



Closure Report

COG Operating, LLC

Pygmy 27 State #001H

Leak Date: 4/29/18

This release occurred on 4/29/18. In agreement with the surface owner, remediation activities were initiated immediately, and impacted soil was removed. Upon the completion of soil removal, confirmation bottom and sidewall samples were collected and analyzed for TPH EXT, BTEX, and Chloride. The results were below OCD requirements and the site was backfilled.

The project information is included in the following report along with the initial C-141 and a final C-141. No RP# was received prior to this site being remediated.

APPROVED

By Olivia Yu at 9:56 am, Sep 14, 2018

NMOCD grants
closure to 1RP-5036.

Closure Report

Site Description

Site Name:	COG Operating, LLC
Company:	Pygmy 27 State #001H
Legal Description:	U/L D, Section 27, T21S, R33E
County:	Lea County, NM
GPS Coordinates:	N 32.45600 W-103.56870

Release Data

Date of Release:	04/29/2018
Type of Release:	Oil
Source of Release:	Truck tank overfilled
Volume of Release:	65 bbls
Volume Recovered:	50 bbls

Remediation Specifications

Remediation Parameters:	Scraped the entire leak area to remove impacted material. Obtained confirmation samples to verify a successful remediation. Backfilled the site with clean soil.	
Remediation Activities:	05/08/2018 and 05/18/2018	
Plan Sent to OCD:	n/a	n/a
OCD Approval of Plan:	n/a	n/a
Plan Sent to BLM:	n/a	n/a
BLM Approval of Plan:	n/a	n/a

Supporting Documentation

Initial C-141	Signed 05/01/2018
Final C-141	Signed 05/25/2018
Site Diagram	May 2018
Groundwater Plot	175'
TOPO Maps	May 2018
Lab Summary	05/07/2018 and 05/08/2018
Lab Analysis	05/07/2018 and 05/08/2018
Correspondence	Request and approval of remediation plan via email

Request for Closure

Based on the completion of the remediation plan, BBC International requests closure approval from NMOCD.

Cliff Brunson, BBC International, Inc.

05/25/2018

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

Form C-141
Revised April 3, 2017

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

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

Release Notification and Corrective Action

OPERATOR Initial Report Final Report

Name of Company: COG Operating, LLC (OGRID #229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland, TX 79701	Telephone No. 432-683-7443
Facility Name: Pygmy 27 State #001H	Facility Type: Tank Battery

Surface Owner: Private	Mineral Owner: State	API No. 30-025-40352
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	27	21S	33E	330	North	190	West	Lea

Latitude 32.4561577 Longitude -103.5683441 NAD83

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 65 bbl.	Volume Recovered: 50 bbl.
Source of Release: Truck Tank Overfilled	Date and Hour of Occurrence: April 29, 2018 1:00pm	Date and Hour of Discovery: April 29, 2018 1:00pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu – NMOCD; Ryan Mann – SLO	
By Whom? Dakota Neel	Date and Hour: April 29, 2018 7:35pm	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

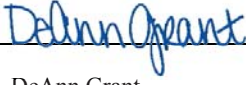
Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a driver overfilling his truck tank.

Describe Area Affected and Cleanup Action Taken.*

The release remained on location. A vacuum truck was dispatched to remove all freestanding fluids. Concho will have the spill area sampled to delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: DeAnn Grant	Approved by Environmental Specialist:	
Title: HSE Administrative Assistant	Approval Date:	Expiration Date:
E-mail Address: agrant@concho.com	Conditions of Approval:	
Date: May 1, 2018	Phone: 432-253-4513	Attached <input type="checkbox"/>

* Attach Additional Sheets If Necessary

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

Form C-141
Revised April 3, 2017

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

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

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company	COG Operating LLC	Contact	Robert McNeill
Address	600 West Illinois Avenue; Midland, TX 79701	Telephone No.	432-683-7443
Facility Name	Pygmy 27 State #001H	Facility Type	Tank Battery

Surface Owner	Private	Mineral Owner	State	API No.	30-025-40352
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	27	21S	33E	330	North	190	West	Lea County, NM

Latitude N 32.83277° Longitude W -103.83914° NAD83

NATURE OF RELEASE

Type of Release	Oil	Volume of Release	65 bbls	Volume Recovered	50 bbls
Source of Release	Truck tank overfilled	Date and Hour of Occurrence	04/29/2018 @ 1:00 pm	Date and Hour of Discovery	04/29/2018 @ 1:00 pm
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu, NMOCD; Ryan Mann, SLO			
By Whom?	Dakota Neel	Date and Hour	04/29/2018 @ 7:35 pm		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*
N/A

APPROVED
By Olivia Yu at 9:57 am, Sep 14, 2018



Describe Cause of Problem and Remedial Action Taken.*

The release was caused by a driver overfilling his truck tank. A vacuum truck recovered 50 bbls of oil.

Describe Area Affected and Cleanup Action Taken.*

This release remained on location. The site was remediated and confirmation samples were taken upon completion of the remediation.

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

Signature: 	OIL CONSERVATION DIVISION	
Printed Name: Rebecca Haskell	Approved by Environmental Specialist:	
Title: Senior HSE Coordinator	Approval Date: 9/14/2018	Expiration Date:
E-mail Address: RHaskell@concho.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: May 25, 2018 Phone: 432-683-7443	NMSLO approval	

* Attach Additional Sheets If Necessary

1RP-5036

COG, PYGMY 27 STATE #001H

Leak date: 04/29/2018
Lea County, NM
API# 30-025-40352

Legend

- ★ Sample points
- Cardinal sample points
- 🔵 LEAK AREA



COG, Pygmy 27 State #001H

Sample points

SP1, N 32.45607 W-103.56876

SP2, N 32.45597 W-103.56872

SP3, N 32.45593 W-103.56880

SP4, N 32.45586 W-103.56876

SP5, N 32.45580 W-103.56868

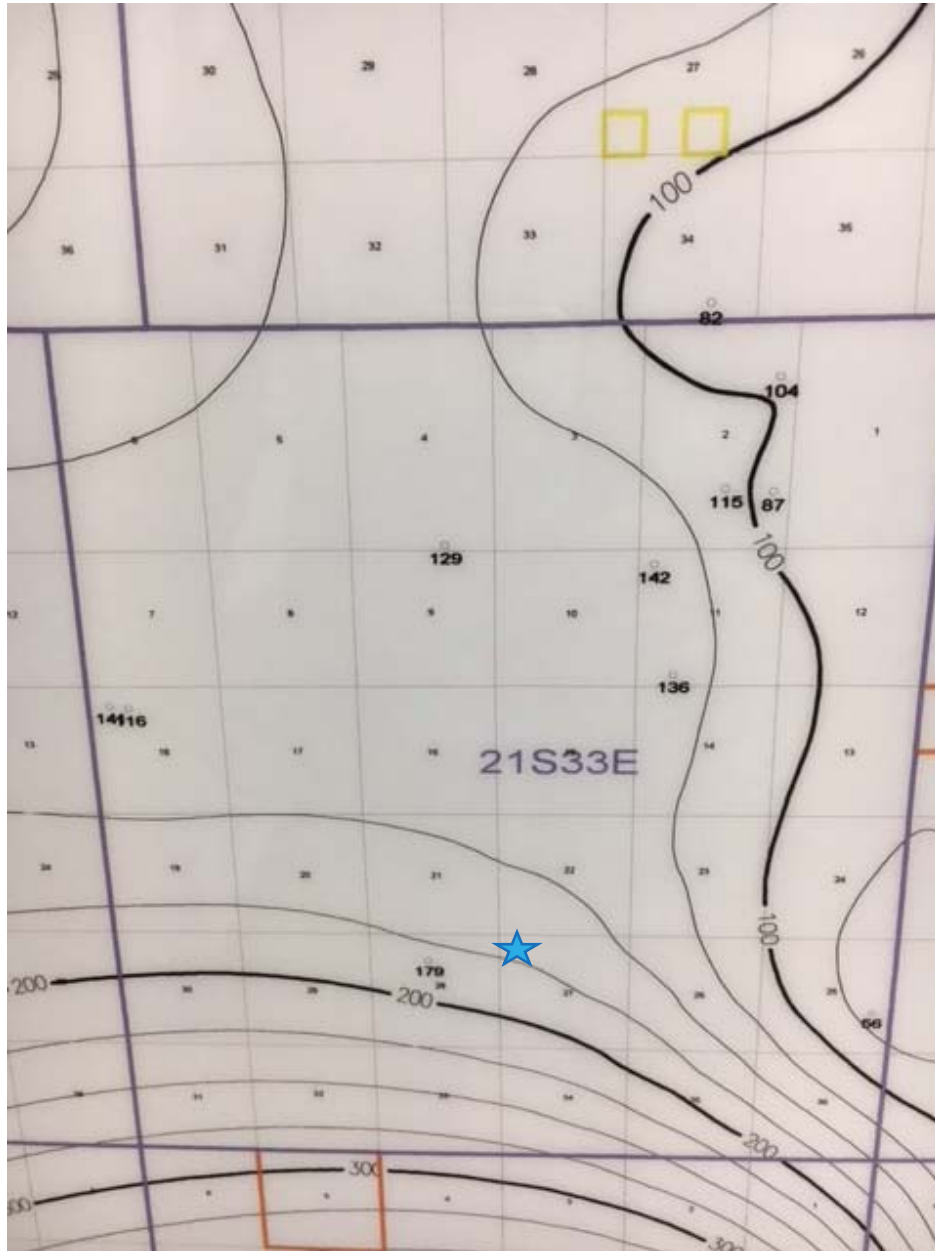
NORTH, N 32.45618 W-103.56876

SOUTH, N 32.45570 W-103.56870

EAST, N 32.45590 W-103.56864

WEST, N 32.45594 W-103.56887

COG, Pygmy 27 State #001H
U/L D, Section 27, T21S, R33E
Groundwater: 175'





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
CP 01357 POD1	CP	LE	4	3	1	27	21S	33E	634782	3591347		463	1286	578	708
CP 01349 POD1	CP	LE	2	3	1	27	21S	33E	635304	3591576		639	1188	572	616
CP 01355 POD1	CP	LE	2	1	3	27	21S	33E	634773	3591061		746	1192	582	610
CP 00601 POD1	CP	LE		2	1	28	21S	33E	633502	3591791*		1205	223		
CP 01411 POD2	CP	LE		1	2	34	21S	33E	635534	3590380		1647	1125		

Average Depth to Water: **577 feet**
 Minimum Depth: **572 feet**
 Maximum Depth: **582 feet**

Record Count: 5

UTMNAD83 Radius Search (in meters):

Easting (X): 634707

Northing (Y): 3591805

Radius: 1700

*UTM location was derived from PLSS - see Help

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

Public Land Survey System (PLSS)

Q64: Q16: Q4: Sec: Tws: Rng:

State Plane Coordinate System - NAD27

X: ft Y: ft Zone:

State Plane Coordinate System - NAD83

X: ft Y: ft Zone:

Degrees/Minutes/Seconds

Longitude (X): Degrees: ° Minutes: ' Seconds: "
Latitude (Y): Degrees: ° Minutes: ' Seconds: "

UTM - NAD27

Easting (X): mtrs Northing (Y): mtrs Zone:

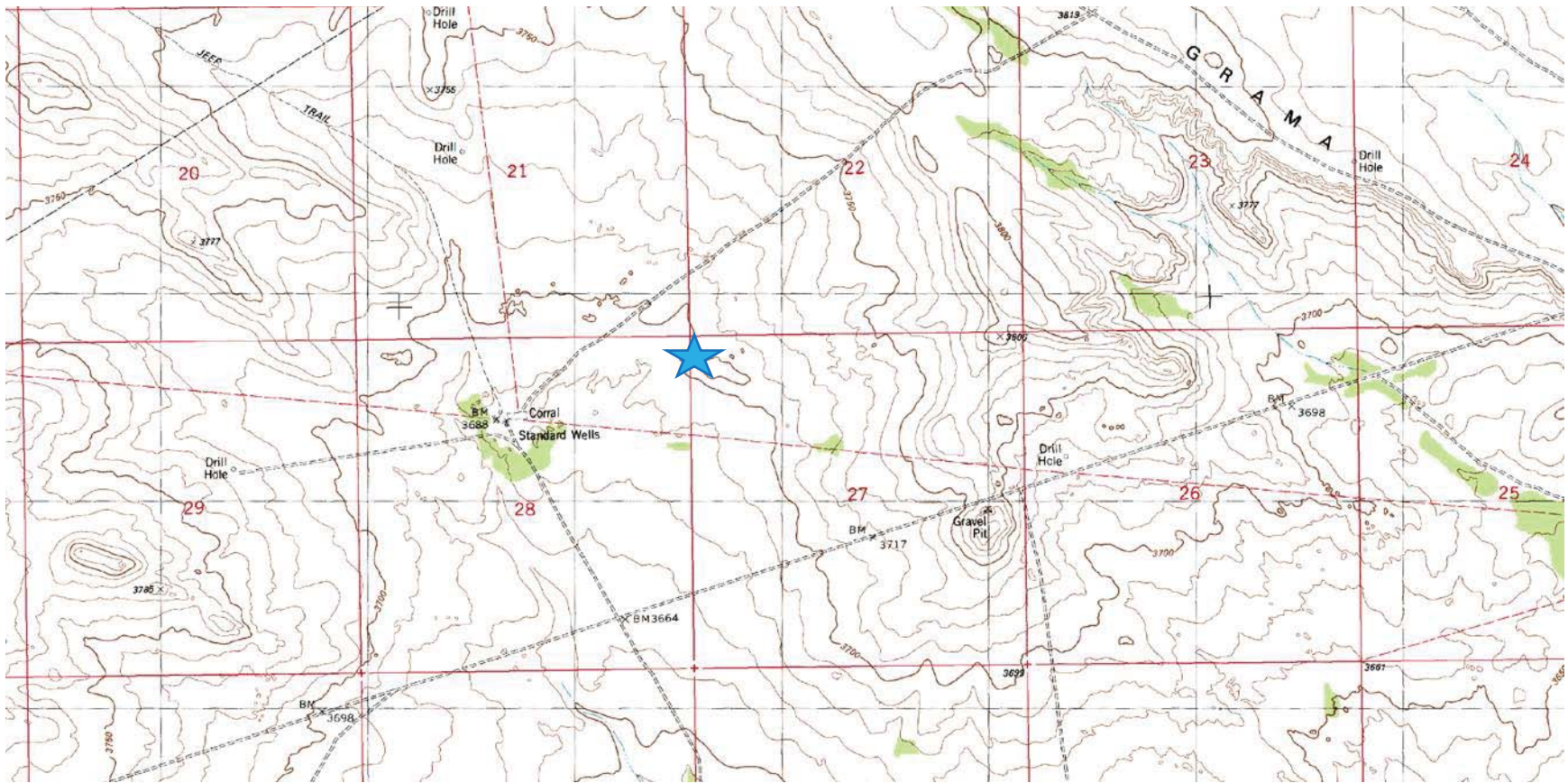
SUBMIT

All Conversion Results are displayed as NAD 1983 UTM Zone 13

Easting (X): mtrs Northing (Y): mtrs

~~ Please keep screen open to copy UTM values for Reports. ~~

COG, Pygmy 27 State #001H



Laboratory Analytical Results Summary
 Pygmy 27 State #001H

Analyte	Method	Sample ID	SP1 @ 6"
		Date	5/7/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		272
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analyte	Method	Sample ID	SP2 @ 6"
		Date	5/8/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		160
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analyte	Method	Sample ID	SP3 @ 6"
		Date	5/7/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		144
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analyte	Method	Sample ID	SP4 @ 6"
		Date	5/7/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		256
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analyte	Method	Sample ID	SP5 @ 6"
		Date	5/7/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		192
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analyte	Method	Sample ID	NORTH @ 6"
		Date	5/7/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		16
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analyte	Method	Sample ID	EAST @ 6"
		Date	5/7/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		16
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analyte	Method	Sample ID	SOUTH @ 6"
		Date	5/7/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

Analyte	Method	Sample ID	WEST @ 6"
		Date	5/7/18
			mg/kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0
EXT DRO	TPH 8015M		<10.0

May 14, 2018

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: PYGMY 27 STATE #001H

Enclosed are the results of analyses for samples received by the laboratory on 05/08/18 15:17.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/08/2018	Sampling Date:	05/07/2018
Reported:	05/14/2018	Sampling Type:	Soil
Project Name:	PYGYM 27 STATE #001H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 1 (H801274-01)

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	05/09/2018	ND	1.98	99.1	2.00	0.100	
Toluene*	<0.050	0.050	05/09/2018	ND	2.06	103	2.00	0.828	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	2.09	105	2.00	0.693	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	6.48	108	6.00	0.896	
Total BTEX	<0.300	0.300	05/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	05/09/2018	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	05/08/2018	ND	206	103	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	198	99.2	200	0.959	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					

Surrogate: 1-Chlorooctane 72.5 % 41-142
Surrogate: 1-Chlorooctadecane 58.3 % 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:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/08/2018	Sampling Date:	05/07/2018
Reported:	05/14/2018	Sampling Type:	Soil
Project Name:	PYGYM 27 STATE #001H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 3 (H801274-02)

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	05/09/2018	ND	1.98	99.1	2.00	0.100	
Toluene*	<0.050	0.050	05/09/2018	ND	2.06	103	2.00	0.828	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	2.09	105	2.00	0.693	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	6.48	108	6.00	0.896	
Total BTEX	<0.300	0.300	05/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	05/09/2018	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	05/08/2018	ND	206	103	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	198	99.2	200	0.959	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					

Surrogate: 1-Chlorooctane 78.2 % 41-142

Surrogate: 1-Chlorooctadecane 66.6 % 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:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/08/2018	Sampling Date:	05/07/2018
Reported:	05/14/2018	Sampling Type:	Soil
Project Name:	PYGYM 27 STATE #001H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 4 (H801274-03)

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	05/09/2018	ND	1.98	99.1	2.00	0.100	
Toluene*	<0.050	0.050	05/09/2018	ND	2.06	103	2.00	0.828	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	2.09	105	2.00	0.693	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	6.48	108	6.00	0.896	
Total BTEX	<0.300	0.300	05/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148

Chloride, SM4500CI-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	05/09/2018	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	05/08/2018	ND	206	103	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	198	99.2	200	0.959	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					

Surrogate: 1-Chlorooctane 67.1 % 41-142

Surrogate: 1-Chlorooctadecane 58.7 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/08/2018	Sampling Date:	05/07/2018
Reported:	05/14/2018	Sampling Type:	Soil
Project Name:	PYGYM 27 STATE #001H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 5 (H801274-04)

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	05/09/2018	ND	1.98	99.1	2.00	0.100	
Toluene*	<0.050	0.050	05/09/2018	ND	2.06	103	2.00	0.828	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	2.09	105	2.00	0.693	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	6.48	108	6.00	0.896	
Total BTEX	<0.300	0.300	05/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	192	16.0	05/09/2018	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	05/08/2018	ND	206	103	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	198	99.2	200	0.959	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					

Surrogate: 1-Chlorooctane 64.6 % 41-142

Surrogate: 1-Chlorooctadecane 54.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/08/2018	Sampling Date:	05/07/2018
Reported:	05/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #001H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP N (H801274-05)

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	05/09/2018	ND	1.98	99.1	2.00	0.100	
Toluene*	<0.050	0.050	05/09/2018	ND	2.06	103	2.00	0.828	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	2.09	105	2.00	0.693	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	6.48	108	6.00	0.896	
Total BTEX	<0.300	0.300	05/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	05/09/2018	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	05/08/2018	ND	206	103	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	198	99.2	200	0.959	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					

Surrogate: 1-Chlorooctane 76.6 % 41-142

Surrogate: 1-Chlorooctadecane 65.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/08/2018	Sampling Date:	05/07/2018
Reported:	05/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #001H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP E (H801274-06)

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	05/09/2018	ND	1.98	99.1	2.00	0.100	
Toluene*	<0.050	0.050	05/09/2018	ND	2.06	103	2.00	0.828	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	2.09	105	2.00	0.693	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	6.48	108	6.00	0.896	
Total BTEX	<0.300	0.300	05/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	05/09/2018	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	05/08/2018	ND	206	103	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	198	99.2	200	0.959	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					

Surrogate: 1-Chlorooctane 75.0 % 41-142

Surrogate: 1-Chlorooctadecane 65.1 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/08/2018	Sampling Date:	05/07/2018
Reported:	05/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #001H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP S (H801274-07)

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	05/09/2018	ND	1.98	99.1	2.00	0.100	
Toluene*	<0.050	0.050	05/09/2018	ND	2.06	103	2.00	0.828	
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	2.09	105	2.00	0.693	
Total Xylenes*	<0.150	0.150	05/09/2018	ND	6.48	108	6.00	0.896	
Total BTEX	<0.300	0.300	05/09/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/09/2018	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	05/08/2018	ND	206	103	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	198	99.2	200	0.959	
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND					

Surrogate: 1-Chlorooctane 73.0 % 41-142

Surrogate: 1-Chlorooctadecane 63.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received:	05/08/2018	Sampling Date:	05/07/2018
Reported:	05/14/2018	Sampling Type:	Soil
Project Name:	PYGMY 27 STATE #001H	Sampling Condition:	Cool & Intact
Project Number:	NOT GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP W (H801274-08)

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	05/09/2018	ND	1.98	99.1	2.00	0.100		
Toluene*	<0.050	0.050	05/09/2018	ND	2.06	103	2.00	0.828		
Ethylbenzene*	<0.050	0.050	05/09/2018	ND	2.09	105	2.00	0.693		
Total Xylenes*	<0.150	0.150	05/09/2018	ND	6.48	108	6.00	0.896		
Total BTEX	<0.300	0.300	05/09/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 72-148

Chloride, SM4500Cl-B		mg/kg		Analyzed By: HM						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	05/09/2018	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	05/08/2018	ND	206	103	200	1.14		
DRO >C10-C28*	<10.0	10.0	05/08/2018	ND	198	99.2	200	0.959		
EXT DRO >C28-C36	<10.0	10.0	05/08/2018	ND						

Surrogate: 1-Chlorooctane 73.5 % 41-142

Surrogate: 1-Chlorooctadecane 63.8 % 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





ARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240

(505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

1071

Page 11 of 11

Company Name: BBC International, Inc.		BILL TO		ANALYSIS REQUEST												
Project Manager: Cliff Brunson		P.O. #:														
Address: P.O. Box 805		Company: <i>Haskell</i>														
City: Hobbs State: NM Zip: 88241		Attn: <i>COG</i>														
Phone #: 575-397-6388 Fax #: 575-397-0397		Address:														
Project #: Project Owner: <i>COG</i>		City:														
Project Name: <i>Pygmy 27 for TH # 001H *</i>		State: Zip:														
Project Location: <i>State</i>		Phone #:														
Sampler Name: <i>Price Brunson</i>		Fax #:														
FOR LAB USE ONLY																
Lab I.D.	Sample I.D.	(GRAB OR C/COMP. # CONTAINERS)	MATRIX					PRESERV.		SAMPLING		DATE	TIME	CI	B74X	TPH Ext
			GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:					
<i>H801274</i>																
<i>1</i>	<i>SP 1</i>	<i>5</i>														
<i>2</i>	<i>SP 3</i>	<i>5</i>			<i>✓</i>				<i>✓</i>		<i>5-7-18</i>	<i>2:45</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	
<i>3</i>	<i>SP 4</i>	<i>5</i>			<i>✓</i>				<i>✓</i>			<i>3:05</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	
<i>4</i>	<i>SP 5</i>	<i>5</i>			<i>✓</i>				<i>✓</i>			<i>3:10</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	
<i>5</i>	<i>SP N</i>	<i>5</i>			<i>✓</i>				<i>✓</i>			<i>3:20</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	
<i>6</i>	<i>SP E</i>	<i>5</i>			<i>✓</i>				<i>✓</i>			<i>3:25</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	
<i>7</i>	<i>SP S</i>	<i>5</i>			<i>✓</i>				<i>✓</i>			<i>3:30</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	
<i>8</i>	<i>SP W</i>	<i>5</i>			<i>✓</i>				<i>✓</i>			<i>3:35</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	
	<i>Haskell Energy Inc</i>	<i>5</i>			<i>✓</i>				<i>✓</i>			<i>3:40</i>	<i>✓</i>	<i>✓</i>	<i>✓</i>	

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Relinquished By: <i>Price Brunson</i>	Date: <i>5/7/18</i>	Received By: <i>Haskell Energy Inc</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <i>5:00pm</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>Haskell Energy Inc</i>	Date: <i>5-8-18</i>	Received By: <i>Jodi Benson</i>	REMARKS:	
	Time: <i>3:17</i>		<i>CC email COG</i>	
Delivered By: (Circle One)		Sample Condition	<i>Rush!!</i>	
Sampler - UPS - Bus - Other: <i>-7.80c / -7.85c</i>		Cool Intact	<i>* Project name revised as per Kathy</i>	
		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>ch 5/14/18</i>	
		Yes <input type="checkbox"/> No <input type="checkbox"/>		

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

May 14, 2018

Cliff Brunson
BBC International, Inc.
P.O. Box 805
Hobbs, NM 88241

RE: PYGMY 27 STATE #001H

Enclosed are the results of analyses for samples received by the laboratory on 05/10/18 9:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. 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/ga/lab_accred_certif.html.

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

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

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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:BBC International, Inc.
P.O. Box 805
Hobbs NM, 88241Project: PYGMY 27 STATE #001H
Project Number: NOT GIVEN
Project Manager: Cliff Brunson
Fax To: (575) 397-0397Reported:
14-May-18 11:52

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SP 2	H801296-01	Soil	08-May-18 14:30	10-May-18 09:15

H801296 project name was revised from Pygmy 27 Fed #001H to Pygmy 27 State #001H as per Kathy, 05/14/18. This report will replace the previous one sent on 05/14/18 at 11:19 am.

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 P.O. Box 805
 Hobbs NM, 88241

 Project: PYGMY 27 STATE #001H
 Project Number: NOT GIVEN
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 14-May-18 11:52

SP 2
H801296-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Chloride	160		16.0	mg/kg	4	8051111	AC	11-May-18	4500-Cl-B	
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Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	8051003	MS	11-May-18	8021B	
Toluene*	<0.050		0.050	mg/kg	50	8051003	MS	11-May-18	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	8051003	MS	11-May-18	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	8051003	MS	11-May-18	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	8051003	MS	11-May-18	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			98.4 %		72-148	8051003	MS	11-May-18	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	8051004	MS	10-May-18	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	8051004	MS	10-May-18	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	8051004	MS	10-May-18	8015B	

Surrogate: 1-Chlorooctane			78.0 %		41-142	8051004	MS	10-May-18	8015B	
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Surrogate: 1-Chlorooctadecane			76.1 %		37.6-147	8051004	MS	10-May-18	8015B	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 P.O. Box 805
 Hobbs NM, 88241

 Project: PYGMY 27 STATE #001H
 Project Number: NOT GIVEN
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 14-May-18 11:52

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8051111 - 1:4 DI Water										
Blank (8051111-BLK1)										
Prepared & Analyzed: 11-May-18										
Chloride	ND	16.0	mg/kg							
LCS (8051111-BS1)										
Prepared & Analyzed: 11-May-18										
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (8051111-BSD1)										
Prepared & Analyzed: 11-May-18										
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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 P.O. Box 805
 Hobbs NM, 88241

 Project: PYGMY 27 STATE #001H
 Project Number: NOT GIVEN
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 14-May-18 11:52

Volatile Organic Compounds by EPA Method 8021 - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8051003 - Volatiles
Blank (8051003-BLK1)

Prepared & Analyzed: 10-May-18

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.101</i>		<i>mg/kg</i>	<i>0.100</i>		<i>101</i>	<i>72-148</i>			

LCS (8051003-BS1)

Prepared & Analyzed: 10-May-18

Benzene	1.70	0.050	mg/kg	2.00		85.0	79.5-124			
Toluene	1.82	0.050	mg/kg	2.00		90.9	75.5-127			
Ethylbenzene	1.83	0.050	mg/kg	2.00		91.5	77.7-125			
Total Xylenes	5.65	0.150	mg/kg	6.00		94.1	70.9-124			
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.100</i>		<i>mg/kg</i>	<i>0.100</i>		<i>100</i>	<i>72-148</i>			

LCS Dup (8051003-BSD1)

Prepared & Analyzed: 10-May-18

Benzene	1.75	0.050	mg/kg	2.00		87.5	79.5-124	2.95	6.5	
Toluene	1.85	0.050	mg/kg	2.00		92.4	75.5-127	1.62	7.02	
Ethylbenzene	1.86	0.050	mg/kg	2.00		92.8	77.7-125	1.51	7.83	
Total Xylenes	5.72	0.150	mg/kg	6.00		95.3	70.9-124	1.21	7.78	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>	<i>0.100</i>		<i>mg/kg</i>	<i>0.100</i>		<i>100</i>	<i>72-148</i>			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 BBC International, Inc.
 P.O. Box 805
 Hobbs NM, 88241

 Project: PYGMY 27 STATE #001H
 Project Number: NOT GIVEN
 Project Manager: Cliff Brunson
 Fax To: (575) 397-0397

 Reported:
 14-May-18 11:52

Petroleum Hydrocarbons by GC FID - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 8051004 - General Prep - Organics
Blank (8051004-BLK1)

Prepared & Analyzed: 10-May-18

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	52.4		mg/kg	50.0		105	41-142			
Surrogate: 1-Chlorooctadecane	50.2		mg/kg	50.0		100	37.6-147			

LCS (8051004-BS1)

Prepared & Analyzed: 10-May-18

GRO C6-C10	204	10.0	mg/kg	200		102	76.5-133			
DRO >C10-C28	197	10.0	mg/kg	200		98.5	72.9-138			
Total TPH C6-C28	401	10.0	mg/kg	400		100	78-132			
Surrogate: 1-Chlorooctane	53.4		mg/kg	50.0		107	41-142			
Surrogate: 1-Chlorooctadecane	51.2		mg/kg	50.0		102	37.6-147			

LCS Dup (8051004-BSD1)

Prepared & Analyzed: 10-May-18

GRO C6-C10	217	10.0	mg/kg	200		109	76.5-133	6.29	20.6	
DRO >C10-C28	204	10.0	mg/kg	200		102	72.9-138	3.39	20.6	
Total TPH C6-C28	421	10.0	mg/kg	400		105	78-132	4.88	18	
Surrogate: 1-Chlorooctane	51.7		mg/kg	50.0		103	41-142			
Surrogate: 1-Chlorooctadecane	51.6		mg/kg	50.0		103	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



ARDINAL LABORATORIES
 101 East Marland, Hobbs, NM 88240
 (505) 393-2326 FAX (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: BBC International, Inc.		BILL TO		ANALYSIS REQUEST																							
Project Manager: Cliff Brunson		P.O. #:																									
Address: P.O. Box 805		Company:																									
City: Hobbs State: NM Zip: 88241		Attn: <i>Becky</i>																									
Phone #: 575-397-6388 Fax #: 575-397-0397		Address:																									
Project #:		City:																									
Project Name: <i>Pygmy 27 Feb 14 COG</i>		State: Zip:																									
Project Location: <i>State</i>		Phone #:																									
Sampler Name: <i>Pricer Brunson</i>		Fax #:																									
FOR LAB USE ONLY																											
Lab I.D.	Sample I.D.	(G)IRAB OR (C)OMP.	# CONTAINERS													MATRIX				PRESERV.		SAMPLING					
<i>H801296</i>				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	<i>TPH EXT</i> <i>BTEX</i> <i>CL-</i>												
<i>1</i>	<i>Sp 2</i>	<i>6</i>											<i>5/8/18</i>	<i>2:30</i>													

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Relinquished By: <i>[Signature]</i>	Date: <i>5/8/18</i>	Received By: <i>Jennifer Gilkey</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: <i>5:00pm</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By: <i>Jennifer Gilkey</i>	Date: <i>5-10-18</i>	Received By: <i>Jodi Henson</i>	REMARKS:	
	Time: <i>9:15</i>		<i>email COG</i>	
Delivered By: (Circle One) <i>#75</i>	Sample Condition	CHECKED BY: <i>[Signature]</i>	<i>* Project name changed as per Kathy. all 5/14/18</i>	
Sampler - UPS - Bus - Other: <i>4.40 / 4.350</i>	Cool Intact			
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476











