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APPROVED

By Olivia Yu at 10:30 am, Jun 30, 2017

DELINEATION WORKPLAN

COG – MACHO NACHO STATE #002H (Leak Date: 11/18/16)

**RP # 1RP-4520
API # 30-025-39883**

NMOCD approves of the delineation and proposed remediation for 1RP-4520 with one condition: For the areas encompassing SP1-4, bottom and sidewall confirmation samples for TPH and chlorides at 6" depth of excavation. If permissible levels are exceeded, excavate to 1 ft. bgs. with confirmation samples.

This delineation workplan and remediation proposal addresses the release associated with RP # 1RP-4520.

The following information includes:

1. Scaled digital site map with spill area demarcated and leak point identified along with sample point locations and areas of remediation at appropriate depths.
2. GPS information for sample points and sample methodology
3. Depth to groundwater information (i.e., pdf of OSE search results and/or copy of Chevron groundwater trend map).
4. Laboratory analysis results summary table and original laboratory analysis reports
5. A copy of the initial C-141
6. Potentially other pertinent information as necessary for site specific purposes.

Based on the information included in this package and the NMOCD guidelines, the following remediation is proposed:

COG will excavate the spill area as depicted on the following site diagram. The leak area covering SP1-SP4, SP8, SP9, and SP12 (green shade on diagram) will be excavated to a depth of 6 inches. The overspray area (pink shade on diagram) covering SP5-SP7, SP10, SP11, OS#1, and OS#2 will be raked or mowed. Although it is not anticipated that seeding will be required, a revegetation plan has been included if seeding is necessary.









The entire site will then be backfilled with clean soil and revegetated (if warranted) to the standards of the appropriate regulatory agency or private surface owner.

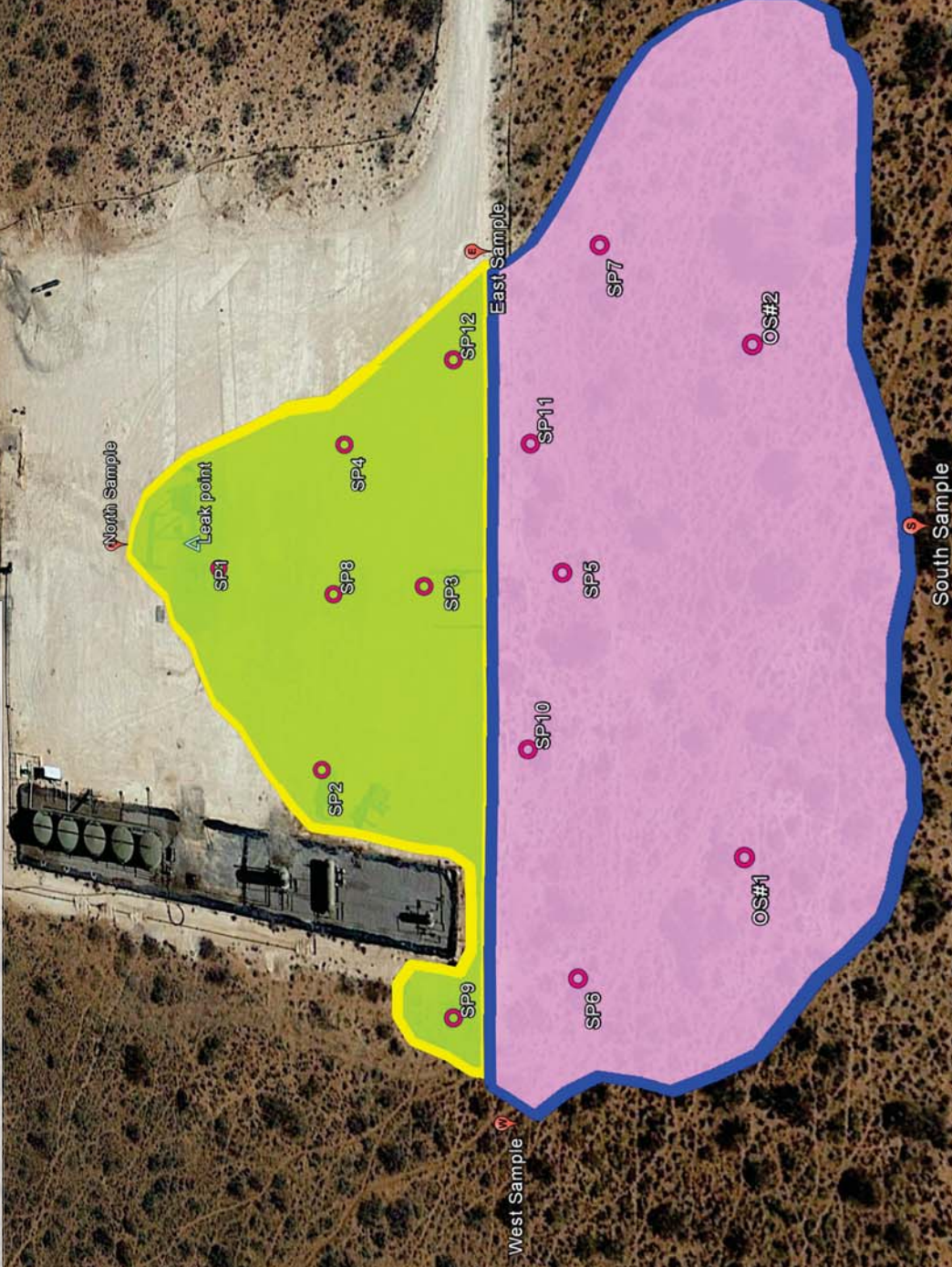
All excavated materials will be disposed of at an NMOCD-approved disposal facility.

COG, Macho Nacho State #002H

Leak date: 11/18/16
Lea County, NM
API# 30-025-39883
RP# 1RP-4520

Legend

-  East Sample
-  Leak point
-  North Sample
-  Overspray Area, Rake or Mow
-  Sample points, hand auger
-  South Sample
-  Spill Area, 6 Inch Excavation
-  West Sample



COG, Macho Nacho State #002H

Spill Area Samples, Hand Auger

SP1, GPS point: N 32.23427° W-103.60396°

SP2, GPS point: N 32.23410° W-103.60424°

SP3, GPS point: N 32.23394° W-103.60397°

SP4, GPS point: N 32.23406° W-103.60378°

SP8, GPS point: N 32.23407° W-103.60399°

SP9, GPS point: N 32.23390° W-103.60454°

SP12, GPS point: N 32.23389° W-103.60366°

Heavy Overspray Area Samples, Hand Auger

SP5, GPS point: N 32.23375° W-103.60394°

SP6, GPS point: N 32.23373° W-103.60446°

SP7, GPS point: N 32.23370° W-103.60352°

SP10, GPS point: N 32.23379° W-103.60417°

SP11, GPS point: N 32.23379° W-103.60377°

Light Overspray Area Samples, Hand Auger

OS #1, GPS point: N 32.23352° W-103.60427°

OS #2, GPS point: N 32.23351° W-103.60365°

Cardinal Samples, Hand Auger

North Sample, GPS point: N 32.23445° W-103.60394°

South Sample, GPS point: N 32.23332° W-103.60386°

East Sample, GPS point: N 32.23386° W-103.60352°

West Sample, GPS point: N 32.23382° W-103.60467°



New Mexico State Land Office Revegetation and Noxious Weed Management Plan

COG – MACHO NACHO STATE #002H

Revegetation Plan

Disturbed areas associated with the remediation efforts will be reseeded. If after one growing season, the vegetation has not taken hold, seeding may need to be repeated until revegetation is successful, as determined by the State Land Office. The seed will be spread by either using a hand-held broadcaster or tractor-mounted broadcaster and the area will be raked or dragged to cover the seed. Since the seed will be broadcast, the pounds per acre will be double over the amount used by drill planting.

The seed mixture will be the appropriate mixture for the specific site and planted in the required amounts of pounds pure live seed (PLS) per acre. Commercially sold seed will be either certified or registered and will not contain primary or secondary noxious weeds.

Gamma grass – 40% - 1.5 lbs. PLS

Buffalo grass – 40% - 1.5 lbs. PLS

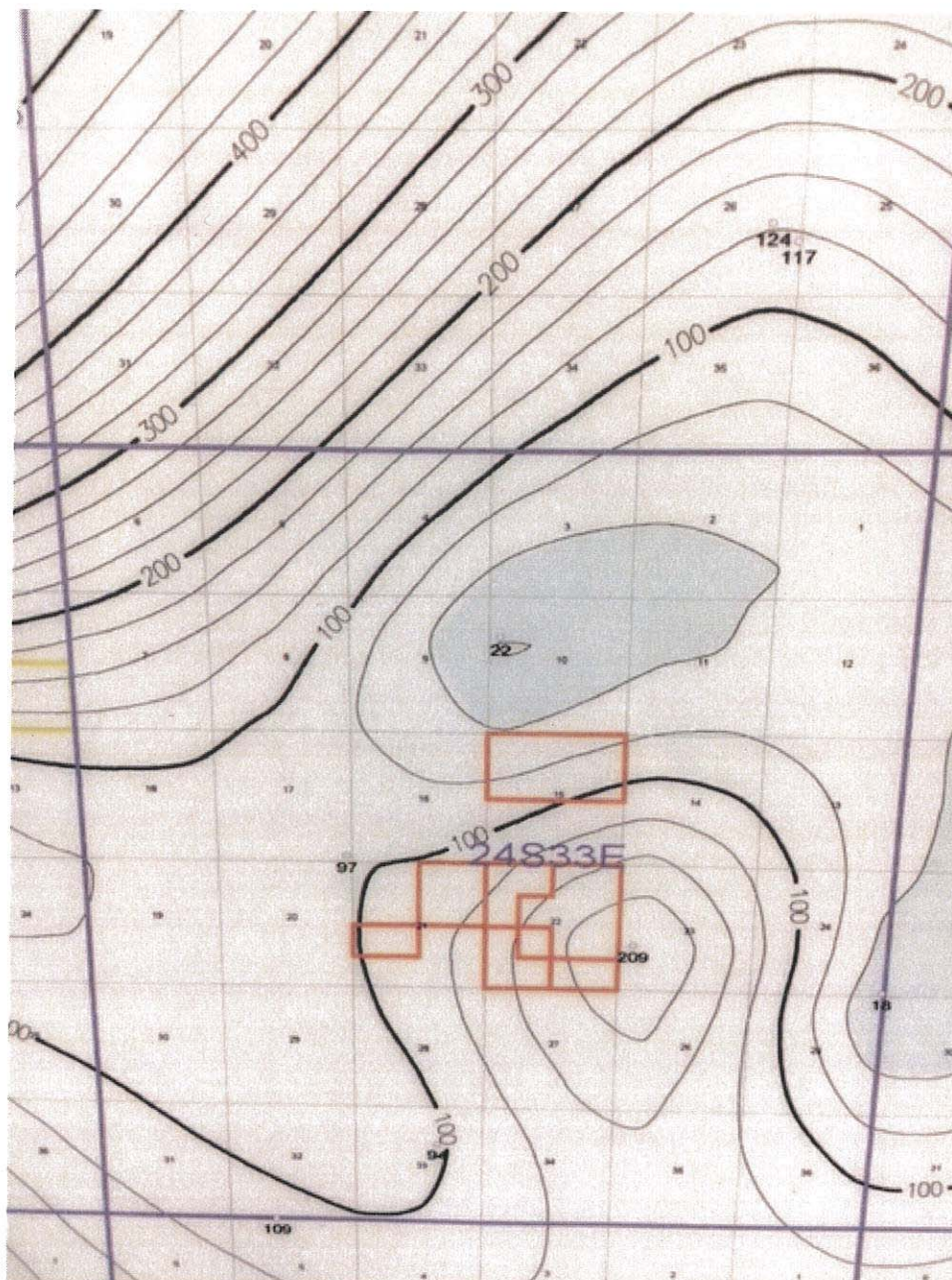
Side oats – 10% - 0.5% lbs. PLS

Four wing Salt bush – 10% - 1.5 lbs. PLS

Noxious Weed Management Plan

The site will be visited to assess the establishment of vegetative growth. Personnel performing the site visit will also look for the presence of noxious weeds at the site as indicated on the New Mexico Noxious Weeds List specified on the United States Department of Agriculture website. If a noxious weed is observed at the site, the NMSLO will be contacted to determine the most effective manner to eradicate it.

COG, Macho Nacho State #002H
U/L H, Section 07, T24S, R33E
Groundwater: 150'





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
C_03565 POD3			LE	3	4	08	24S	33E		632763	3566546	1493			1533

Average Depth to Water: 1533 feet

Minimum Depth: 1533 feet

Maximum Depth: 1533 feet

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 631432

Northing (Y): 3567224

Radius: 1700

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.

2/27/17 3:02 PM

WATER COLUMN/ AVERAGE DEPTH TO
WATER

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): mtrsNorthing (Y): mtrs**~~ Please keep screen open to copy UTM values for Reports. ~~**

Laboratory Analytical Results Summary
Macho Nacho State #002H

Analyte	Method	Sample Date	SP1 @ SURFACE	SP1 @ 1'
			1/18/17 mg/kg	1/18/17 mg/kg
Benzene	BTEX 8021B		0.13	<0.050
Toluene	BTEX 8021B		1.94	<0.050
Ethylbenzene	BTEX 8021B		1.48	<0.050
Total Xylenes	BTEX 8021B		6.93	<0.150
Total BTEX	BTEX 8021B		10.5	<0.300
GRO	TPH 8015M		145	<10.0
DRO	TPH 8015M		18600	<10.0

Analyte	Method	Sample Date	SP2 @ SURFACE	SP2 @ 1'
			1/18/17 mg/kg	1/18/17 mg/kg
Benzene	BTEX 8021B		<0.100	<0.050
Toluene	BTEX 8021B		1.49	<0.050
Ethylbenzene	BTEX 8021B		1.58	<0.050
Total Xylenes	BTEX 8021B		7.64	<0.150
Total BTEX	BTEX 8021B		10.7	<0.300
GRO	TPH 8015M		186	<10.0
DRO	TPH 8015M		13300	<10.0

Analyte	Method	Sample Date	SP3 @ SURFACE	SP3 @ 1'
			1/18/17 mg/kg	1/18/17 mg/kg
Benzene	BTEX 8021B		<0.100	<0.050
Toluene	BTEX 8021B		1.52	<0.050
Ethylbenzene	BTEX 8021B		1.54	<0.050
Total Xylenes	BTEX 8021B		7.39	<0.150
Total BTEX	BTEX 8021B		10.4	<0.300
GRO	TPH 8015M		215	<10.0
DRO	TPH 8015M		15600	<10.0

Analyte	Method	Sample Date	SP4 @ SURFACE	SP4 @ 1'
			1/18/17 mg/kg	1/18/17 mg/kg
Benzene	BTEX 8021B		<0.100	<0.050
Toluene	BTEX 8021B		1.86	<0.050
Ethylbenzene	BTEX 8021B		1.53	<0.050
Total Xylenes	BTEX 8021B		7.29	<0.150
Total BTEX	BTEX 8021B		10.7	<0.300
GRO	TPH 8015M		176	<10.0
DRO	TPH 8015M		17000	11.3

Analyte	Method	Sample Date	SP5 @ SURFACE	SP5 @ 1'
			1/18/17 mg/kg	1/18/17 mg/kg
Benzene	BTEX 8021B		<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300
GRO	TPH 8015M		<10.0	<10.0
DRO	TPH 8015M		103	<10.0

Analyte	Method	Sample Date	SP6 @ SURFACE	SP6 @ 1'
			1/18/17 mg/kg	1/18/17 mg/kg
Benzene	BTEX 8021B			<0.050
Toluene	BTEX 8021B		0.051	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300
GRO	TPH 8015M		<10.0	<10.0
DRO	TPH 8015M		154	<10.0

Analyte	Method	Sample Date	SP7 @ SURFACE	SP7 @ 1'
			1/18/17 mg/kg	1/18/17 mg/kg
Benzene	BTEX 8021B		<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050
Total Xylenes	BTEX 8021B		<0.150	<0.150
Total BTEX	BTEX 8021B		<0.300	<0.300
GRO	TPH 8015M		<10.0	<10.0
DRO	TPH 8015M		15.2	<10.0

Analyte	Method	Sample Date	OVERSPRAY #1 @ SURFACE	
			1/18/17 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	
GRO	TPH 8015M		<10.0	
DRO	TPH 8015M		<10.0	

Analyte	Method	Sample Date	OVERSPRAY #2 @ SURFACE	
			1/18/17 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	
GRO	TPH 8015M		<10.0	
DRO	TPH 8015M		<10.0	

Analyte	Method	Sample Date	NORTH SAMPLE @ SURFACE	
			1/18/17 mg/kg	
Benzene	BTEX 8021B			
Toluene	BTEX 8021B		<0.050	
Ethylbenzene	BTEX 8021B		<0.050	
Total Xylenes	BTEX 8021B		<0.150	
Total BTEX	BTEX 8021B		<0.300	
GRO	TPH 8015M		<10.0	
DRO	TPH 8015M		<10.0	

Analyte	Method	Sample Date	SOUTH SAMPLE @ SURFACE	
			1/18/17 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	
GRO	TPH 8015M		<10.0	
DRO	TPH 8015M		<10.0	

Analyte	Method	Sample Date	EAST SAMPLE @ SURFACE	
			1/18/17 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	
GRO	TPH 8015M		<10.0	
DRO	TPH 8015M		<10.0	

Analyte	Method	Sample Date	WEST SAMPLE @ SURFACE	
			1/18/17 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	
GRO	TPH 8015M		<10.0	
DRO	TPH 8015M		<10.0	

Laboratory Analytical Results Summary
Macho Nacho State #002H

Analyte	Method	Sample		SP8 @ SURFACE	SP8 @ 1'
		Date		5/2/17 mg/Kg	5/2/17 mg/Kg
Benzene	BTEX 8021B			<0.050	<0.050
Toluene	BTEX 8021B			0.076	<0.050
Ethylbenzene	BTEX 8021B			<0.050	<0.050
Total Xylenes	BTEX 8021B			0.161	<0.150
Total BTEX	BTEX 8021B			<0.300	<0.300
Chloride	SM4500Cl-B			144	64
GRO	TPH 8015M			<10.0	<10.0
DRO	TPH 8015M			1500	37.6

Analyte	Method	Sample		SP9 @ SURFACE	SP9 @ 1'
		Date		5/2/17 mg/Kg	5/2/17 mg/Kg
Benzene	BTEX 8021B			<0.050	<0.050
Toluene	BTEX 8021B			<0.050	<0.050
Ethylbenzene	BTEX 8021B			<0.050	<0.050
Total Xylenes	BTEX 8021B			<0.150	<0.150
Total BTEX	BTEX 8021B			<0.300	<0.300
Chloride	SM4500Cl-B			48	32
GRO	TPH 8015M			<10.0	<10.0
DRO	TPH 8015M			10.9	<10.0

Analyte	Method	Sample		SP10 @ SURFACE	SP10 @ 1'
		Date		5/2/17 mg/Kg	5/2/17 mg/Kg
Benzene	BTEX 8021B			<0.050	<0.050
Toluene	BTEX 8021B			<0.050	<0.050
Ethylbenzene	BTEX 8021B			<0.050	<0.050
Total Xylenes	BTEX 8021B			<0.150	<0.150
Total BTEX	BTEX 8021B			<0.300	<0.300
Chloride	SM4500Cl-B			48	32
GRO	TPH 8015M			<10.0	<10.0
DRO	TPH 8015M			<10.0	<10.0

Analyte	Method	Sample		SP11 @ SURFACE	SP11 @ 1'
		Date		5/2/17 mg/Kg	5/2/17 mg/Kg
Benzene	BTEX 8021B			<0.050	<0.050
Toluene	BTEX 8021B			<0.050	<0.050
Ethylbenzene	BTEX 8021B			<0.050	<0.050
Total Xylenes	BTEX 8021B			<0.150	<0.150
Total BTEX	BTEX 8021B			<0.300	<0.300
Chloride	SM4500Cl-B			80	32
GRO	TPH 8015M			<10.0	<10.0
DRO	TPH 8015M			<10.0	<10.0

Analyte	Method	Sample		SP12 @ SURFACE	SP12 @ 1'
		Date		5/2/17 mg/Kg	5/2/17 mg/Kg
Benzene	BTEX 8021B			<0.050	<0.050
Toluene	BTEX 8021B			0.094	<0.050
Ethylbenzene	BTEX 8021B			<0.050	<0.050
Total Xylenes	BTEX 8021B			0.193	<0.150
Total BTEX	BTEX 8021B			<0.300	<0.300
Chloride	SM4500Cl-B			128	32
GRO	TPH 8015M			<10.0	<10.0
DRO	TPH 8015M			1420	18.4

COG, Macho Nacho State #002H
Overspray Verification Pictures





January 27, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MACHO NACHO STATE #002H

Enclosed are the results of analyses for samples received by the laboratory on 01/23/17 11:50.

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,



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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 1 @ SURFACE (H700144-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.130	0.100	01/26/2017	ND	2.14	107	2.00	0.290	
Toluene*	1.94	0.100	01/26/2017	ND	2.11	106	2.00	0.0300	
Ethylbenzene*	1.48	0.100	01/26/2017	ND	2.16	108	2.00	0.0284	
Total Xylenes*	6.93	0.300	01/26/2017	ND	6.14	102	6.00	0.0495	
Total BTX	10.5	0.600	01/26/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: CK				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	145	50.0	01/24/2017	ND	194	97.0	200	1.79	
DRO >C10-C28	18600	50.0	01/24/2017	ND	185	92.7	200	7.85	

Surrogate: 1-Chlorooctane 102 % 35-147

Surrogate: 1-Chlorooctadecane 245 % 28-171

Cardinal Laboratories

*=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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 1 @ 1' (H700144-02)

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	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/24/2017	ND	194	97.0	200	1.79		
DRO >C10-C28	<10.0	10.0	01/24/2017	ND	185	92.7	200	7.85		

Surrogate: 1-Chlorooctane 92.7 % 35-147

Surrogate: 1-Chlorooctadecane 89.4 % 28-171

Cardinal Laboratories

*=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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 2 @ SURFACE (H700144-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	01/26/2017	ND	2.14	107	2.00	0.290	
Toluene*	1.49	0.100	01/26/2017	ND	2.11	106	2.00	0.0300	
Ethylbenzene*	1.58	0.100	01/26/2017	ND	2.16	108	2.00	0.0284	
Total Xylenes*	7.64	0.300	01/26/2017	ND	6.14	102	6.00	0.0495	
Total BTX	10.7	0.600	01/26/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	186	50.0	01/24/2017	ND	194	97.0	200	1.79		
DRO >C10-C28	13300	50.0	01/24/2017	ND	185	92.7	200	7.85		

Surrogate: 1-Chlorooctane 113 % 35-147

Surrogate: 1-Chlorooctadecane 196 % 28-171

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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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 2 @ 1' (H700144-04)

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	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/24/2017	ND	194	97.0	200	1.79		
DRO >C10-C28	<10.0	10.0	01/24/2017	ND	185	92.7	200	7.85		

Surrogate: 1-Chlorooctane 86.5 % 35-147

Surrogate: 1-Chlorooctadecane 92.3 % 28-171

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Analytical Results For:

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

Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 3 @ SURFACE (H700144-05)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	01/26/2017	ND	2.14	107	2.00	0.290	
Toluene*	1.52	0.100	01/26/2017	ND	2.11	106	2.00	0.0300	
Ethylbenzene*	1.54	0.100	01/26/2017	ND	2.16	108	2.00	0.0284	
Total Xylenes*	7.39	0.300	01/26/2017	ND	6.14	102	6.00	0.0495	
Total BTX	10.4	0.600	01/26/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 121 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	215	50.0	01/24/2017	ND	194	97.0	200	1.79		
DRO >C10-C28	15600	50.0	01/24/2017	ND	185	92.7	200	7.85		

Surrogate: 1-Chlorooctane 130 % 35-147

Surrogate: 1-Chlorooctadecane 212 % 28-171

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Analytical Results For:

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Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 3 @ 1' (H700144-06)

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	01/26/2017	ND	2.14	107	2.00	0.290	
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300	
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284	
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495	
Total BTEX	<0.300	0.300	01/26/2017	ND					

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

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/24/2017	ND	194	97.0	200	1.79	
DRO >C10-C28	<10.0	10.0	01/24/2017	ND	185	92.7	200	7.85	

Surrogate: 1-Chlorooctane 87.2 % 35-147

Surrogate: 1-Chlorooctadecane 84.0 % 28-171

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Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 4 @ SURFACE (H700144-07)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.100	0.100	01/26/2017	ND	2.14	107	2.00	0.290	
Toluene*	1.86	0.100	01/26/2017	ND	2.11	106	2.00	0.0300	
Ethylbenzene*	1.53	0.100	01/26/2017	ND	2.16	108	2.00	0.0284	
Total Xylenes*	7.29	0.300	01/26/2017	ND	6.14	102	6.00	0.0495	
Total BTEX	10.7	0.600	01/26/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 116 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	176	50.0	01/24/2017	ND	194	97.0	200	1.79		
DRO >C10-C28	17000	50.0	01/24/2017	ND	185	92.7	200	7.85		

Surrogate: 1-Chlorooctane 116 % 35-147

Surrogate: 1-Chlorooctadecane 247 % 28-171

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Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 4 @ 1' (H700144-08)

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	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/24/2017	ND	194	97.0	200	1.79		
DRO >C10-C28	11.3	10.0	01/24/2017	ND	185	92.7	200	7.85		

Surrogate: 1-Chlorooctane 91.7 % 35-147

Surrogate: 1-Chlorooctadecane 87.0 % 28-171

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Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 5 @ SURFACE (H700144-09)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2017	ND	2.14	107	2.00	0.290	
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300	
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284	
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495	
Total BTEx	<0.300	0.300	01/26/2017	ND					

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

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/24/2017	ND	194	97.0	200	1.79	
DRO >C10-C28	103	10.0	01/24/2017	ND	185	92.7	200	7.85	

Surrogate: 1-Chlorooctane 76.4 % 35-147

Surrogate: 1-Chlorooctadecane 75.0 % 28-171

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Cliff Brunson
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Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 5 @ 1' (H700144-10)

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	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/24/2017	ND	194	97.0	200	1.79		
DRO >C10-C28	<10.0	10.0	01/24/2017	ND	185	92.7	200	7.85		

Surrogate: 1-Chlorooctane 81.0 % 35-147

Surrogate: 1-Chlorooctadecane 78.4 % 28-171

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P.O. Box 805
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Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 6 @ SURFACE (H700144-11)

BTX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	0.051	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTX	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98		
DRO >C10-C28	154	10.0	01/25/2017	ND	185	92.7	200	4.22		

Surrogate: 1-Chlorooctane 78.1 % 35-147

Surrogate: 1-Chlorooctadecane 72.9 % 28-171

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Fax To: (575) 397-0397

Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 6 @ 1' (H700144-12)

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	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTEx	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98	
DRO >C10-C28	<10.0	10.0	01/25/2017	ND	185	92.7	200	4.22	

Surrogate: 1-Chlorooctane 93.5 % 35-147

Surrogate: 1-Chlorooctadecane 92.0 % 28-171

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Received:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 7 @ SURFACE (H700144-13)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98		
DRO >C10-C28	15.2	10.0	01/25/2017	ND	185	92.7	200	4.22		

Surrogate: 1-Chlorooctane 73.2 % 35-147

Surrogate: 1-Chlorooctadecane 73.7 % 28-171

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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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SP 7 @ 1' (H700144-14)

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	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98		
DRO >C10-C28	<10.0	10.0	01/25/2017	ND	185	92.7	200	4.22		

Surrogate: 1-Chlorooctane 86.4 % 35-147

Surrogate: 1-Chlorooctadecane 85.9 % 28-171

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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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: OVERSPRAY #1 @ SURFACE (H700144-15)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/26/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/26/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/26/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/26/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/26/2017	ND						

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

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98		
DRO >C10-C28	<10.0	10.0	01/25/2017	ND	185	92.7	200	4.22		

Surrogate: 1-Chlorooctane 96.0 % 35-147

Surrogate: 1-Chlorooctadecane 94.2 % 28-171

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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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: OVERSPRAY #2 @ SURFACE (H700144-16)

BTEx 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/27/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/27/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/27/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/27/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/27/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98		
DRO >C10-C28	<10.0	10.0	01/25/2017	ND	185	92.7	200	4.22		

Surrogate: 1-Chlorooctane 94.5 % 35-147

Surrogate: 1-Chlorooctadecane 97.5 % 28-171

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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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: NORTH SAMPLE @ SURFACE (H700144-17)

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	01/27/2017	ND	2.14	107	2.00	0.290	
Toluene*	<0.050	0.050	01/27/2017	ND	2.11	106	2.00	0.0300	
Ethylbenzene*	<0.050	0.050	01/27/2017	ND	2.16	108	2.00	0.0284	
Total Xylenes*	<0.150	0.150	01/27/2017	ND	6.14	102	6.00	0.0495	
Total BTEX	<0.300	0.300	01/27/2017	ND					

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

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98	
DRO >C10-C28	<10.0	10.0	01/25/2017	ND	185	92.7	200	4.22	

Surrogate: 1-Chlorooctane 83.4 % 35-147

Surrogate: 1-Chlorooctadecane 76.7 % 28-171

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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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: SOUTH SAMPLE @ SURFACE (H700144-18)

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	01/27/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/27/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/27/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/27/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/27/2017	ND						

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

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98		
DRO >C10-C28	<10.0	10.0	01/25/2017	ND	185	92.7	200	4.22		

Surrogate: 1-Chlorooctane 79.6 % 35-147

Surrogate: 1-Chlorooctadecane 80.2 % 28-171

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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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: EAST SAMPLE @ SURFACE (H700144-19)

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	01/27/2017	ND	2.14	107	2.00	0.290		
Toluene*	<0.050	0.050	01/27/2017	ND	2.11	106	2.00	0.0300		
Ethylbenzene*	<0.050	0.050	01/27/2017	ND	2.16	108	2.00	0.0284		
Total Xylenes*	<0.150	0.150	01/27/2017	ND	6.14	102	6.00	0.0495		
Total BTEX	<0.300	0.300	01/27/2017	ND						

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

TPH 8015M			mg/kg							
			Analyzed By: CK							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98		
DRO >C10-C28	<10.0	10.0	01/25/2017	ND	185	92.7	200	4.22		

Surrogate: 1-Chlorooctane 86.9 % 35-147

Surrogate: 1-Chlorooctadecane 84.5 % 28-171

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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:	01/23/2017	Sampling Date:	01/18/2017
Reported:	01/27/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG		

Sample ID: WEST SAMPLE @ SURFACE (H700144-20)

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	01/27/2017	ND	2.13	107	2.00	0.189		
Toluene*	<0.050	0.050	01/27/2017	ND	2.11	106	2.00	0.288		
Ethylbenzene*	<0.050	0.050	01/27/2017	ND	2.16	108	2.00	0.00954		
Total Xylenes*	<0.150	0.150	01/27/2017	ND	6.14	102	6.00	0.0936		
Total BTEX	<0.300	0.300	01/27/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.9 % 73.6-140

TPH 8015M		mg/kg		Analyzed By: CK						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	<10.0	10.0	01/25/2017	ND	188	94.1	200	1.98		
DRO >C10-C28	<10.0	10.0	01/25/2017	ND	185	92.7	200	4.22		

Surrogate: 1-Chlorooctane 84.2 % 35-147

Surrogate: 1-Chlorooctadecane 81.4 % 28-171

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
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



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

1082

Company Name: BBC International, Inc.		P.O. #:		BILL TO										ANALYSIS REQUEST									
Project Manager: Cliff Brunson		City: Hobbs		State: NM		Zip: 88241		Company: CG		Attn: Grubbs		Address:		City:		State:		Zip:		Phone #:		Fax #:	
Phone #: 575-397-6388		Fax #: 575-397-0397		Project Owner: CG		Project Name: MACHO NACHO STATE #002H		Project Location: LEA COUNTY, NM		Sampler Name: ROGER HERNANDEZ		FOR LAB USE ONLY		DATE		TIME		TPH		BTEX			

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		DATE	TIME										
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL												
H700144	SP1 @ SURFACE		1									1/18/17	9:15 AM										
	SP1 @ 1'		1									1/18/17	9:48 AM										
	SP2 @ SURFACE		1									1/18/17	10:08 AM										
	SP2 @ 1'		1									1/18/17	10:27 AM										
	SP3 @ SURFACE		1									1/18/17	10:42 AM										
	SP3 @ 1'		1									1/18/17	11:00 AM										
	SP4 @ SURFACE		1									1/18/17	11:15 AM										
	SP4 @ 1'		1									1/18/17	11:42 AM										
	SP5 @ SURFACE		1									1/18/17	12:00 PM										
	SP5 @ 1'		1									1/18/17	1:05 PM										

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Relinquished By: <i>Roger Hernandez</i>	Date: 1/18/17	Received By: <i>Roger Hernandez</i>	Time: 5:30 PM
Relinquished By: <i>Roger Hernandez</i>	Date: 1/18/17	Received By: <i>Roger Hernandez</i>	Time: 11:50 AM
Delivered By: (Circle One) <i>Roger Hernandez</i>	#75	2.40	CHECKED BY: <i>Roger Hernandez</i>
Sampler - UPS - Bus - Other: <input checked="" type="checkbox"/> UPS			

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

ORDINAL 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					
State: NM Zip: 88241					
Phone #: 575-397-6388 Fax #: 575-397-0397					
Project #:					
Project Owner: CDB					
Project Name: MACHO NACHO STATE #002H					
Project Location: LEA COUNTY, NM					
Sample Name: ROGER HERNANDEZ					
FOR LAB USE ONLY					
Lab I.D. Sample I.D.					
H700144					
SP6 @ SURFACE					
SP6 @ 1'					
SP7 @ SURFACE					
SP7 @ 1'					
OVERSPRAY #1 @ SURFACE					
OVERSPRAY #2 @ SURFACE					
NORTH SAMPLE@SURFACE					
SOUTH SAMPLE@SURFACE					
EAST SAMPLE @ SURFACE					
WEST SAMPLE @ SURFACE					
DATE TIME					
1/18/17 1:40 PM					
1/18/17 1:55 PM					
1/18/17 2:25 PM					
1/18/17 2:40 PM					
1/18/17 3:00 PM					
1/18/17 3:10 PM					
1/18/17 3:15 PM					
1/18/17 3:230 PM					
1/18/17 3:28 PM					
1/18/17 3:40 PM					
TPH BTEX					

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Relinquished By: [Signature] Date: 1/18/17 Received By: [Signature]					
Reinforced By: [Signature] Date: 1/18/17 Time: 1:30 PM					
Delivered By: (Circle One) Delivered By: [Signature] Time: 11:50 AM					
Sampler - UPS - Bus - Other: #75 2.40					
Sample Condition Cool Intact Yes No Checked BY: [Signature]					
REMARKS: Phone Result: Yes No Add'l Phone #: Fax Result: Yes No Add'l Fax #:					

May 12, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MACHO NACHO STATE #002H

Enclosed are the results of analyses for samples received by the laboratory on 05/04/17 16:55.

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,



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: 05/04/2017
Reported: 05/12/2017
Project Name: MACHO NACHO STATE #002H
Project Number: NONE GIVEN
Project Location: COG

Sampling Date: 05/02/2017
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: SP8 @ SURFACE (H701210-01)

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	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	0.076	0.050	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	<0.050	0.050	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	0.161	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTX	<0.300	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.8 % 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	144	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	1500	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 60.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 89.7 % 34.7-157

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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:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP8 @ 1' (H701210-02)

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	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	<0.050	0.050	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	<0.050	0.050	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	<0.150	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEX	<0.300	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 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	64.0	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	37.6	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 76.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 75.3 % 34.7-157

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Fax To: (575) 397-0397

Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP9 @ SURFACE (H701210-03)

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	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	<0.050	0.050	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	<0.050	0.050	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	<0.150	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEx	<0.300	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.0 % 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	48.0	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	10.9	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 88.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 85.2 % 34.7-157

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Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP9 @ 1' (H701210-04)

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	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	<0.050	0.050	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	<0.050	0.050	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	<0.150	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEX	<0.300	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 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	32.0	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	<10.0	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 84.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 83.7 % 34.7-157

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Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP10 @ SURFACE (H701210-05)

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	05/09/2017	ND	2.12	106	2.00	1.77		
Toluene*	<0.050	0.050	05/09/2017	ND	1.95	97.4	2.00	1.70		
Ethylbenzene*	<0.050	0.050	05/09/2017	ND	1.91	95.6	2.00	1.62		
Total Xylenes*	<0.150	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89		
Total BTEx	<0.300	0.300	05/09/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 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	48.0	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	<10.0	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 80.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 76.5 % 34.7-157

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Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP10 @ 1' (H701210-06)

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	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	<0.050	0.050	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	<0.050	0.050	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	<0.150	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEx	<0.300	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.3 % 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	32.0	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	<10.0	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 83.1 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.3 % 34.7-157

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Fax To: (575) 397-0397

Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP11 @ SURFACE (H701210-07)

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	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	<0.050	0.050	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	<0.050	0.050	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	<0.150	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEX	<0.300	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 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	80.0	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	<10.0	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 81.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.0 % 34.7-157

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Fax To: (575) 397-0397

Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP11 @ 1' (H701210-08)

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/11/2017	ND	2.11	106	2.00	0.434		
Toluene*	<0.050	0.050	05/11/2017	ND	2.11	105	2.00	0.179		
Ethylbenzene*	<0.050	0.050	05/11/2017	ND	2.08	104	2.00	0.0550		
Total Xylenes*	<0.150	0.150	05/11/2017	ND	6.21	103	6.00	0.209		
Total BTEX	<0.300	0.300	05/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 124 % 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	32.0	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	<10.0	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 82.9 % 28.3-164

Surrogate: 1-Chlorooctadecane 83.6 % 34.7-157

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Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP12 @ SURFACE (H701210-09)

BTEx 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/11/2017	ND	2.11	106	2.00	0.434		
Toluene*	0.094	0.050	05/11/2017	ND	2.11	105	2.00	0.179		
Ethylbenzene*	<0.050	0.050	05/11/2017	ND	2.08	104	2.00	0.0550		
Total Xylenes*	0.193	0.150	05/11/2017	ND	6.21	103	6.00	0.209		
Total BTEX	<0.300	0.300	05/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 126 % 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	128	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	1420	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 63.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 153 % 34.7-157

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Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MACHO NACHO STATE #002H	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG		

Sample ID: SP12 @ 1' (H701210-10)

BTEX 8021B		mg/kg		Analyzed By: BF						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	05/11/2017	ND	2.11	106	2.00	0.434		
Toluene*	<0.050	0.050	05/11/2017	ND	2.11	105	2.00	0.179		
Ethylbenzene*	<0.050	0.050	05/11/2017	ND	2.08	104	2.00	0.0550		
Total Xylenes*	<0.150	0.150	05/11/2017	ND	6.21	103	6.00	0.209		
Total BTEX	<0.300	0.300	05/11/2017	ND						

Surrogate: 4-Bromofluorobenzene (PID) 123 % 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	32.0	16.0	05/09/2017	ND	448	112	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	05/08/2017	ND	175	87.7	200	2.62	
DRO >C10-C28	18.4	10.0	05/08/2017	ND	181	90.6	200	4.90	

Surrogate: 1-Chlorooctane 81.7 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.4 % 34.7-157

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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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Celey D. Keene, Lab Director/Quality Manager

ORDINAL 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		Attn:																			
State: NM Zip: 88241		Address:																			
Phone #: 575-397-6388 Fax #: 575-397-0397		City:																			
Project #:		State:																			
Project Name: MACHO MACHO CT #0024		Zip:																			
Project Location:		Phone #:																			
Fax #:																					
Sampler Name: ROGER HERMANDEZ		PRESERV																			
FOR LAB USE ONLY		SAMPLING																			
Lab I.D.		Sample I.D.																			
#191210		(G)RAB OR (C)OMP.																			
		# CONTAINERS																			
		GROUNDWATER																			
		WASTEWATER																			
		SOIL																			
		OIL																			
		SLUDGE																			
		OTHER :																			
		ACID/BASE:																			
		ICE / COOL																			
		OTHER :																			
		DATE																			
		TIME																			
1 SP8 @ SURFACE		5-2-17 830		TPH																	
2 SP8 @ SURFACE		5-2-17 850		BTEX																	
3 SP8 @ SURFACE		5-2-17 915		CL-																	
4 SP10 @ SURFACE		5-2-17 948																			
5 SP10 @ SURFACE		5-2-17 1020																			
6 SP11 @ SURFACE		5-2-17 1055																			
7 SP11 @ SURFACE		5-2-17 1130																			
8 SP12 @ SURFACE		5-2-17 1208																			
9 SP12 @ SURFACE		5-2-17 1115																			
10 SP12 @ SURFACE		5-2-17 1140																			
PLEASE NOTE: Liability and Damages. Cardholder's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the service. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal regardless of whether such claim is based upon any of the above stated remedies or otherwise.		Relinquished By: Roger Hernandez		Date: 5-3-17		Time: 4:55		Received By: Jamarra Schaefer		Date: 5-4-17		Time: 4:55		Delivered By: (Circle One) Sampler - UPS - Bus - Other: -11.46		Sample Condition Cool Intact Yes No		CHECKED BY: (Initials) TP.HYS		REMARKS:	

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:	MACHO NACHO STATE #002H	Facility Type:	Well
Surface Owner:	State	Mineral Owner:	API No. 30-025-39883

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	07	24S	33E	1870'	North	330'	East	Lea

Latitude 32.2343559 Longitude 103.6039429

NATURE OF RELEASE

Type of Release:	Oil	Volume of Release:	50bbls	Volume Recovered:	45bbls
Source of Release:	Wellhead	Date and Hour of Occurrence:	11-18-2016 06:30 am	Date and Hour of Discovery:	11-18-2016 06:30 am
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Ms. Lynch -NMOCD / Ms. Groves - SLO		
By Whom?	Rebecca Haskell	Date and Hour:	Fri 11/18/2016 2:18 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.*



Describe Cause of Problem and Remedial Action Taken.*

Polish rods broke causing the stuffing box to blowout. Replace polish rods and packing on the well.

Describe Area Affected and Cleanup Action Taken.*

This release occurred on the pad and over sprayed into 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:			
Printed Name:	Robert Grubbs Jr.	Approved by Environmental Specialist: 	
Title:	Senior HSE Coordinator	Approval Date:	11/23/2016
E-mail Address:	rgrubbs@concho.com	Expiration Date:	1/23/2017
Date:	November 21, 2016	Phone:	432-683-7443
		Conditions of Approval:	Attached <input type="checkbox"/> 1RP 4520
		Please see attached directive	

* Attach Additional Sheets If Necessary

nKL1632835278
pKL1632835544

From: Cliff Brunson
To: "Yu, Olivia, EMNRD"; "Amber Groves"
Cc: "Robert Grubbs"; "Ken Swinney"; "Jennifer Gilkey"; "Kathy Purvis"
Subject: RE: COG - Macho Nacho State #002H (1RP-4520) - Delineation Workplan
Date: Thursday, April 20, 2017 6:25:51 PM

Olivia,

We will address your listed concerns and update the workplan for 1RP-4520 and send to you when the additional information is collected.

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
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Fax: (575) 397-0397
E-Mail: cbrunson@bbcinternational.com



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From: Yu, Olivia, EMNRD [mailto:Olivia.Yu@state.nm.us]
Sent: Thursday, April 13, 2017 3:20 PM
To: Cliff Brunson <cbrunson@bbcinternational.com>; Amber Groves <agroves@slo.state.nm.us>
Cc: Robert Grubbs <RGrubbs@concho.com>; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey <jgilkey@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>
Subject: RE: COG - Macho Nacho State #002H (1RP-4520) - Delineation Workplan

Dear Mr. Brunson:

Please address these concerns regarding the delineation workplan for 1RP-4520:

1. The Google Earth image does not appear to show the presence of a berm between the pad and pasture. Please provide photographic evidence that the release did not flow into the pasture and impact to pasture was only overspray.

2. Additional sample points are requested based on potential pooling locations and distance between current sample locations:
 - a. 3 in the spill area: behind the battery (northeast of the West Sample location), west of East Sample location, and center of SP1-4.
 - b. 2 in the spray area: closer to the pad, southwest and southeast of SP3 (between SP5 & SP6 and between SP5 & SP7).
3. In addition to Benzene, BTEX, and TPH, laboratory analyses for all sample points need to include chlorides. The production log for this well notes that 473 bbls of produced water was recorded for 17 days of production in November 2016.
4. Like approval from SLO is needed for the delineation workplan as well as a revegetation plan.

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 [<mailto:cbrunson@bbcinternational.com>]
Sent: Friday, March 24, 2017 2:05 PM
To: Yu, Olivia, EMNRD <Olivia.Yu@state.nm.us>; Amber Groves <agroves@slo.state.nm.us>
Cc: Robert Grubbs <RGrubbs@concho.com>; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey <jgilkey@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>
Subject: COG - Macho Nacho State #002H (1RP-4520) - Delineation Workplan

Olivia and Amber,

Please find the attached Delineation Workplan and remediation proposal for the COG Macho Nacho State #002H (1RP-4520). COG is requesting that you review this plan and is looking forward to the OCD's and SLO's approval.

If you have any questions, please let me know.

Thanks, Cliff

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.
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