



August 22, 2019

Mike Bratcher
NMOCD District 2
811 South First Street
Artesia, NM 88210

9DUCH-190823-C-1410

Ryan Mann
New Mexico State Land Office
2827 N. Dal Paso Suite 117
Hobbs, NM 88240

Closure Report

Gillespie State #001 Battery

API#: 30-015-23863

RP#: 2RP-5232

DOR: January 23, 2019

GPS: 32.80989, -104.15767

Unit Letter A, Section 27, Township 17 South, Range 28 East

Eddy 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 Gillespie State #001 Battery.

BACKGROUND

The release was discovered on January 23, 2019 and a C-141 initial report was submitted to the New Mexico Oil Conservation Division (NMOCD) and the New Mexico State Land Office (NMSLO). A hole developed in the bottom of the oil tank and resulted in the release of approximately sixty-five (65) barrels (bbls) of oil with sixty (60) bbls recovered.

GROUNDWATER AND REGULATORY FRAMEWORK

According to the USGS National Water Information System, the nearest active water well (USGS 324858104091901) is located approximately 0.39 miles northeast of the release point and indicates that groundwater in the project vicinity is approximately seventy-eight (78) 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, the release did not occur within any areas of concern. No other receptors (water wells, playas, water course, lake beds or ordinance boundaries) were located within each specific boundaries or distance from the site. The groundwater data and the site characterization evaluation data is summarized in Appendix B. The delineation and closure criteria are listed below:

General Site Characterization and Groundwater:

Site Characterization	Average Groundwater Depth (ft.)
NA	51 – 100 feet

Delineation and Closure Criteria:

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

REMEDIAL ACTIONS

- The impacted area was excavated to depths from four (4) to five and a half (5.5) feet BGS.
- All of the excavated material was hauled to an NMOCD approved solid waste disposal facility.
- Confirmation soil samples were collected every 200 square feet to ensure proper removal of the impacted soils.
- The site was backfilled with caliche and contoured to match the surrounding location.

SITE RECLAMATION AND RESTORATION

All of the fluid remained on the well pad. No reclamation activities will be required at this site.

CLOSURE REQUEST

COG Operating, LLC respectfully requests that the NMOCD and the NMSLO grant closure approval for the Gillespie State #001 Battery incident that occurred on January 23, 2019. Should you have any questions or concerns please do not hesitate to contact me.

Sincerely,

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

Dakota Neel
HSE Coordinator
Dneel2@concho.com

FIGURES



TABLES

Table 1
COG Operating LLC.
Gillespie State #001 Battery
Eddy County, New Mexico

Sample ID	Sample Depth (ft)	Sample Date	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
			In-Situ	Removed	GRO	DRO	MRO	Total			
NMOCDD RRAL Limits (mg/kg)					-	-	-	100	10	50	600
BTTM- 1	4	6/26/2019	X		<10.0	35.9	<10.0	35.9	<0.050	<0.050	32
BTTM- 2	4	6/26/2019	X		<10.0	58.4	<10.0	58.4	<0.050	<0.050	80
BTTM- 3	4	6/26/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.050	32
BTTM -4	4	6/26/2019		X	<10.0	96.8	17.3	114.1	<0.050	<0.050	400
BTTM -4	4.5	7/11/2019	X		<10.0	27.8	<10.0	27.8	-	-	-
BTTM-5	4	6/26/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.050	48
BTTM-6	4	6/26/2019		X	<10.0	104	33.5	137.5	<0.050	<0.050	48
BTTM-6	5	7/11/2019	X		<10.0	45.8	33.5	79.3	-	-	-
BTTM-7	5	6/26/2019		X	<10.0	480	266	746.0	<0.050	<0.050	656
BTTM-7	5.5	7/11/2019	X		<10.0	52.2	14.6	66.8	<0.050	<0.050	160
BTTM-8	5	6/26/2019		X	<10.0	130	46.5	176.5	<0.050	<0.050	608
BTTM-8	5.5	7/11/2019	X		<10.0	<10.0	<10.0	0.0	-	-	32
BTTM-9	4	6/26/2019		X	<10.0	85.5	33.3	118.8	<0.050	<0.050	48
BTTM-9	5	7/11/2019	X		<10.0	45.9	20.5	66.4	-	-	-
BTTM-10	4	6/26/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.050	32
BTTM-11	4	6/26/2019		X	<10.0	649	251	900.0	<0.050	<0.050	96
BTTM-11	5	7/11/2019	X		<10.0	<10.0	<10.0	0.0	-	-	-
BTTM-12	4	6/26/2019	X		<10.0	13.5	<10.0	13.5	<0.050	<0.050	128
S 1	N/A	6/26/2019		X	<10.0	129	61.2	190.2	<0.050	<0.050	416
S1	N/A	7/11/2019	X		<10.0	<10.0	<10.0	0.0	-	-	-
S 2	N/A	6/26/2019		X	<10.0	244	112	356.0	<0.050	<0.050	64
S 2	N/A	7/11/2019	X		<10.0	<10.0	<10.0	0.0	-	-	-
S 3	N/A	6/26/2019		X	<10.0	81.5	41.2	122.7	<0.050	<0.050	64
S 3	N/A	7/11/2019	X		<10.0	<10.0	<10.0	0.0	-	-	-
S 4	N/A	6/26/2019		X	<10.0	125	75.8	200.8	<0.050	<0.050	32
S 4	N/A	7/11/2019	X		<10.0	<10.0	<10.0	0.0	-	-	-
S 5	N/A	6/26/2019		X	<10.0	327	106	433.0	<0.050	<0.050	336
S 5	N/A	7/11/2019	X		<10.0	<10.0	<10.0	0.0	-	-	-
S 6	N/A	6/26/2019		X	<10.0	330	121	451.0	<0.050	<0.050	256
S 6	N/A	7/11/2019		X	<10.0	300	75.1	375.1	-	-	-
S 6	N/A	7/16/2019	X		<10.0	11.6	<10.0	11.6	-	-	-
S 7	N/A	6/26/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.050	144
S 8	N/A	6/26/2019	X		<10.0	<10.0	<10.0	0.0	<0.050	<0.050	144
S 9	N/A	6/26/2019		X	<10.0	70.4	31.8	102.2	<0.050	<0.050	48
S 9	N/A	7/11/2019	X		<10.0	54.2	17.5	71.7	-	-	-
S 10	N/A	6/26/2019	X		<10.0	22.4	<10.0	22.4	<0.050	<0.050	48

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)

<input type="checkbox"/> Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	<input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> Condensate	Volume Released (bbls)	Volume Recovered (bbls)
<input type="checkbox"/> Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
<input type="checkbox"/> 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? <input type="checkbox"/> Yes <input type="checkbox"/> 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

<input type="checkbox"/> The source of the release has been stopped.	
<input type="checkbox"/> The impacted area has been secured to protect human health and the environment.	
<input type="checkbox"/> Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.	
<input type="checkbox"/> 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>Delann Opreant</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?	<u>78</u> (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

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

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


<input checked="" type="checkbox"/>	Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
<input type="checkbox"/>	Field data
<input checked="" type="checkbox"/>	Data table of soil contaminant concentration data
<input checked="" type="checkbox"/>	Depth to water determination
<input checked="" type="checkbox"/>	Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release
<input type="checkbox"/>	Boring or excavation logs
<input checked="" type="checkbox"/>	Photographs including date and GIS information
<input checked="" type="checkbox"/>	Topographic/Aerial maps
<input checked="" type="checkbox"/>	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: Dakota Neel Title: HSE Coordinator

Signature:  Date: 8/22/2019

email: dneel2@concho.com Telephone: 575-746-2010

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

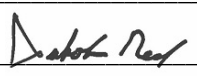
Closure

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: Dakota Neel Title: HSE Coordinator
 Signature:  Date: 8-22-2019
 email: Dneel2@concho.com Telephone: 575-746-2010

OCD Only

Received by: _____ Date: _____

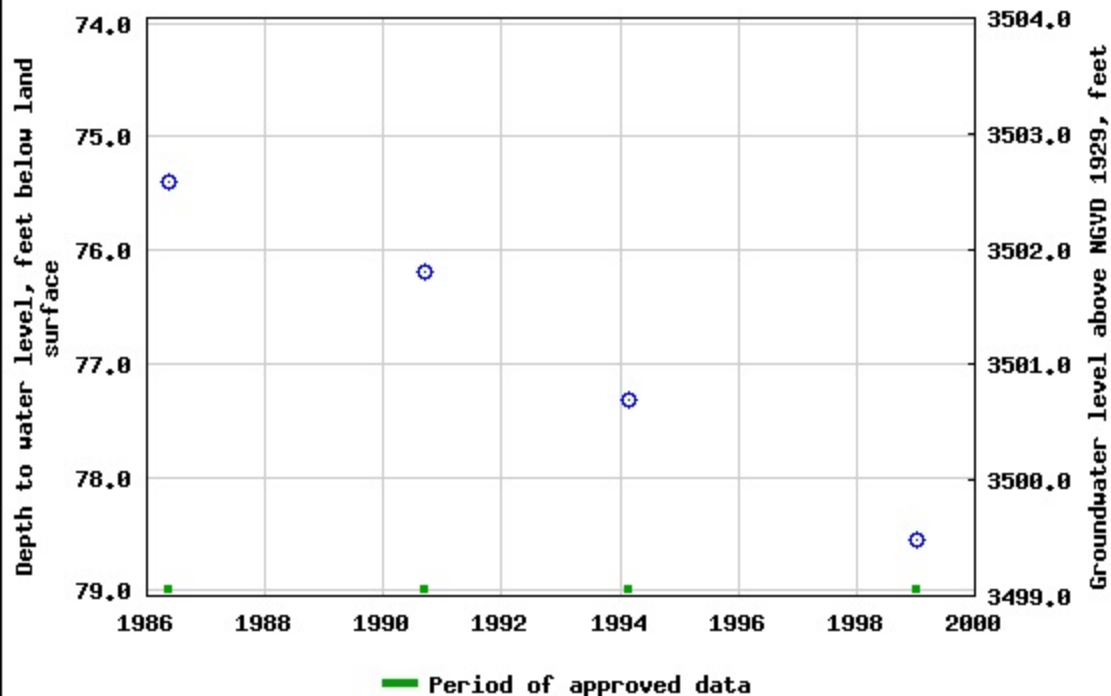
Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

APPENDIX B

USGS 324855104093101 17S.28E.22.34242



Legend

OSE PODs

Unknown

Flood Hazard Zones

1% Annual Chance Flood Hazard

Regulatory Floodway

Special Floodway

Area of Undetermined Flood Hazard

0.2% Annual Chance Flood Hazard

Future Conditions 1% Annual Chance Flood Hazard

Area with Reduced Risk Due to Levee

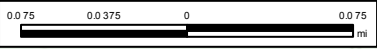
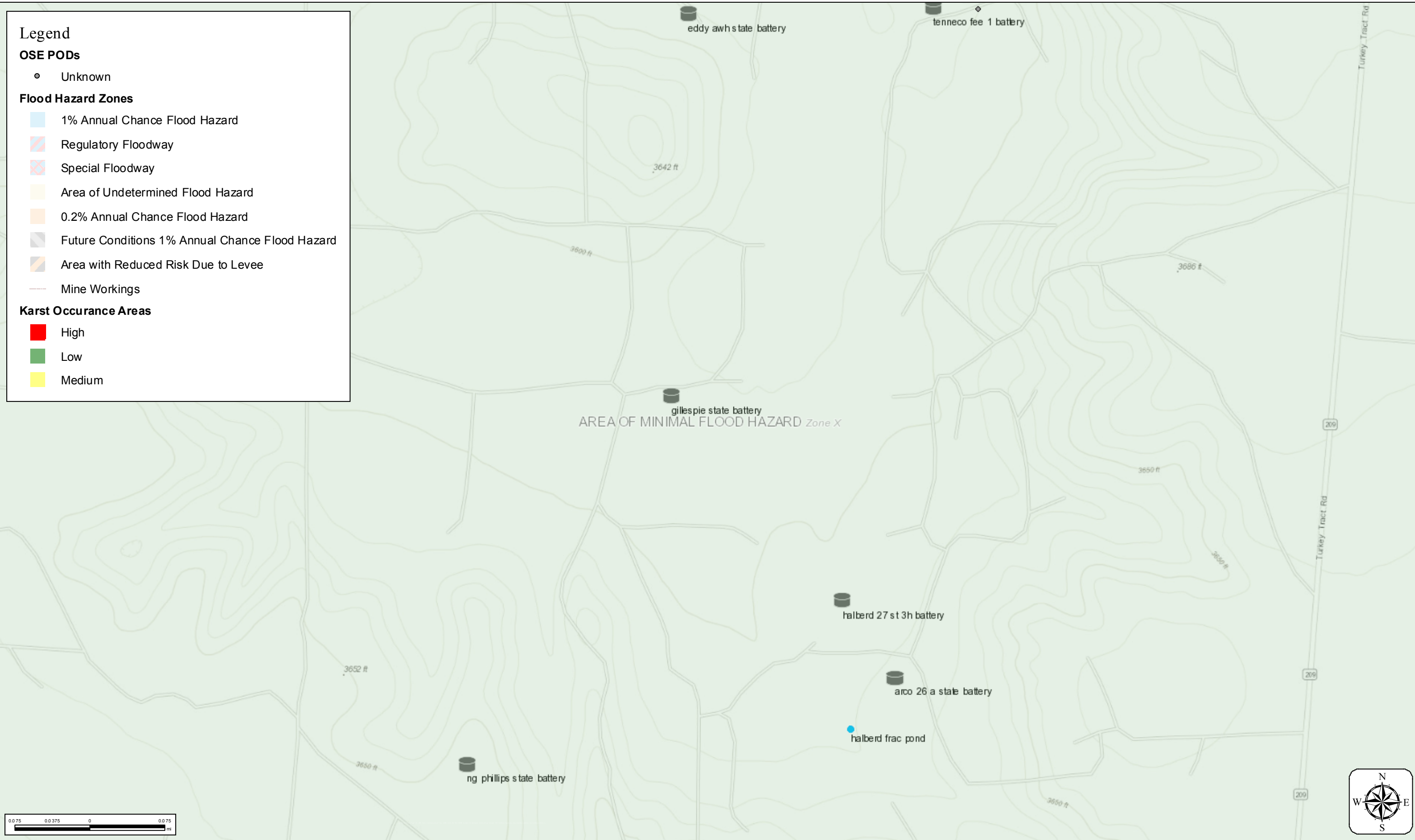
Mine Workings

Karst Occurance Areas

High









Low

Medium






Legend

Flood Hazard Zones

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

Karst Occurance Areas

-  High
-  Low
-  Medium



APPENDIX C



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

June 28, 2019

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: GILLESPIE STATE OIL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 06/27/19 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S 1 (H902206-01)

BTEX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2019	ND	1.80	90.2	2.00	2.40	
Toluene*	<0.050	0.050	06/27/2019	ND	1.79	89.5	2.00	2.48	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.70	85.0	2.00	0.508	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.15	85.8	6.00	0.0404	
Total BTEX	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	416	16.0	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	129	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	61.2	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 66.1 % 41-142

Surrogate: 1-Chlorooctadecane 86.3 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S 2 (H902206-02)

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2019	ND	1.80	90.2	2.00	2.40	
Toluene*	<0.050	0.050	06/27/2019	ND	1.79	89.5	2.00	2.48	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.70	85.0	2.00	0.508	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.15	85.8	6.00	0.0404	
Total BTX	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	64.0	16.0	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	244	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	112	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 65.6 % 41-142

Surrogate: 1-Chlorooctadecane 89.2 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received:	06/27/2019	Sampling Date:	06/26/2019
Reported:	06/28/2019	Sampling Type:	Soil
Project Name:	GILLESPIE STATE OIL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: S 3 (H902206-03)

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2019	ND	1.80	90.2	2.00	2.40	
Toluene*	<0.050	0.050	06/27/2019	ND	1.79	89.5	2.00	2.48	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.70	85.0	2.00	0.508	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.15	85.8	6.00	0.0404	
Total BTX	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 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	64.0	16.0	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	81.5	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	41.2	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 64.0 % 41-142

Surrogate: 1-Chlorooctadecane 79.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S 4 (H902206-04)

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2019	ND	1.80	90.2	2.00	2.40	
Toluene*	<0.050	0.050	06/27/2019	ND	1.79	89.5	2.00	2.48	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.70	85.0	2.00	0.508	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.15	85.8	6.00	0.0404	
Total BTX	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	125	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	75.8	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 73.5 % 41-142

Surrogate: 1-Chlorooctadecane 92.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S 5 (H902206-05)

BTEx 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2019	ND	1.80	90.2	2.00	2.40	
Toluene*	<0.050	0.050	06/27/2019	ND	1.79	89.5	2.00	2.48	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.70	85.0	2.00	0.508	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.15	85.8	6.00	0.0404	
Total BTEx	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	336	16.0	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	327	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	106	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 72.6 % 41-142

Surrogate: 1-Chlorooctadecane 90.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received:	06/27/2019	Sampling Date:	06/26/2019
Reported:	06/28/2019	Sampling Type:	Soil
Project Name:	GILLESPIE STATE OIL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: S 6 (H902206-06)

BTEx 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2019	ND	1.80	90.2	2.00	2.40	
Toluene*	<0.050	0.050	06/27/2019	ND	1.79	89.5	2.00	2.48	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.70	85.0	2.00	0.508	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.15	85.8	6.00	0.0404	
Total BTEx	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	256	16.0	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	330	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	121	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 63.1 % 41-142

Surrogate: 1-Chlorooctadecane 77.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received:	06/27/2019	Sampling Date:	06/26/2019
Reported:	06/28/2019	Sampling Type:	Soil
Project Name:	GILLESPIE STATE OIL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: S 7 (H902206-07)

BTX 8021B		mg/kg		Analyzed By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/27/2019	ND	1.80	90.2	2.00	2.40	
Toluene*	<0.050	0.050	06/27/2019	ND	1.79	89.5	2.00	2.48	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.70	85.0	2.00	0.508	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.15	85.8	6.00	0.0404	
Total BTX	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	144	16.0	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 60.3 % 41-142

Surrogate: 1-Chlorooctadecane 66.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S 8 (H902206-08)

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	06/27/2019	ND	1.94	97.2	2.00	2.29	
Toluene*	<0.050	0.050	06/27/2019	ND	1.95	97.6	2.00	2.43	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.83	91.3	2.00	2.43	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.53	92.1	6.00	2.68	
Total BTEx	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	144	16.0	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	<10.0	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 74.8 % 41-142

Surrogate: 1-Chlorooctadecane 78.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received:	06/27/2019	Sampling Date:	06/26/2019
Reported:	06/28/2019	Sampling Type:	Soil
Project Name:	GILLESPIE STATE OIL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: S 9 (H902206-09)

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	06/27/2019	ND	1.94	97.2	2.00	2.29	
Toluene*	<0.050	0.050	06/27/2019	ND	1.95	97.6	2.00	2.43	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.83	91.3	2.00	2.43	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.53	92.1	6.00	2.68	
Total BTEx	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	06/27/2019	ND	416	104	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	06/27/2019	ND	197	98.3	200	1.94	
DRO >C10-C28*	70.4	10.0	06/27/2019	ND	195	97.4	200	0.756	
EXT DRO >C28-C36	31.8	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 70.6 % 41-142

Surrogate: 1-Chlorooctadecane 84.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S 10 (H902206-10)

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	06/27/2019	ND	1.94	97.2	2.00	2.29	
Toluene*	<0.050	0.050	06/27/2019	ND	1.95	97.6	2.00	2.43	
Ethylbenzene*	<0.050	0.050	06/27/2019	ND	1.83	91.3	2.00	2.43	
Total Xylenes*	<0.150	0.150	06/27/2019	ND	5.53	92.1	6.00	2.68	
Total BTX	<0.300	0.300	06/27/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	48.0	16.0	06/27/2019	ND	416	104	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	06/27/2019	ND	214	107	200	1.29	
DRO >C10-C28*	22.4	10.0	06/27/2019	ND	228	114	200	0.919	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 82.6 % 41-142

Surrogate: 1-Chlorooctadecane 87.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating LLC

Project Manager: Dakota Neel

Address: 2208 West Main

City: Artesia

Phone #: (575) 746-2010

Project #:

Project Name:

Project Location:

Sampler Name: Dakota Neel

BILL TO

ANALYSIS REQUEST

P.O. #:

Company: COG Operating LLC

Attn: Robert McNeill

Address: 600 W Illinois

City: Midland

State: TX Zip: 79701

Phone #: (432) 221-0388

Fax #:

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

H90224

1 2 3 4 5 6 7 8 9 10

51 52 53 54 55 56 57 58 59 60

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

BTEX

TPH

Chloride

6-26-19 9:40

9:45

9:50

9:55

10:00

10:05

10:10

10:15

10:20

10:25

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

Date: 8-27-19
Time: 11:00

Received By: *[Signature]*

Date:

Time:

Received By:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

8.72

47

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY:
(Initials)
T.D.

Phone Result: ☐ Yes ☐ No Add'l Phone #:
Fax Result: ☐ Yes ☐ No Add'l Fax #:

REMARKS:

[Signature]



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

June 28, 2019

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: GILLESPIE STATE OIL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 06/27/19 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM - 1 4' (H902207-01)

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	06/28/2019	ND	1.94	97.2	2.00	2.29	
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43	
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43	
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68	
Total BTEX	<0.300	0.300	06/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	35.9	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 87.0 % 41-142

Surrogate: 1-Chlorooctadecane 88.8 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 DAKOTA NEEL
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

 Received: 06/27/2019
 Reported: 06/28/2019
 Project Name: GILLESPIE STATE OIL BATTERY
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/26/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BTM - 2 4' (H902207-02)

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	06/28/2019	ND	1.94	97.2	2.00	2.29		
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43		
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43		
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68		
Total BTEX	<0.300	0.300	06/28/2019	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	80.0	16.0	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	58.4	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 99.0 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 DAKOTA NEEL
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

 Received: 06/27/2019
 Reported: 06/28/2019
 Project Name: GILLESPIE STATE OIL BATTERY
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/26/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BTM - 3 4' (H902207-03)

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	06/28/2019	ND	1.94	97.2	2.00	2.29	
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43	
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43	
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68	
Total BTX	<0.300	0.300	06/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	<10.0	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 97.2 % 41-142

Surrogate: 1-Chlorooctadecane 99.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM - 4 4' (H902207-04)

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	06/28/2019	ND	1.94	97.2	2.00	2.29	
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43	
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43	
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68	
Total BTEX	<0.300	0.300	06/28/2019	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	400	16.0	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	96.8	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	17.3	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 96.8 % 41-142

Surrogate: 1-Chlorooctadecane 105 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 COG OPERATING
 DAKOTA NEEL
 P. O. BOX 1630
 ARTESIA NM, 88210
 Fax To: NONE

 Received: 06/27/2019
 Reported: 06/28/2019
 Project Name: GILLESPIE STATE OIL BATTERY
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 06/26/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BTM - 5 4' (H902207-05)

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	06/28/2019	ND	1.94	97.2	2.00	2.29		
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43		
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43		
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68		
Total BTX	<0.300	0.300	06/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	<10.0	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 92.2 % 41-142

Surrogate: 1-Chlorooctadecane 95.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM - 6 4' (H902207-06)

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	06/28/2019	ND	1.94	97.2	2.00	2.29		
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43		
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43		
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68		
Total BTEX	<0.300	0.300	06/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	104	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	33.5	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 74.0 % 41-142

Surrogate: 1-Chlorooctadecane 84.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM - 7 5' (H902207-07)

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	06/28/2019	ND	1.94	97.2	2.00	2.29	
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43	
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43	
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68	
Total BTX	<0.300	0.300	06/28/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	656	16.0	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	480	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	266	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 92.8 % 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
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM - 8 5' (H902207-08)

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	06/28/2019	ND	1.94	97.2	2.00	2.29		
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43		
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43		
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68		
Total BTX	<0.300	0.300	06/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 99.3 % 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	608	16.0	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	130	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	46.5	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 81.9 % 41-142

Surrogate: 1-Chlorooctadecane 90.4 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM - 9 4' (H902207-09)

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	06/28/2019	ND	1.94	97.2	2.00	2.29		
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43		
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43		
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68		
Total BTX	<0.300	0.300	06/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 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	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	85.5	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	33.3	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 97.6 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received:	06/27/2019	Sampling Date:	06/26/2019
Reported:	06/28/2019	Sampling Type:	Soil
Project Name:	GILLESPIE STATE OIL BATTERY	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	NOT GIVEN		

Sample ID: BTM - 10 4' (H902207-10)

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	06/28/2019	ND	1.94	97.2	2.00	2.29		
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43		
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43		
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68		
Total BTX	<0.300	0.300	06/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	<10.0	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 107 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM - 11 4' (H902207-11)

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	06/28/2019	ND	1.94	97.2	2.00	2.29		
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43		
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43		
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68		
Total BTX	<0.300	0.300	06/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	06/27/2019	ND	400	100	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	06/27/2019	ND	199	99.7	200	5.39	
DRO >C10-C28*	649	10.0	06/27/2019	ND	188	94.2	200	1.66	
EXT DRO >C28-C36	251	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 145 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 06/27/2019
Reported: 06/28/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 06/26/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: BTM - 12 4' (H902207-12)

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	06/28/2019	ND	1.94	97.2	2.00	2.29		
Toluene*	<0.050	0.050	06/28/2019	ND	1.95	97.6	2.00	2.43		
Ethylbenzene*	<0.050	0.050	06/28/2019	ND	1.83	91.3	2.00	2.43		
Total Xylenes*	<0.150	0.150	06/28/2019	ND	5.53	92.1	6.00	2.68		
Total BTX	<0.300	0.300	06/28/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	128	16.0	06/27/2019	ND	400	100	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	06/27/2019	ND	214	107	200	1.29	
DRO >C10-C28*	13.5	10.0	06/27/2019	ND	228	114	200	0.919	
EXT DRO >C28-C36	<10.0	10.0	06/27/2019	ND					

Surrogate: 1-Chlorooctane 82.9 % 41-142

Surrogate: 1-Chlorooctadecane 84.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Rush!!



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating LLC

Project Manager: Dakota Neel

Address: 2208 West Main

City: Artesia

Phone #: (575) 746-2010

Project #:

Project Name: CLEESPIE STATE OIL ARTISTRY

Project Location:

Sampler Name: Dakota Neel

FOR LAB USE ONLY

Lab I.D.

Sample I.D.

H902207

11 BTM - 11 4'
12 BTM - 12 4'

(G)RAB OR (C)OMP.

CONTAINERS

GROUNDWATER

WASTEWATER

SOIL

OIL

SLUDGE

OTHER :

ACID/BASE:

ICE / COOL

OTHER :

DATE

TIME

BTEX

TPH

Chloride

BILL TO

P.O. #:

Company: COG Operating LLC

Attn: Robert McNeill

Address: 600 W Illinois

City: Midland

State: TX Zip: 79701

Phone #: (432) 221-0388

Fax #:

ANALYSIS REQUEST

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analysis. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:

Date: 6-27-19

Received By:

Phone Result:

Yes No

Add'l Phone #:

Add'l Fax #:

Relinquished By:

Date: 6-27-19

Received By:

Phone Result:

Yes No

Add'l Phone #:

Add'l Fax #:

Delivered By: (Circle One)

Sampler - UPS - Bus - Other:

2.76 #97

Sample Condition
Cool Intact
Yes Yes
No No

CHECKED BY:
(Initials)

Push!!

5. Please fax written changes to 575-393-2476



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

July 15, 2019

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: GILLESPIE STATE OIL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 07/12/19 12:24.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 07/12/2019
Reported: 07/15/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: BTM - 4 4.5' (H902404-01)

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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	27.8	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/12/2019	ND					
<hr/>									
Surrogate: 1-Chlorooctane	75.7 %	41-142							
Surrogate: 1-Chlorooctadecane	84.7 %	37.6-147							

Sample ID: BTM - 6 5' (H902404-02)

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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	45.8	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/12/2019	ND					
<hr/>									
Surrogate: 1-Chlorooctane	78.1 %	41-142							
Surrogate: 1-Chlorooctadecane	84.1 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 07/12/2019
Reported: 07/15/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: BTM - 7 5.5' (H902404-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	07/15/2019	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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	52.2	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	14.6	10.0	07/12/2019	ND					
Surrogate: 1-Chlorooctane	75.9 %	41-142							
Surrogate: 1-Chlorooctadecane	81.0 %	37.6-147							

Sample ID: BTM - 8 5.5' (H902404-04)

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	07/15/2019	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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	<10.0	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/12/2019	ND					
Surrogate: 1-Chlorooctane	72.8 %	41-142							
Surrogate: 1-Chlorooctadecane	73.7 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 07/12/2019
Reported: 07/15/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: BTM - 9 5' (H902404-05)

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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	45.9	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	20.5	10.0	07/12/2019	ND					
Surrogate: 1-Chlorooctane	65.4 %	41-142							
Surrogate: 1-Chlorooctadecane	71.7 %	37.6-147							

Sample ID: BTM - 11 5' (H902404-06)

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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	<10.0	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/12/2019	ND					
Surrogate: 1-Chlorooctane	75.0 %	41-142							
Surrogate: 1-Chlorooctadecane	77.5 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 07/12/2019
Reported: 07/15/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S 1 (H902404-07)

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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	<10.0	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/12/2019	ND					
Surrogate: 1-Chlorooctane	69.0 %	41-142							
Surrogate: 1-Chlorooctadecane	79.6 %	37.6-147							

Sample ID: S 2 (H902404-08)

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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	<10.0	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/12/2019	ND					
Surrogate: 1-Chlorooctane	72.8 %	41-142							
Surrogate: 1-Chlorooctadecane	82.2 %	37.6-147							

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*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 07/12/2019
Reported: 07/15/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S 3 (H902404-09)

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	07/12/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	<10.0	10.0	07/12/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/12/2019	ND					
Surrogate: 1-Chlorooctane	72.5 %	41-142							
Surrogate: 1-Chlorooctadecane	80.0 %	37.6-147							

Sample ID: S 4 (H902404-10)

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	07/13/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	<10.0	10.0	07/13/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/13/2019	ND					
Surrogate: 1-Chlorooctane	72.6 %	41-142							
Surrogate: 1-Chlorooctadecane	76.5 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONE

Received: 07/12/2019
Reported: 07/15/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVEN

Sampling Date: 07/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: S 5 (H902404-11)

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	07/13/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	<10.0	10.0	07/13/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	<10.0	10.0	07/13/2019	ND					
Surrogate: 1-Chlorooctane	76.3 %	41-142							
Surrogate: 1-Chlorooctadecane	81.2 %	37.6-147							

Sample ID: S 6 (H902404-12)

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	07/13/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	300	10.0	07/13/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	75.1	10.0	07/13/2019	ND					
Surrogate: 1-Chlorooctane	62.5 %	41-142							
Surrogate: 1-Chlorooctadecane	69.7 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:COG OPERATING
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONEReceived: 07/12/2019
Reported: 07/15/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVENSampling Date: 07/11/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson**Sample ID: S 9 (H902404-13)**

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	07/13/2019	ND	196	97.8	200	1.52	
DRO >C10-C28*	54.2	10.0	07/13/2019	ND	192	95.9	200	0.132	
EXT DRO >C28-C36	17.5	10.0	07/13/2019	ND					
Surrogate: 1-Chlorooctane	72.8 %	41-142							
Surrogate: 1-Chlorooctadecane	79.5 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

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



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating LLC		P.O. #:		BILL TO										ANALYSIS REQUEST													
Project Manager: Dakota Neel		Company: COG Operating LLC																									
Address: 2208 West Main		Attn: Robert McNeill																									
City: Artesia		Address: 600 W Illinois																									
Phone #: (575) 746-2010		City: Midland																									
Fax #: (575) 746-2010		State: TX Zip: 79701																									
Project #: Project Owner:		State: TX Zip: 79701																									
Project Name: WILLIS OIL START OIL BATTERY		Phone #: (432) 221-0388																									
Project Location:		Fax #:																									
Sampler Name: Dakota Neel																											
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX				PRESERV.		SAMPLING																	
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	BTEX	TPH	Chloride										
H902404	BTM-4 4.5'	C	1										7-11-19	9:30	X	X											
1	BTM-6 5'													9:35	X	X											
2	BTM-7 5.5'													9:40	X	X											
3	BTM-8 5.5'													9:45	X	X											
4	BTM-9 5'													9:50	X	X											
5	BTM-11 5'													9:55	X	X											
6	51													10:00	X	X											
7	52													10:05	X	X											
8	53													10:10	X	X											
9	54													10:15	X	X											
10																											

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Relinquished By: <i>[Signature]</i>	Date: 7-12-19	Received By: <i>[Signature]</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #: _____
Relinquished By: _____	Date: 12-24	Received By: <i>[Signature]</i>	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #: _____
Time: _____			REMARKS: <i>RUSH!</i>	

Delivered By: (Circle One)	Sample Condition	CHECKED BY: <i>[Signature]</i>
Sampler - UPS - Bus - Other: 2.90c / #97	Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>	
	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	

FORM 006-120

5. Please fax written changes to 575-393-2476



101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: COG Operating LLC		BILL TO		ANALYSIS REQUEST											
Project Manager: Dakota Neel		P.O. #:													
Address: 2208 West Main		Company: COG Operating LLC													
City: Artesia		Attn: Robert McNeill													
Phone #: (575) 746-2010		Address: 600 W Illinois													
State: NM		City: Midland													
Zip: 88210		State: TX													
Project #: Project Owner:		Zip: 79701													
Project Name: CULLESPIE STATE OIL BATTERY		Phone #: (432) 221-0388													
Project Location:		Fax #:													
Sampler Name: Dakota Neel															
FOR LAB USE ONLY															
Lab I.D.		Sample I.D.		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING			
								GROUNDWATER							
								WASTEWATER							
								SOIL							
								OIL							
								SLUDGE							
								OTHER :							
								ACID/BASE:							
								ICE / COOL							
								OTHER :							
11		55		1		1		7/19/19		10:20		X			
12		56		1		1		10:30		10:30		X			
13		59		1		1		10:35		10:35		X			
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Relinquished By:		Date: 7-12-17		Received By: Speedi Henderson											
Time: 12:24		Date: 7-12-17													
Relinquished By:		Time:													
Delivered By: (Circle One)		Sample Condition													
Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/>															
Yes <input type="checkbox"/> No <input type="checkbox"/>															
Sample - UPS - Bus - Other: 2.90c / #97		CHECKED BY: (Initials)													
Yes <input type="checkbox"/> No <input type="checkbox"/>															
Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>															
Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>															
Add'l Phone #: _____															
Add'l Fax #: _____															
REMARKS: RUSH!															



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

July 17, 2019

DAKOTA NEEL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: GILLESPIE STATE OIL BATTERY

Enclosed are the results of analyses for samples received by the laboratory on 07/16/19 10:17.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. 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
DAKOTA NEEL
P. O. BOX 1630
ARTESIA NM, 88210
Fax To: NONEReceived: 07/16/2019
Reported: 07/17/2019
Project Name: GILLESPIE STATE OIL BATTERY
Project Number: NONE GIVEN
Project Location: NOT GIVENSampling Date: 07/16/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker**Sample ID: S 6 (H902428-01)**

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	07/16/2019	ND	190	95.1	200	0.351	
DRO >C10-C28*	11.6	10.0	07/16/2019	ND	189	94.6	200	4.27	
EXT DRO >C28-C36	<10.0	10.0	07/16/2019	ND					
<hr/>									
Surrogate: 1-Chlorooctane	95.3 %	41-142							
Surrogate: 1-Chlorooctadecane	100 %	37.6-147							

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Celey D. Keene, Lab Director/Quality Manager

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

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

[illegible]

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Relinquished By:	Date:	7-16-19	Received By:	Jawara Chakraborty	Phone Result:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Add'l Phone #:
	Time:	10:17				Fax Result:	<input type="checkbox"/> Yes	
Relinquished By:	Date:		Received By:		REMARKS:	Eusk!!		
	Time:							
Delivered By: (Circle One)			Sample Condition	CHECKED BY:				
Sampler - UPS - Bus - Other:	4.3c #97		Cool	Intact				
			<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes				
		<input type="checkbox"/> No	<input type="checkbox"/> No					

APPENDIX D







☼ 189°S (T) ● 32°48'35"N, 104°9'27"W ±16.4ft ▲ 3584ft



