/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 9 (H904087-09)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/09/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.41	90.2	6.00	2.04	
Total BTX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 102 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 10 (H904087-10)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/09/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.41	90.2	6.00	2.04	
Total BTX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 93.0 % 41-142

Surrogate: 1-Chlorooctadecane 95.4 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 11 (H904087-11)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/09/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.41	90.2	6.00	2.04	
Total BTX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 92.0 % 41-142

Surrogate: 1-Chlorooctadecane 92.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 12 (H904087-12)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/09/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.41	90.2	6.00	2.04	
Total BTX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 100 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 85.9 % 41-142

Surrogate: 1-Chlorooctadecane 86.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 13 (H904087-13)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/09/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.41	90.2	6.00	2.04	
Total BTEX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 89.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 14 (H904087-14)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/09/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.41	90.2	6.00	2.04	
Total BTX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.4 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 96.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 15 (H904087-15)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	1.81	90.6	2.00	2.02	
Toluene*	<0.050	0.050	12/09/2019	ND	1.76	87.8	2.00	2.39	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	1.79	89.4	2.00	2.04	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.41	90.2	6.00	2.04	
Total BTEx	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	12/09/2019	ND	432	108	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 91.2 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
SHELDON HITCHCOCK
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 12/06/2019
Reported: 12/09/2019
Project Name: MAGNUM PRONTO STATE #4
Project Number: NONE GIVEN
Project Location: LEA CO NM

Sampling Date: 12/06/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SW - 16 (H904087-16)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/09/2019	ND	2.09	105	2.00	6.43	
Toluene*	<0.050	0.050	12/09/2019	ND	2.08	104	2.00	6.62	
Ethylbenzene*	<0.050	0.050	12/09/2019	ND	2.01	101	2.00	6.14	
Total Xylenes*	<0.150	0.150	12/09/2019	ND	5.77	96.2	6.00	6.08	
Total BTEX	<0.300	0.300	12/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	12/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	12/09/2019	ND	230	115	200	1.93	
DRO >C10-C28*	<10.0	10.0	12/09/2019	ND	254	127	200	0.643	
EXT DRO >C28-C36	<10.0	10.0	12/09/2019	ND					

Surrogate: 1-Chlorooctane 101 % 41-142

Surrogate: 1-Chlorooctadecane 98.9 % 37.6-147

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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ORIGINAL COPY

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APPENDIX D

NE

E

SE

60

90

120

150

☀ 107°E (T) ☉ 32°36.642', -103°46.833' ±32ft ▲ 3568ft

CONCHO COG Operating LLC
MAGNUM PRONTO STATE COM #4H
UNIT P, SEC. 32-T19S-R32E
330' FSL & 330' FEL
LEA COUNTY, NEW MEXICO
API #30-025-39951

COG 0

432-

DANGER


HIGH VOLTAGE
STAY AWAY FROM POWER LINES

NOTICE

ALL VEHICLES MUST STOP
WHENLY & NOT PROCEED UNTIL
INSTRUCTED BY THE GUARD
OR THE GUARD RECALLS
THEIR VEHICLE

PRODUCED WATER



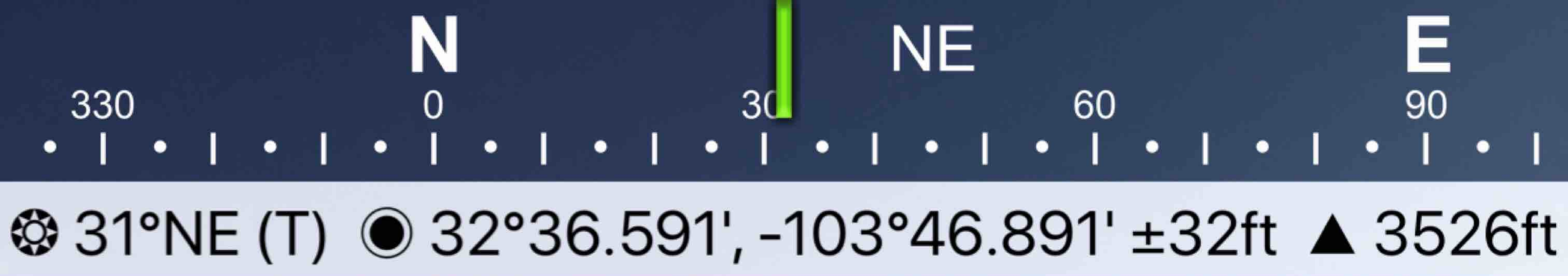

BIOHAZARD
DANGER
DO NOT TOUCH
DO NOT EAT OR DRINK
DO NOT SMOKE
DO NOT INHALE
DO NOT GET ON SKIN
DO NOT GET IN EYES
DO NOT GET IN MOUTH
DO NOT GET IN NOSE
DO NOT GET IN EARS
DO NOT GET IN CLOTHING
DO NOT GET IN HAIR
DO NOT GET IN MAKEUP
DO NOT GET IN JEWELRY
DO NOT GET IN CONTACT WITH ANYTHING


FLAMMABLE
DANGER
DO NOT TOUCH
DO NOT EAT OR DRINK
DO NOT SMOKE
DO NOT INHALE
DO NOT GET ON SKIN
DO NOT GET IN EYES
DO NOT GET IN MOUTH
DO NOT GET IN NOSE
DO NOT GET IN EARS
DO NOT GET IN CLOTHING
DO NOT GET IN HAIR
DO NOT GET IN MAKEUP
DO NOT GET IN JEWELRY
DO NOT GET IN CONTACT WITH ANYTHING

D

CONFINED SPACE EX
TO ANY ENTRY INTO AL

17 Sep 2019, 09:09:17



17 Sep 2019, 09:26:20



☼ 319°NW (T) ● 32.610544°, -103.781132° ±16ft ▲ 3518ft

