

Closure Report

Site Description

Site Name:	Lightning P-38 State #002H
Company:	COG Operating LLC
Legal Description:	U/L A, Section 1, T21S, R33E
County:	Lea County, NM
GPS Coordinates:	N 32.51731° W 103.51861°

Release Data

Date of Release:	10/19/2016
Type of Release:	Oil
Source of Release:	Mechanical failure on oil dump valve linkage to FWKO
Volume of Release:	15 bbls
Volume Recovered:	10 bbls

Remediation Specifications

Remediation Parameters:	Mow the overspray area. Excavate to a depth of 2 feet in the spill area. Obtain confirmation bottom and sidewall samples SP1 and SP2 and in between those 2 points. Backfill the site with clean soil.	
Remediation Activities:	03/10/2017 to 03/21/2017	
Plan Sent to OCD:	02/27/2017	Email from Cliff Brunson to Olivia Yu
OCD Approval of Plan:	03/09/2017	Email from Olivia Yu to Cliff Brunson
Plan Sent to SLO:	02/05/2017	Email from Cliff Brunson to Amber Groves
SLO Approval of Plan:	02/22/2017	Email from Amber Groves to Cliff Brunson

Supporting Documentation

Initial C-141	Signed 10/27/2016
Final C-141	Signed 04/04/2017
Site Diagram	January 2017
Groundwater Plot	75'-100'
TOPO Maps	January 2017
Lab Summary	01/12/2017 and 03/15/2017
Lab Analysis	01/12/2017 and 03/15/2017
Correspondence	Request and approval of remediation plan via email

Request for Closure

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

Cliff Brunson, President of BBC International Inc.

04/11/2016

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

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

Form C-141
Revised August 8, 2011

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:	LIGHTNING P-38 STATE #002H	Facility Type:	Tank Battery
Surface Owner:	State	Mineral Owner:	API No. 30-025-40302

LOCATION OF RELEASE

Unit Letter A	Section 01	Township 21S	Range 33E	Feet from the 1980'	North/South Line North	Feet from the 330'	East/West Line East	County Lea
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Latitude 32.5168495 Longitude 103.5184784

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 15bbls	Volume Recovered: 10bbls
Source of Release: FWKO	Date and Hour of Occurrence: 10-19-2016 08:30 am	Date and Hour of Discovery: 10-19-2016 08:30 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
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.*

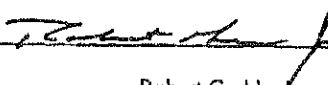
Describe Cause of Problem and Remedial Action Taken.*

Mechanical failure on the oil dump valve linkage attached to the FWKO sending to fluid to the flare. Repaired the dump valve linkage on the FWKO.

Describe Area Affected and Cleanup Action Taken.*

Most of the release was contained within the bermed area of the flare. Due to high winds a mist area of 300' X 100' is located in the pasture. Concho will have the spill site sampled to delineate any possible contamination from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation work.

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: Robert Grubbs Jr.	Approved by Environmental Specialist:	
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: rgrubbs@concho.com	Conditions of Approval:	
Date: October 27, 2016 Phone: 432-683-7443	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary

District I
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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. 432-685-4304
Facility Name: Lightning P-38 State #002H	Facility Type: Tank Battery
Surface Owner: State	Mineral Owner:
API No. 30-025-40302	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	01	21S	33E	1980	North	330	East	Lea County, NM

Latitude N 32.51731° Longitude W 103.51861°

NATURE OF RELEASE

Type of Release: Oil	Volume of Release: 15 bbls	Volume Recovered: 10 bbls
Source of Release: FWKO	Date and Hour of Occurrence 10/19/2016 @ 8:30 am	Date and Hour of Discovery 10/19/2016 @ 8:30 am
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	
By Whom?	Date and Hour:	
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.*

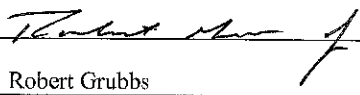
Describe Cause of Problem and Remedial Action Taken.*

Mechanical failure on the oil dump valve linkage attached to the FWKO sending fluid to the flare. Repaired the dump valve linkage on the FWKO.

Describe Area Affected and Cleanup Action Taken.*

Most of this release was contained within the bermed area of the flare. Due to high winds, a mist area of 300' x 100' is located in the pasture. The site was delineated and the results were used to compose a remediation plan. Remediation was completed in accordance with the remediation plan approved by Olivia Yu of NMOCD via email on 03/09/2017.

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: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: Robert Grubbs	Approved by Environmental Specialist: <u>Ashley Maxwell</u>	
Title: Senior Environmental Coordinator	Approval Date:	Expiration Date:
E-mail Address: rgrubbs@concho.com	Conditions of Approval:	
Date: <u>9/4/17</u> Phone: (432) 683-7443	Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary








APPROVED

By Ashley Maxwell at 8:11 am, Nov 10, 2022

COG, Lightning P-38 State #002

Leak Date: 10/19/16
Lea County, NM
API# 30-025-40302
RP# 1RP-4487

Legend

-  East Sample
-  North Sample
-  Overspray Area, Mow entire area
-  Sample points, Hand Auger
-  South Sample
-  Spill Area, 2 ft Excavation
-  West Sample



COG, Lightning P-38 State #002

Sample Points, Hand Auger

SP1, N 32.51740 W-103.51871

SP2, N 32.51743 W-103.51846

SP3, N 32.51782 W-103.51864

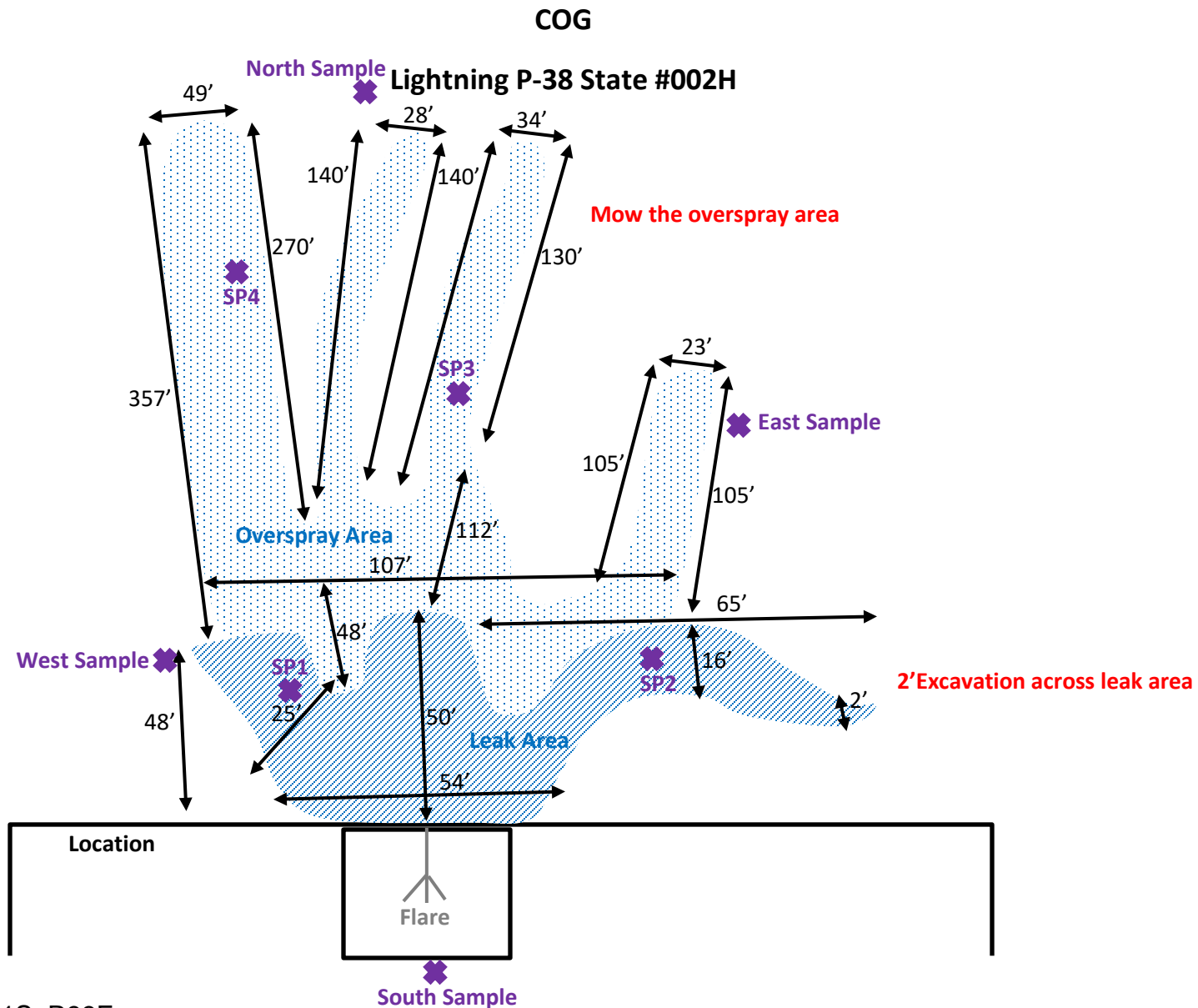
SP4, N 32.51807 W-103.51900

NORTH SAMPLE, N 32.51842 W-103.51891

SOUTH SAMPLE, N 32.51717 W-103.51865

EAST SAMPLE, N 32.51768 W-103.51840

WEST SAMPLE, N 32.51744 W-103.51885



U/L A, Section 1, T21S, R33E

Lea County, NM

N 32.51731° W 103.51861°

API# 30-025-40302

BBC International, Inc.

COG

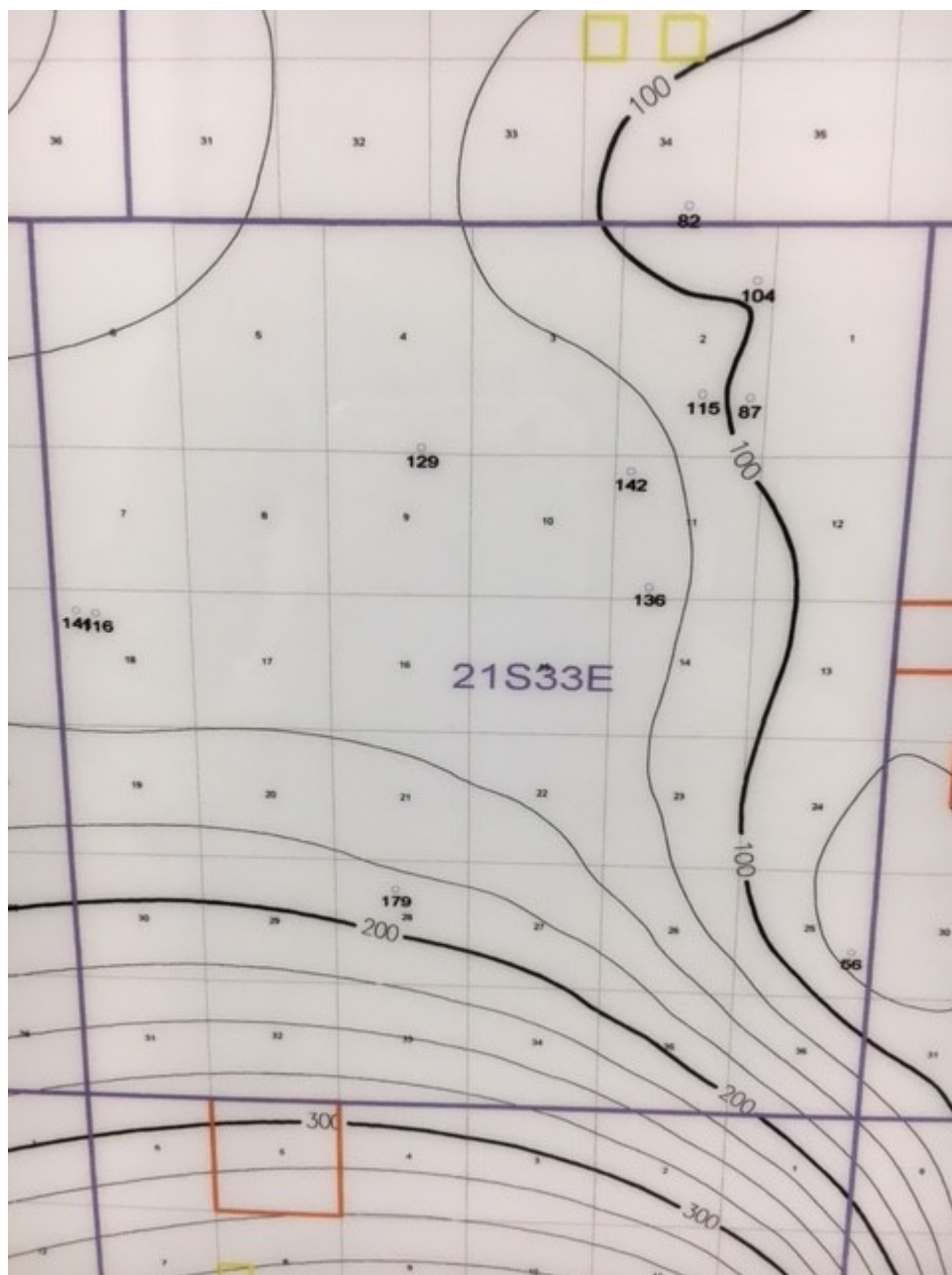
Lightning P-38 State #002H

Date: 01/04/2017

DRWG by: K. Purvis

NOT TO SCALE

File: COG 2016





New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	DepthWell	DepthWater	Water Column
CP 00611			LE	2	1	06	21S	34E	639838	3598306*	<input type="checkbox"/>	787	118	112	6
CP 00579			LE	2	2	02	21S	33E	637438	3598269*	<input type="checkbox"/>	1613	125	100	25
CP 00796 POD1		CP	LE	2	2	4	02	21S	33E	637548	3597564*	<input type="checkbox"/>	1670	102	
CP 01335 POD1			LE	4	1	4	35	20S	34E	638205	3599736	<input type="checkbox"/>	1672	1307	735 572
Average Depth to Water:														315 feet	
Minimum Depth:														100 feet	
Maximum Depth:														735 feet	

Record Count: 4

UTMNAD83 Radius Search (in meters):

Easting (X): 639051

Northing (Y): 3598293

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.

4/11/17 11:05 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Public Land Survey System (PLSS)					
Q64:	Q16: NE	Q4: NE	Sec: 01	Tws: 21S	Rng: 33E

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 <u>NAD 1983 UTM Zone 13</u>					
Easting (X):	639051.0	mtrs	Northing (Y):	3598293.0	mtrs
~~ Please keep screen open to copy UTM values for Reports. ~~					

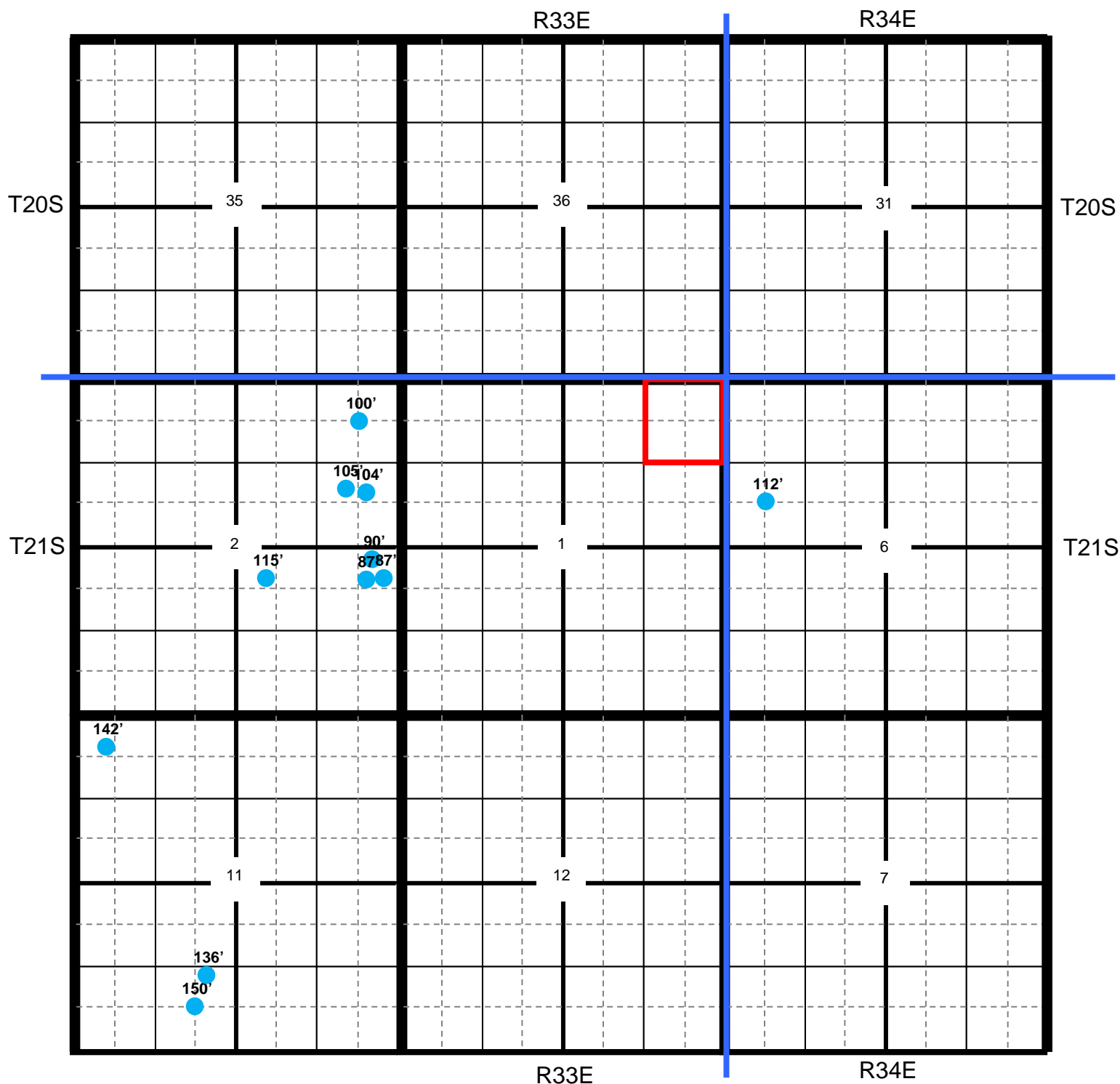


Groundwater Plot

COG Lightning P-38 State #002H

County
LeaUnit Letter
ASection
1Township
21SRange
33E

Trend Map 75'-100'



★ Location

● OCD

● USGS

● SEO

● All Databases



Section Quarters

COG Lightning P-38 State #002H

County	Unit Letter	Section	Township	Range
Lea	A	1	21S	33E

Trend Map 75'-100'

1

2

NW/NW None found	NE/NW	NW/NE	NE/NE
Unit Letter D	Unit Letter C	Unit Letter B	Unit Letter A
SW/NW	SE/NW	SW/NE	SE/NE
Unit Letter E	Unit Letter F	Unit Letter G	Unit Letter H
NW/SW	NE/SW	NW/SE	NE/SE
Unit Letter L	Unit Letter K	Unit Letter J	Unit Letter I
SW/SW	SE/SW	SW/SE	SE/SE
Unit Letter M	Unit Letter N	Unit Letter O	Unit Letter P

3

4

* Location

● OCD

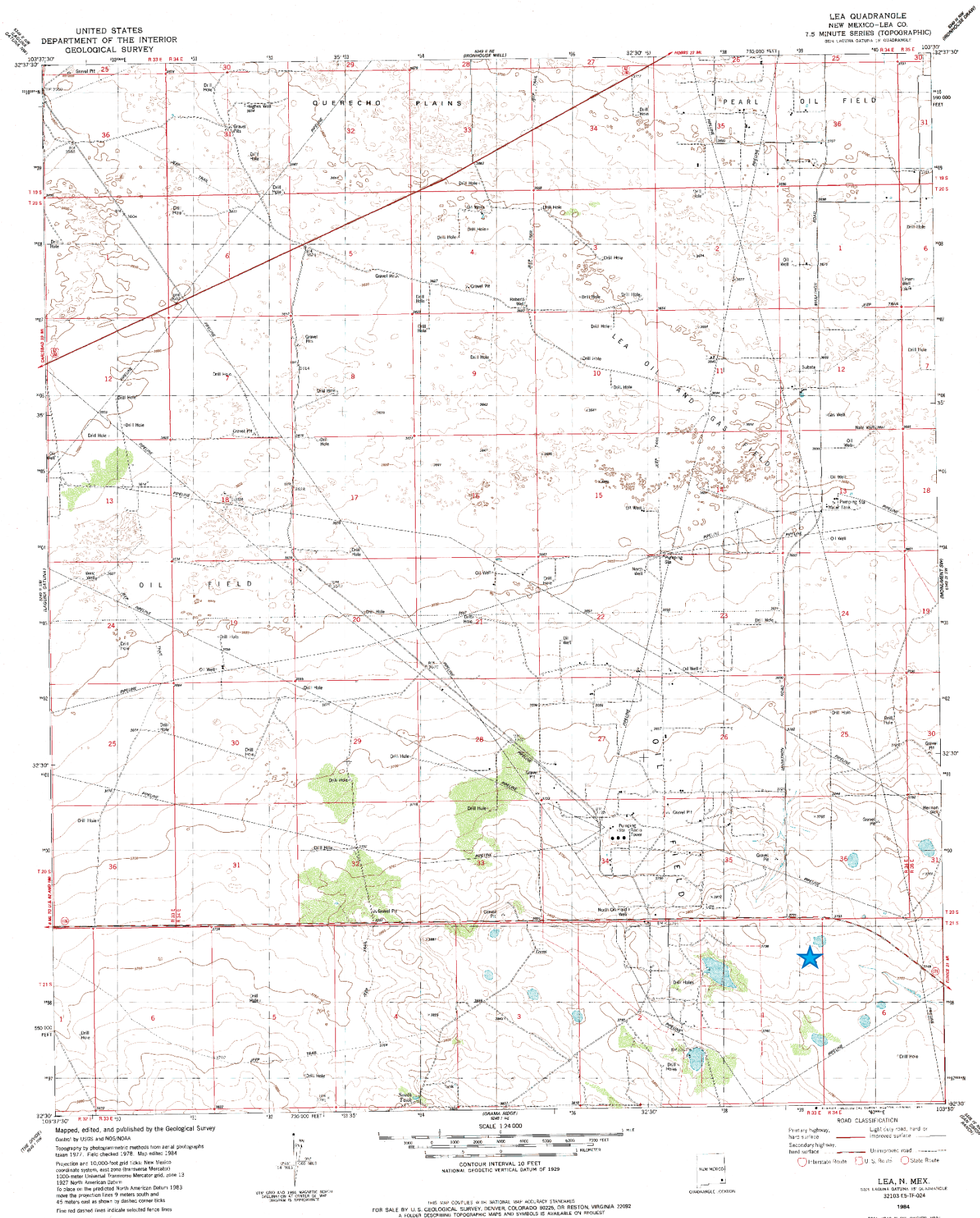
● USGS

● SEO

● All Databases

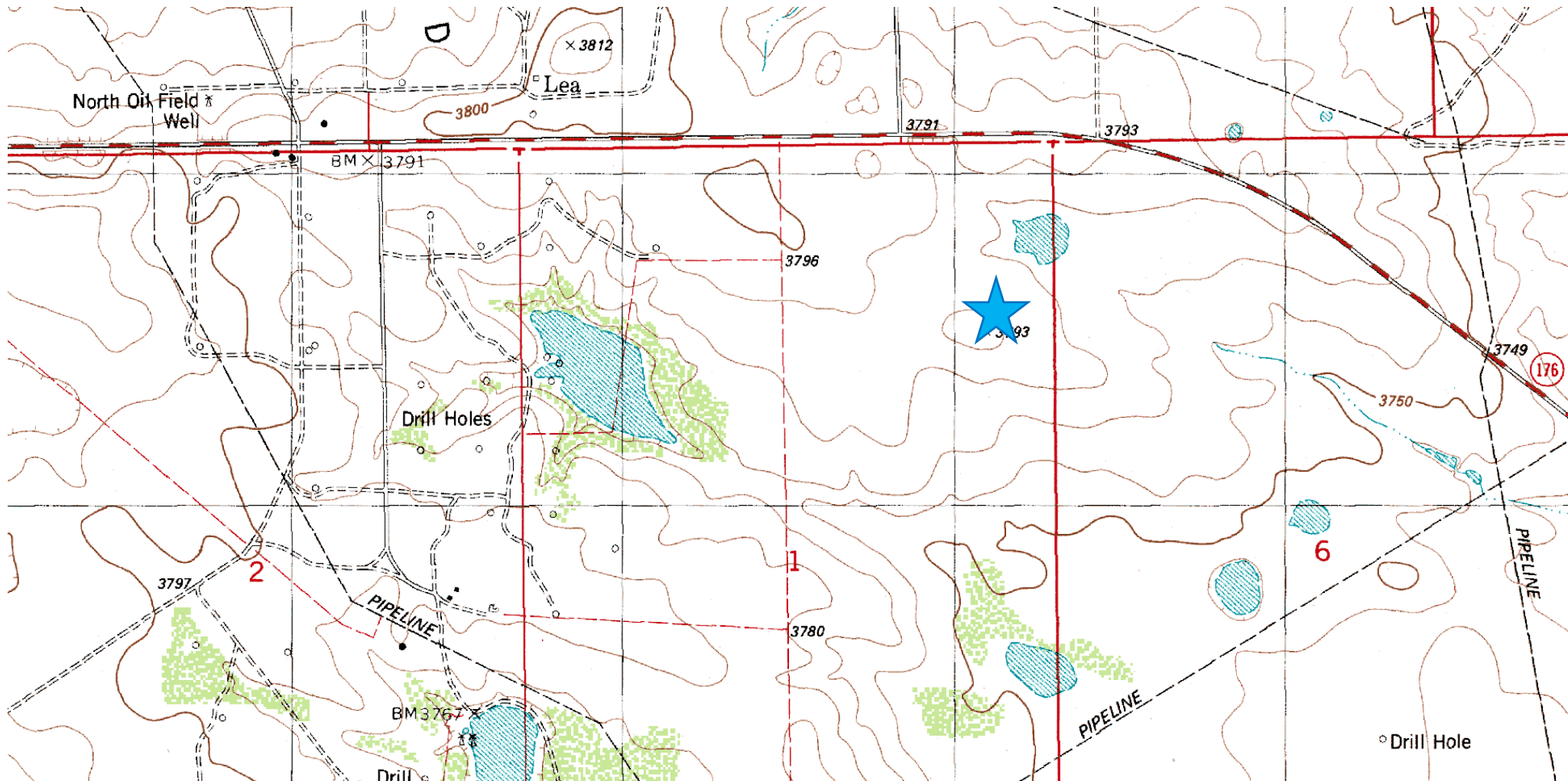
COG

Lightning P-38 State #002H



COG

Lightning P-38 State #002H



Laboratory Analytical Results Summary
Lightning P-38 State #002H

		Sample	SP1 @ 1'	SP1 @ 2'
Analyte	Method	Date	1/12/17	1/12/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050
Toluene	BTEX 8021B		0.13	<0.050
Ethylbenzene	BTEX 8021B		0.486	<0.050
Total Xylenes	BTEX 8021B		2.82	<0.150
Total BTEX	BTEX 8021B		3.44	<0.300
Chloride	SM4500Cl-B		n/a	128
GRO	TPH 8015M		320	<10.0
DRO	TPH 8015M		6980	468

		Sample	SP2 @ 1'	SP2 @ 2'
Analyte	Method	Date	1/12/17	1/12/17
			mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050
Toluene	BTEX 8021B		0.179	<0.050
Ethylbenzene	BTEX 8021B		0.407	<0.050
Total Xylenes	BTEX 8021B		2.22	<0.150
Total BTEX	BTEX 8021B		2.8	<0.300
Chloride	SM4500Cl-B		n/a	n/a
GRO	TPH 8015M		222	<10.0
DRO	TPH 8015M		6400	439

		Sample	SP3 @ SURFACE
Analyte	Method	Date	1/12/17
			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		32
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

		Sample	SP4 @ SURFACE
Analyte	Method	Date	1/12/17
			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		n/a
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

		Sample	NORTH SAMPLE
Analyte	Method	Date	1/12/17
			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		n/a
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

		Sample	EAST SAMPLE
Analyte	Method	Date	1/12/17
			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		n/a
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

		Sample	SOUTH SAMPLE
Analyte	Method	Date	1/12/17
			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		n/a
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

		Sample	WEST SAMPLE
Analyte	Method	Date	1/12/17
			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		n/a
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

Laboratory Analytical Results Summary
Lightning P-38 State #002H

Confirmation		Sample	NORTH SIDEWALL
Analyte	Method	Date	3/15/17
			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		112
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		56.2

Confirmation		Sample	EAST SIDEWALL
Analyte	Method	Date	3/15/17
			mg/Kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		0.07
Total Xylenes	BTEX 8021B		0.165
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		64
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		53.3

Confirmation		Sample	SOUTH SIDEWALL
Analyte	Method	Date	3/15/17
			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		96
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		55.6

Confirmation		Sample	WEST SIDEWALL
Analyte	Method	Date	3/15/17
			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		80
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		56.4

Confirmation		Sample	SP1 @ BOTTOM
Analyte	Method	Date	3/15/17
			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		96
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		52.4

Confirmation		Sample	SP2 @ BOTTOM
Analyte	Method	Date	3/15/17
			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		80
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		46

Confirmation		Sample	SP3 @ BOTTOM
Analyte	Method	Date	3/15/17
			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		80
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		57.6



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

January 18, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LIGHTNING P38 #2H

Enclosed are the results of analyses for samples received by the laboratory on 01/13/17 16:45.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	01/13/2017	Sampling Date:	01/12/2017
Reported:	01/18/2017	Sampling Type:	Soil
Project Name:	LIGHTNING P38 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 1 @ 1' (H700095-01)

BTEX 8021B		mg/kg	Analyzed By: CK					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/16/2017	ND	2.25	113	2.00	0.346	
Toluene*	0.130	0.050	01/16/2017	ND	2.22	111	2.00	0.116	
Ethylbenzene*	0.486	0.050	01/16/2017	ND	2.24	112	2.00	0.289	
Total Xylenes*	2.82	0.150	01/16/2017	ND	6.31	105	6.00	0.427	
Total BTEX	3.44	0.300	01/16/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 159 % 73.6-140

TPH 8015M		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	320	10.0	01/17/2017	ND	212	106	200	3.70	
DRO >C10-C28	6980	10.0	01/17/2017	ND	236	118	200	3.40	

Surrogate: 1-Chlorooctane 138 % 35-147

Surrogate: 1-Chlorooctadecane 197 % 28-171

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 01/13/2017
 Reported: 01/18/2017
 Project Name: LIGHTNING P38 #2H
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 01/12/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 1 @ 2' (H700095-02)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/16/2017	ND	2.25	113	2.00	0.346	
Toluene*	<0.050	0.050	01/16/2017	ND	2.22	111	2.00	0.116	
Ethylbenzene*	<0.050	0.050	01/16/2017	ND	2.24	112	2.00	0.289	
Total Xylenes*	<0.150	0.150	01/16/2017	ND	6.31	105	6.00	0.427	
Total BTEx	<0.300	0.300	01/16/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

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	01/17/2017	ND	432	108	400	3.64	

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	01/17/2017	ND	212	106	200	3.70	
DRO >C10-C28	468	10.0	01/17/2017	ND	236	118	200	3.40	

Surrogate: 1-Chlorooctane 75.9 % 35-147

Surrogate: 1-Chlorooctadecane 88.0 % 28-171

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Analytical Results For:

BBC International, Inc.
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 Hobbs NM, 88241
 Fax To: (575) 397-0397

Received: 01/13/2017
 Reported: 01/18/2017
 Project Name: LIGHTNING P38 #2H
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 01/12/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 2 @ 1' (H700095-03)

BTEx 8021B		mg/kg	Analyzed By: CK					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/16/2017	ND	2.25	113	2.00	0.346	
Toluene*	0.179	0.050	01/16/2017	ND	2.22	111	2.00	0.116	
Ethylbenzene*	0.407	0.050	01/16/2017	ND	2.24	112	2.00	0.289	
Total Xylenes*	2.22	0.150	01/16/2017	ND	6.31	105	6.00	0.427	
Total BTEX	2.80	0.300	01/16/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 147 % 73.6-140

TPH 8015M		mg/kg	Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	222	10.0	01/17/2017	ND	212	106	200	3.70	
DRO >C10-C28	6400	10.0	01/17/2017	ND	236	118	200	3.40	

Surrogate: 1-Chlorooctane 129 % 35-147

Surrogate: 1-Chlorooctadecane 196 % 28-171

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Analytical Results For:

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

Received: 01/13/2017
 Reported: 01/18/2017
 Project Name: LIGHTNING P38 #2H
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 01/12/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 2 @ 2' (H700095-04)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/16/2017	ND	2.25	113	2.00	0.346	
Toluene*	<0.050	0.050	01/16/2017	ND	2.22	111	2.00	0.116	
Ethylbenzene*	<0.050	0.050	01/16/2017	ND	2.24	112	2.00	0.289	
Total Xylenes*	<0.150	0.150	01/16/2017	ND	6.31	105	6.00	0.427	
Total BTEX	<0.300	0.300	01/16/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 73.6-140

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	01/17/2017	ND	212	106	200	3.70	
DRO >C10-C28	439	10.0	01/17/2017	ND	236	118	200	3.40	

Surrogate: 1-Chlorooctane 91.3 % 35-147

Surrogate: 1-Chlorooctadecane 96.8 % 28-171

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Analytical Results For:

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

Received: 01/13/2017
 Reported: 01/18/2017
 Project Name: LIGHTNING P38 #2H
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 01/12/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 3 @ SURFACE (H700095-05)

BTX 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2017	ND	2.25	113	2.00	0.346		
Toluene*	<0.050	0.050	01/16/2017	ND	2.22	111	2.00	0.116		
Ethylbenzene*	<0.050	0.050	01/16/2017	ND	2.24	112	2.00	0.289		
Total Xylenes*	<0.150	0.150	01/16/2017	ND	6.31	105	6.00	0.427		
Total BTX	<0.300	0.300	01/16/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	32.0	16.0	01/17/2017	ND	432	108	400	3.64		

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	01/17/2017	ND	212	106	200	3.70	
DRO >C10-C28	<10.0	10.0	01/17/2017	ND	236	118	200	3.40	

Surrogate: 1-Chlorooctane 93.7 % 35-147

Surrogate: 1-Chlorooctadecane 96.3 % 28-171

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Analytical Results For:

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 Fax To: (575) 397-0397

Received: 01/13/2017
 Reported: 01/18/2017
 Project Name: LIGHTNING P38 #2H
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 01/12/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SP 4 @ SURFACE (H700095-06)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2017	ND	2.25	113	2.00	0.346		
Toluene*	<0.050	0.050	01/16/2017	ND	2.22	111	2.00	0.116		
Ethylbenzene*	<0.050	0.050	01/16/2017	ND	2.24	112	2.00	0.289		
Total Xylenes*	<0.150	0.150	01/16/2017	ND	6.31	105	6.00	0.427		
Total BTEX	<0.300	0.300	01/16/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

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	01/17/2017	ND	212	106	200	3.70	
DRO >C10-C28	<10.0	10.0	01/17/2017	ND	236	118	200	3.40	

Surrogate: 1-Chlorooctane 87.0 % 35-147

Surrogate: 1-Chlorooctadecane 89.0 % 28-171

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Analytical Results For:

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Received: 01/13/2017
 Reported: 01/18/2017
 Project Name: LIGHTNING P38 #2H
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 01/12/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: NORTH (H700095-07)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2017	ND	2.25	113	2.00	0.346		
Toluene*	<0.050	0.050	01/16/2017	ND	2.22	111	2.00	0.116		
Ethylbenzene*	<0.050	0.050	01/16/2017	ND	2.24	112	2.00	0.289		
Total Xylenes*	<0.150	0.150	01/16/2017	ND	6.31	105	6.00	0.427		
Total BTEX	<0.300	0.300	01/16/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

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	01/17/2017	ND	212	106	200	3.70	
DRO >C10-C28	<10.0	10.0	01/17/2017	ND	236	118	200	3.40	

Surrogate: 1-Chlorooctane 81.3 % 35-147

Surrogate: 1-Chlorooctadecane 87.8 % 28-171

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Analytical Results For:

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

Received:	01/13/2017	Sampling Date:	01/12/2017
Reported:	01/18/2017	Sampling Type:	Soil
Project Name:	LIGHTNING P38 #2H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: EAST (H700095-08)

BTEx 8021B		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/16/2017	ND	2.25	113	2.00	0.346		
Toluene*	<0.050	0.050	01/16/2017	ND	2.22	111	2.00	0.116		
Ethylbenzene*	<0.050	0.050	01/16/2017	ND	2.24	112	2.00	0.289		
Total Xylenes*	<0.150	0.150	01/16/2017	ND	6.31	105	6.00	0.427		
Total BTEX	<0.300	0.300	01/16/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 101 % 73.6-140

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	01/17/2017	ND	211	105	200	3.72	
DRO >C10-C28	<10.0	10.0	01/17/2017	ND	231	116	200	1.17	

Surrogate: 1-Chlorooctane 85.8 % 35-147

Surrogate: 1-Chlorooctadecane 89.2 % 28-171

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Analytical Results For:

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

Received: 01/13/2017
 Reported: 01/18/2017
 Project Name: LIGHTNING P38 #2H
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 01/12/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: SOUTH (H700095-09)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/17/2017	ND	2.25	112	2.00	1.42	
Toluene*	<0.050	0.050	01/17/2017	ND	2.22	111	2.00	1.47	
Ethylbenzene*	<0.050	0.050	01/17/2017	ND	2.24	112	2.00	1.26	
Total Xylenes*	<0.150	0.150	01/17/2017	ND	6.34	106	6.00	1.39	
Total BTEX	<0.300	0.300	01/17/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

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	01/17/2017	ND	211	105	200	3.72	
DRO >C10-C28	<10.0	10.0	01/17/2017	ND	231	116	200	1.17	

Surrogate: 1-Chlorooctane 84.7 % 35-147

Surrogate: 1-Chlorooctadecane 87.4 % 28-171

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Analytical Results For:

BBC International, Inc.
 Cliff Brunson
 P.O. Box 805
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Received: 01/13/2017
 Reported: 01/18/2017
 Project Name: LIGHTNING P38 #2H
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 01/12/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Jodi Henson

Sample ID: WEST (H700095-10)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/17/2017	ND	2.25	112	2.00	1.42	
Toluene*	<0.050	0.050	01/17/2017	ND	2.22	111	2.00	1.47	
Ethylbenzene*	<0.050	0.050	01/17/2017	ND	2.24	112	2.00	1.26	
Total Xylenes*	<0.150	0.150	01/17/2017	ND	6.34	106	6.00	1.39	
Total BTEX	<0.300	0.300	01/17/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.6-140

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	01/17/2017	ND	211	105	200	3.72	
DRO >C10-C28	<10.0	10.0	01/17/2017	ND	231	116	200	1.17	

Surrogate: 1-Chlorooctane 77.6 % 35-147

Surrogate: 1-Chlorooctadecane 79.0 % 28-171

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Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager



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				Attn:							
State: NM zip: 88241				Address:							
Phone #: 575-397-6388 Fax #: 575-397-0397				City:							
Project #:				State:				Zip:			
Project Name: Litchfield #38 #2H				Phone #:							
Project Location:				Fax #:							
Sampler Name: Roger Hernandez				MATRIX				SAMPLING			
<small>FOR LAB USE ONLY</small>											
Lab I.D. Sample I.D.				(G)RAB OR (C)OMP.							
				# CONTAINERS							
H700095 SP 102 SP 201 SP 202 SP 305A SP 405B North East South West		GROUNDWATER									
		WASTEWATER									
		SOIL									
		OIL									
		SLUDGE									
		OTHER :									
		ACID/BASE:									
ICE / COOL											
OTHER :											
		DATE		TIME							
		F12		5:00							
				10:20							
				11:10							
				11:35							
				11:40							
				1:00							
				1:20							
				1:46							
				2:00							
				2:26							

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Relinquished By: [Signature]		Date: 1-13-17		Received By: [Signature]		Date: 1-13-17	
Relinquished By: [Signature]		Date: 1-13-17		Received By: [Signature]		Date: 1-13-17	

Delivered By: (Circle One) **#752.22**

Sampler - UPS - Bus - Other:

Sample Condition: Cool ☒ Intact ☒
☐ Yes ☐ No ☐ Yes ☐ No

CHECKED BY: [Signature]

REMARKS:



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

March 21, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: LIGHTNING P38

Enclosed are the results of analyses for samples received by the laboratory on 03/15/17 16:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-16-8. 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 style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/15/2017	Sampling Date:	03/15/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	LIGHTNING P38	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	COG		

Sample ID: NORTH SIDEWALL (H700689-01)

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	03/20/2017	ND	2.04	102	2.00	0.182	
Toluene*	<0.050	0.050	03/20/2017	ND	1.93	96.7	2.00	0.0974	
Ethylbenzene*	<0.050	0.050	03/20/2017	ND	1.95	97.4	2.00	0.357	
Total Xylenes*	<0.150	0.150	03/20/2017	ND	5.57	92.9	6.00	0.565	
Total BTEX	<0.300	0.300	03/20/2017	ND					

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

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	03/20/2017	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	03/17/2017	ND	182	91.0	200	4.18	
DRO >C10-C28	56.2	10.0	03/17/2017	ND	196	97.8	200	0.645	

Surrogate: 1-Chlorooctane 78.3 % 25.1-158

Surrogate: 1-Chlorooctadecane 70.7 % 26.8-170

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	03/15/2017	Sampling Date:	03/15/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	LIGHTNING P38	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	COG		

Sample ID: EAST SIDEWALL (H700689-02)

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	03/20/2017	ND	2.04	102	2.00	0.182	
Toluene*	<0.050	0.050	03/20/2017	ND	1.93	96.7	2.00	0.0974	
Ethylbenzene*	0.070	0.050	03/20/2017	ND	1.95	97.4	2.00	0.357	
Total Xylenes*	0.165	0.150	03/20/2017	ND	5.57	92.9	6.00	0.565	
Total BTEx	<0.300	0.300	03/20/2017	ND					

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

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	03/20/2017	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	03/17/2017	ND	182	91.0	200	4.18	
DRO >C10-C28	53.3	10.0	03/17/2017	ND	196	97.8	200	0.645	

Surrogate: 1-Chlorooctane 67.8 % 25.1-158

Surrogate: 1-Chlorooctadecane 65.3 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/15/2017	Sampling Date:	03/15/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	LIGHTNING P38	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	COG		

Sample ID: SOUTH SIDEWALL (H700689-03)

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	03/20/2017	ND	2.04	102	2.00	0.182	
Toluene*	<0.050	0.050	03/20/2017	ND	1.93	96.7	2.00	0.0974	
Ethylbenzene*	<0.050	0.050	03/20/2017	ND	1.95	97.4	2.00	0.357	
Total Xylenes*	<0.150	0.150	03/20/2017	ND	5.57	92.9	6.00	0.565	
Total BTX	<0.300	0.300	03/20/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148

Chloride, SM4500CI-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	03/20/2017	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	03/17/2017	ND	182	91.0	200	4.18	
DRO >C10-C28	55.6	10.0	03/17/2017	ND	196	97.8	200	0.645	

Surrogate: 1-Chlorooctane 82.2 % 25.1-158

Surrogate: 1-Chlorooctadecane 79.2 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	03/15/2017	Sampling Date:	03/15/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	LIGHTNING P38	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	COG		

Sample ID: WEST SIDEWALL (H700689-04)

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	03/20/2017	ND	2.04	102	2.00	0.182	
Toluene*	<0.050	0.050	03/20/2017	ND	1.93	96.7	2.00	0.0974	
Ethylbenzene*	<0.050	0.050	03/20/2017	ND	1.95	97.4	2.00	0.357	
Total Xylenes*	<0.150	0.150	03/20/2017	ND	5.57	92.9	6.00	0.565	
Total BTX	<0.300	0.300	03/20/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148

Chloride, SM4500CI-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	03/20/2017	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	03/17/2017	ND	182	91.0	200	4.18	
DRO >C10-C28	56.4	10.0	03/17/2017	ND	196	97.8	200	0.645	

Surrogate: 1-Chlorooctane 72.4 % 25.1-158

Surrogate: 1-Chlorooctadecane 71.6 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 03/15/2017
 Reported: 03/21/2017
 Project Name: LIGHTNING P38
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 03/15/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: 1 BOTTOM (H700689-05)

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	03/20/2017	ND	2.04	102	2.00	0.182	
Toluene*	<0.050	0.050	03/20/2017	ND	1.93	96.7	2.00	0.0974	
Ethylbenzene*	<0.050	0.050	03/20/2017	ND	1.95	97.4	2.00	0.357	
Total Xylenes*	<0.150	0.150	03/20/2017	ND	5.57	92.9	6.00	0.565	
Total BTX	<0.300	0.300	03/20/2017	ND					

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

Chloride, SM4500CI-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	03/20/2017	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	03/17/2017	ND	182	91.0	200	4.18	
DRO >C10-C28	52.4	10.0	03/17/2017	ND	196	97.8	200	0.645	

Surrogate: 1-Chlorooctane 82.4 % 25.1-158

Surrogate: 1-Chlorooctadecane 83.7 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	03/15/2017	Sampling Date:	03/15/2017
Reported:	03/21/2017	Sampling Type:	Soil
Project Name:	LIGHTNING P38	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	COG		

Sample ID: 2 BOTTOM (H700689-06)

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	03/20/2017	ND	2.04	102	2.00	0.182	
Toluene*	<0.050	0.050	03/20/2017	ND	1.93	96.7	2.00	0.0974	
Ethylbenzene*	<0.050	0.050	03/20/2017	ND	1.95	97.4	2.00	0.357	
Total Xylenes*	<0.150	0.150	03/20/2017	ND	5.57	92.9	6.00	0.565	
Total BTX	<0.300	0.300	03/20/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 72-148

Chloride, SM4500CI-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	03/20/2017	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	03/17/2017	ND	182	91.0	200	4.18	
DRO >C10-C28	46.0	10.0	03/17/2017	ND	196	97.8	200	0.645	

Surrogate: 1-Chlorooctane 89.1 % 25.1-158

Surrogate: 1-Chlorooctadecane 89.8 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received: 03/15/2017
 Reported: 03/21/2017
 Project Name: LIGHTNING P38
 Project Number: NONE GIVEN
 Project Location: COG

Sampling Date: 03/15/2017
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Celey D. Keene

Sample ID: 3 BOTTOM (H700689-07)

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	03/20/2017	ND	2.04	102	2.00	0.182	
Toluene*	<0.050	0.050	03/20/2017	ND	1.93	96.7	2.00	0.0974	
Ethylbenzene*	<0.050	0.050	03/20/2017	ND	1.95	97.4	2.00	0.357	
Total Xylenes*	<0.150	0.150	03/20/2017	ND	5.57	92.9	6.00	0.565	
Total BTX	<0.300	0.300	03/20/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 72-148

Chloride, SM4500CI-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	03/20/2017	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	03/17/2017	ND	182	91.0	200	4.18	
DRO >C10-C28	57.6	10.0	03/17/2017	ND	196	97.8	200	0.645	

Surrogate: 1-Chlorooctane 88.2 % 25.1-158

Surrogate: 1-Chlorooctadecane 79.4 % 26.8-170

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

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.

Project Manager: Cliff Brunson

Address: P.O. Box 805

City: Hobbs

Phone #: 575-397-6388

Project #:

Project Name: Lightning P-38

Project Location:

Sampler Name: Roger Hernandez

FOR LAB USE ONLY

Lab I.D.:

State: NM **Zip:** 88241

Fax #: 575-397-0397

Project Owner: C.O.G

City:

State: **Zip:**

Phone #:

Fax #:

P.O. #:

Company: C.O.G

Attn:

Address:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV	SAMPLING	DATE	TIME	ANALYSIS REQUEST
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :					
1700681	North Sidevall		1									3-15-17	9:00	✓
	2 East Sidevall		1									3-15-17	9:10	✓
	3 South Sidevall		1									3-15-17	9:20	✓
	4 West Sidevall		1									3-15-17	9:30	✓
	5 Bottom		1									3-15-17	9:40	✓
	6 Bottom		1									3-15-17	9:50	✓
	7 Bottom		1									3-15-17	10:00	✓

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Relinquished By: Roger Hernandez

Relinquished By: Jennifer Gilling

Date: 3-15-17

Time: 18:30

Received By: Jennifer Gilling

Date: 3-15-17

Time: 4:15

Sample Condition: Cool ☒ Yes ☐ No

Intact: ☒ Yes ☐ No

CHECKED BY: (Initials) JG

REMARKS:

Phone Result: ☐ Yes ☐ No

Add'l Phone #:

Fax Result: ☐ Yes ☐ No

Add'l Fax #:

From: Yu, Olivia, EMNRD
To: [Cliff Brunson](#); "[Kathy Purvis](#)"
Cc: [Oberding, Tomas, EMNRD](#); "[Robert Grubbs](#)"; [Houston, Kristen, EMNRD](#); agroves@slo.state.nm.us; [Ken Swinney](#); [Jennifer Gilkey](#)
Subject: RE: COG - Lightning P-38 State #002H - Remediation Plan
Date: Thursday, March 9, 2017 2:35:05 PM
Attachments: [Approvedworkplan_1RP4487_Remediation Packet Lightning P-38 State #002H.pdf](#)

Dear All:

NMOCD approves the delineation workplan for 1RP-4487 with conditions below accepted. Please see the attachment for your records.

Olivia

From: Cliff Brunson [mailto:cbrunson@bbcinternational.com]
Sent: Monday, February 27, 2017 4:43 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; 'Kathy Purvis' <kathy@bbcinternational.com>
Cc: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>; 'Robert Grubbs' <RGrubbs@concho.com>; Houston, Kristen, EMNRD <Kristen.Houston@state.nm.us>; agroves@slo.state.nm.us; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey <jgilkey@bbcinternational.com>
Subject: RE: COG - Lightning P-38 State #002H - Remediation Plan

Olivia,

Your approval is appreciated. Per our conversation, I wanted to reply to your email with some clarification on the listed conditions.

1. Excavation will be to a depth of 2 ft. bgs.
2. Confirmation bottom and sidewall samples will be taken of SP1-2. No excavation will occur for SP 3-4 as this is the overspray area and the previous samples were below limits. This is the area that will be mowed that has been approved by the SLO. No additional samples will be taken in the overspray area. A bottom sample will be taken between SP1 & SP2.
3. Documentation of depth to groundwater in the format that you have requested will be included in the final report.
4. A scaled digital map will be included in the final report as we agreed and we discussed the discrepancy between GPS coordinates so now everyone is on the same page.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS
President
BBC International, Inc.
World-Wide Environmental Specialists
Mailing Address:
P. O. Box 805
Hobbs, NM 88241-0805 USA
Shipping Address:

1324 W. Marland St.
Hobbs, NM 88240 USA
Phone: (575) 397-6388
Fax: (575) 397-0397
E-Mail: cbrunson@bbcinternational.com



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From: Yu, Olivia, EMNRD [<mailto:Olivia.Yu@state.nm.us>]
Sent: Friday, February 17, 2017 4:01 PM
To: 'Cliff Brunson' <cbrunson@bbcinternational.com>; 'Kathy Purvis' <kathy@bbcinternational.com>
Cc: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>; 'Robert Grubbs' <RGrubbs@concho.com>; Lynch, Kristen, EMNRD <Kristen.Lynch@state.nm.us>; 'agroves@slo.state.nm.us' <agroves@slo.state.nm.us>
Subject: COG - Lightning P-38 State #002H - Remediation Plan

Dear Mr. Brunson:

The workplan for 1RP-4487 is approved with the following conditions.

- 1) Excavate contaminated soil to a depth of 2 ft. bgs.
- 2) Confirmation bottom and sidewall samples of SP1-4 and North, South, East, and West Samples. Additionally, take a soil sample between SP1 & SP2, between SP3 & SP4, between SP3 & East Sample, and west of SP4 (beyond the western border of the release).
- 3) Provide documentation of depth to groundwater (i.e., pdf of OSE search or copy of Chevron water trend map).
- 4) A scaled digital map with the release area demarcated and georeferenced locations of sample points. This is important given that the GPS coordinates provided on the submitted initial C141 differs from the GPS coordinates on the drawing on page 2.

Also, this release occurred on a State lease, so approval from the State Land Office regarding the mowing of vegetation in the overspray area as a corrective action is required.

Please confirm these conditions.

Thanks,

Olivia Yu
Environmental Specialist
NMOCD, District I

Olivia.yu@state.nm.us

575-393-6161 x113

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: Cliff Brunson

Sent: Saturday, January 28, 2017 6:44:55 PM (UTC-07:00) Mountain Time (US & Canada)

To: Lynch, Kristen, EMNRD

Cc: Robert Grubbs; Ken Swinney; Jennifer Gilkey; Kathy Purvis

Subject: COG - Lightning P-38 State #002H - Remediation Plan

Kristen,

This e-mail is to confirm our discussion concerning the remediation plan for the COG Lightning P-38 State #002H release. I have attached the information packet that we used in our discussion on 2/25/17 with a cover page describing the remediation plan that we agreed upon.

If you would please reply back via e-mail with your concurrence on this plan, it would be greatly appreciated.

Thanks, Cliff

Cliff P. Brunson, CEI, CRS

President

BBC International, Inc.

World-Wide Environmental Specialists

Mailing Address:

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Hobbs, NM 88241-0805 USA

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From: Groves, Amber
To: [Yu, Olivia, EMNRD](#); ["Cliff Brunson"](#); ["Kathy Purvis"](#)
Cc: [Oberding, Tomas, EMNRD](#); ["Robert Grubbs"](#); [Lynch, Kristen, EMNRD](#)
Subject: RE: COG - Lightning P-38 State #002H - Remediation Plan
Date: Wednesday, February 22, 2017 8:31:36 AM
Attachments: [image002.png](#)
[image001.png](#)

Good Morning, Cliff,

NMSLO agrees with NMOCD's work plan approval and conditions.

Thank you,

Amber Groves

Remediation Specialist

Field Operations Division

(575)392-3697

(575)263-3209 cell

New Mexico State Land Office

2827 N. Dal Paso Suite 117

Hobbs, NM 88260

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From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]
Sent: Friday, February 17, 2017 4:01 PM
To: 'Cliff Brunson' <cbrunson@bbcininternational.com>; 'Kathy Purvis' <kathy@bbcininternational.com>
Cc: Oberding, Tomas, EMNRD <Tomas.Oberding@state.nm.us>; 'Robert Grubbs' <RGrubbs@concho.com>; Lynch, Kristen, EMNRD <Kristen.Lynch@state.nm.us>; Groves, Amber <agroves@slo.state.nm.us>
Subject: COG - Lightning P-38 State #002H - Remediation Plan

Dear Mr. Brunson:

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Please confirm these conditions.

Thanks,

Olivia Yu
Environmental Specialist
NMOCD, District I
Olivia.yu@state.nm.us
575-393-6161 x113

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Sent: Saturday, January 28, 2017 6:44:55 PM (UTC-07:00) Mountain Time (US & Canada)
To: Lynch, Kristen, EMNRD
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If you would please reply back via e-mail with your concurrence on this plan, it would be greatly appreciated.

Thanks, Cliff

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Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 157581

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 157581
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
amaxwell	None	11/10/2022