Closure Report

Site Description	
Site Name:	MOC SWD #001
Company:	Oxy Permian
Legal Description:	U/L K, Section 7, T20S, R25E
County:	Eddy County, NM
GPS Coordinates:	N 32.58641º W-104.52663º

Release Data	
Date of Release:	03/15/2017
Type of Release:	Produced water
Source of Release:	Compromised 4” steel disposal line
Volume of Release:	20 bbls
Volume Recovered:	10 bbls

Remediation Specifications		
Remediation Parameters:	Excavate the entire spill to a depth of 6 inches. Backfill the site with clean soil.	
Remediation Activities:	02/09/2018 to 02/13/2018	
Plan Sent to OCD:	09/14/2017	Email from Cliff Brunson to Mike Bratcher
OCD Approval of Plan:	09/21/2017	Email from Mike Bratcher to Cliff Brunson
Plan Sent to BLM:	09/14/2017	Email from Cliff Brunson to Shelly Tucker
BLM Approval of Plan:	10/03/2017	Email from Shelly Tucker to Cliff Brunson

Supporting Documentation	
Initial C-141	Signed 04/04/2017
Final C-141	Upon completion
Site Diagram	March 2017
Groundwater Plot	175’
TOPO Maps	March 2017
Lab Summary	04/07/2017
Lab Analysis	04/07/2017
Correspondence	Request and approval of remediation plan via email

Request for Closure

Based on the completion of the remediation plan, Oxy Permian requests closure approval from NMOCD.

Wade Dittrich, Environmental Specialists, Oxy Permian 02/20/2018

NM OIL CONSERVATION
ARTESIA DISTRICT

APR 0 4 2017

RECEIVED

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-14
Revised August 8, 20
Submit Copy to appropriate District Office in accordance with 19.15.29 NMA

Release Notification and Corrective Action

nAB1710036047

OPERATOR

☒ Initial Report ☐ Final Repo

Name of Company Oxy Permian Ltd. 192463	Contact Casey Summers
Address PO Box 4294; Houston, TX 77210	Telephone No. (575) 513-8289
Facility Name MOC SWD #001	Facility Type SWD

Surface Owner BLM	Mineral Owner	API No. 30-015-21669

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	7	20S	25E					Eddy County, NM

Latitude N 32.58641° **Longitude** W 104.52663°

NATURE OF RELEASE

Type of Release Produced water	Volume of Release 20 bbls	Volume Recovered 10 bbls
Source of Release Compromised 4" steel disposal line	Date and Hour of Occurrence 03/15/2017	Date and Hour of Discovery
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher, Crystal Weaver-NMOCD; Shelly Tucker-BLM	
By Whom? Jennifer Gilkey @ BBC International	Date and Hour 03/16/2017 @ 4:25 pm	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A compromised steel disposal line caused a leak of 20 bbls of produced water. A vacuum truck recovered 10 bbls of water and the line was repaired.

Describe Area Affected and Cleanup Action Taken.*

The affected area is approximately 200' x 125' on location just south of the wellhead. Remediation will be completed in accordance with a remediation plan approved by both NMOCD and the BLM.

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: Casey Summers

Title: NM Environmental Advisor

E-mail Address: Casey_Summers@oxy.com

Date: 4-4-17 Phone: (575) 513-8289

OIL CONSERVATION DIVISION

Signed By Mike Bratcher

Approved by Environmental Specialist:

Approval Date: 4/4/17 Expiration Date: N/A

Conditions of Approval: See attached

Attached ☒

* Attach Additional Sheets If Necessary

2RP-4163

Operator/Responsible Party,

The OCD has received the form C-141 you provided on 4/4/2017 regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4163 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

> *The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.* [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District 2 office in ARTESIA on or before 5/4/2017. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.

- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C_6 thru C_{36}), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.

- Nominal detection limits for field and laboratory analyses must be provided.

- Composite sampling is not generally allowed.

- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

•Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

• If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

• Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold
OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Bratcher, Mike, EMNRD

From: Casey_Summers@oxy.com
Sent: Tuesday, April 4, 2017 2:08 PM
To: stucker@blm.gov; Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD
Cc: cbrunson@bbcinternational.com; kswinney@bbcinternational.com; kathy@bbcinternational.com; Jennifer_Hudgens@oxy.com; jgilkey@bbcinternational.com
Subject: RE: MOC SWD 1 (3-15-2017)
Attachments: Initial C-141, MOC SWD#001.pdf

I Apologize, the file was saved as initial and final but this is only the initial C-141 for the MOC SWD #1. Please see the correctly saved file attached for your records.

Casey Summers
O: (575)-628-4152
C: (575)-513-8289

From: Summers, Casey L
Sent: Tuesday, April 04, 2017 1:55 PM
To: Tucker, Shelly <stucker@blm.gov>; mike.bratcher@state.nm.us; crystal.weaver@state.nm.us
Cc: Cliff Brunson <cbrunson@bbcinternational.com>; Ken Swinney <kswinney@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>; Hudgens, Jennifer A <Jennifer_Hudgens@oxy.com>; 'Jennifer Gilkey' <jgilkey@bbcinternational.com>
Subject: MOC SWD 1 (3-15-2017)

Attached is the initial C-141 for a leak that occurred at the MOC SWD 1 on 03/15/2017 in Eddy County, NM. Receipt notification and the RP number via email are greatly appreciated.

Thanks You

Casey Summers
O: (575)-628-4152
C: (575)-513-8289

From: Jennifer Gilkey [mailto:jgilkey@bbcinternational.com]
Sent: Friday, March 17, 2017 2:38 PM
To: Tucker, Shelly <stucker@blm.gov>; mike.bratcher@state.nm.us; crystal.weaver@state.nm.us
Cc: Cliff Brunson <cbrunson@bbcinternational.com>; Ken Swinney <kswinney@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>; Summers, Casey L <Casey_Summers@oxy.com>; Hudgens, Jennifer A <Jennifer_Hudgens@oxy.com>
Subject: [EXTERNAL] RE: MOC SWD 1

The leak date was March 15, 2017.

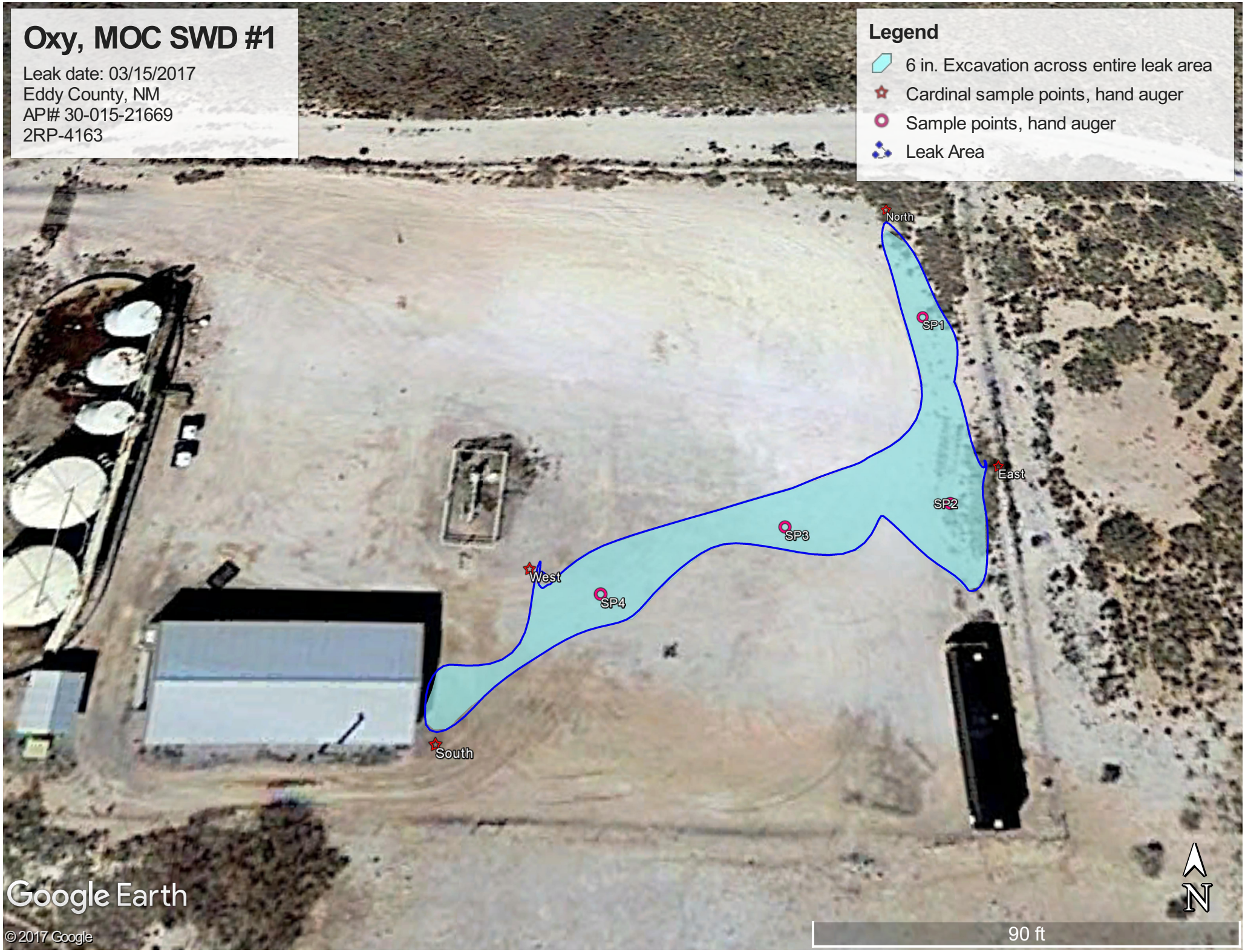
****
Jennifer Gilkey
Administrative Manager
BBC International, Inc.
Phone: (575) 397-6388
Fax: (575) 397-0397

E-mail: jgilkey@bbcinternational.com
1324 W. Marland Blvd.
Hobbs, NM 88240
****

From: Jennifer Gilkey [mailto:jgilkey@bbcinternational.com]
Sent: Thursday, March 16, 2017 4:25 PM
To: Tucker, Shelly (stucker@blm.gov); Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us> (mike.bratcher@state.nm.us); 'crystal.weaver@state.nm.us'
Cc: Cliff Brunson ; Ken Swinney; Kathy Purvis ; Casey Summers (casey_summers@Oxy.com); 'Jennifer_Hudgens@oxy.com'
Subject: MOC SWD 1

This is to inform you that Oxy Permian had a leak at the MOC SWD 0001. Oxy spilled 20 bbls of water. The preliminary report shows the leak measuring approximately 25' x 120' on location. The release is located in U/L K of Section 7, T20S, R25E of Eddy County, NM. BBC International will remediate the location at a later date and an initial C-141 will follow. Driving directions: From US285 and White Pine Rd, go 3.9 miles to MOC sign, turn right 0.5 mile to 'Y', turn left on Picket Rd west for 3.1 miles to MOC sign, turn right 1.4 miles, turn right 0.1 mile to dead end at location. API# 30-015-21669 GPS coordinates N 32.58641 W104.52663

****
Jennifer Gilkey
Administrative Manager
BBC International, Inc.
Phone: (575) 397-6388
Fax: (575) 397-0397
E-mail: jgilkey@bbcinternational.com
1324 W. Marland Blvd.
Hobbs, NM 88240
****


Oxy, MOC SWD #1
Leak date: 03/15/2017
Eddy County, NM
API# 30-015-21669
2RP-4163
Legend
6 in. Excavation across entire leak area
Cardinal sample points, hand auger
Sample points, hand auger
Leak Area
North
East
South
West
SP1
SP2
SP3
SP4
Google Earth
© 2017 Google
N
90 ft

Oxy, MOC SWD #1

Sample points, hand auger

SP1, N 32.58661 W-104.52629

SP2, N 32.58646 W-104.52629

SP3, N 32.58644 W-104.52643

SP4, N 32.58639 W-104.52657

NORTH, N 32.58671 W-104.52631

SOUTH, N 32.58629 W-104.52669

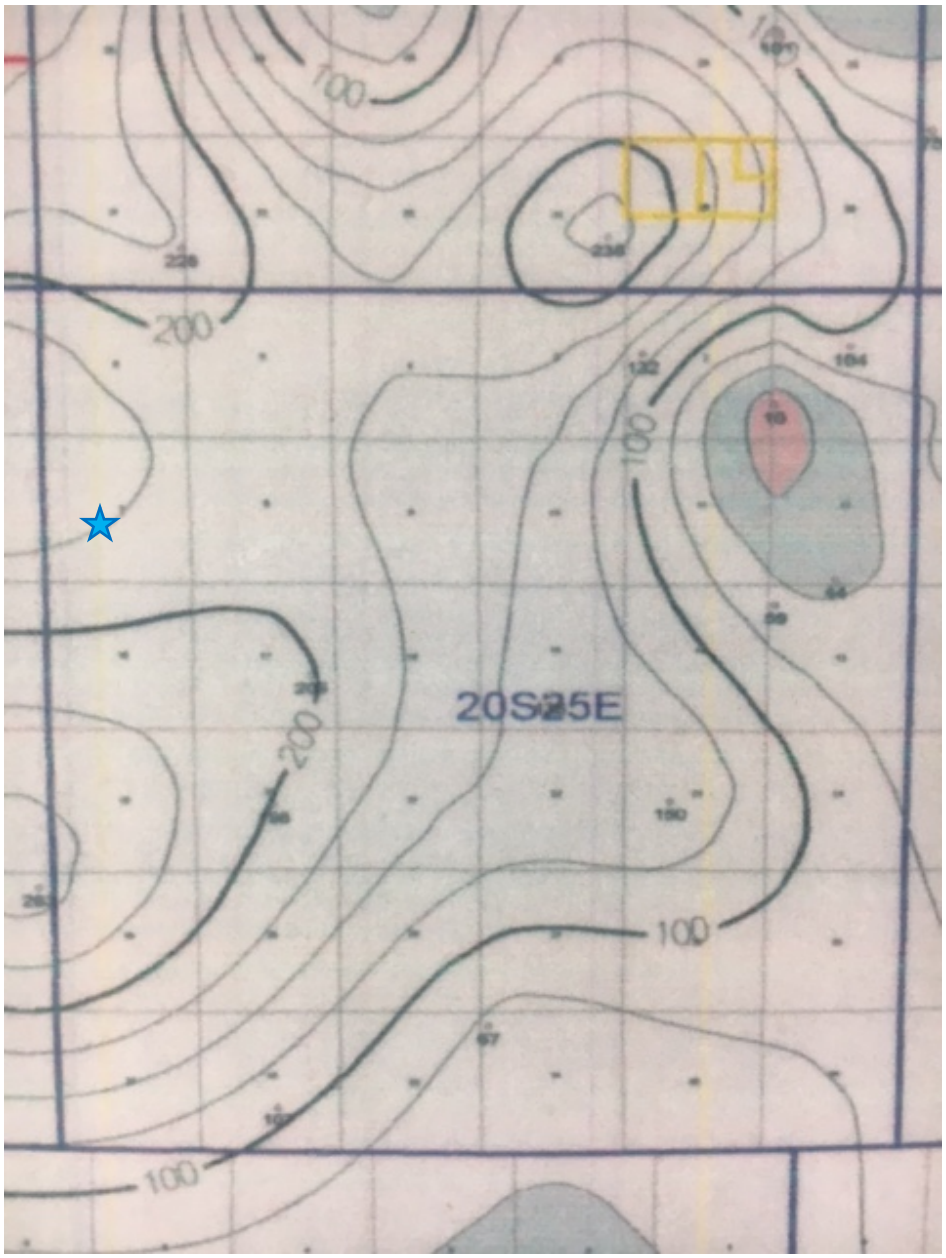
EAST, N 32.58648 W-104.52625

WEST, N 32.58641 W-104.52663

Oxy, MOC SWD #001

U/L K, Section 7, T20S, R25E

Groundwater: 175’



New Mexico Office of the State Engineer
Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 03265			ED	1	2	3	08	20S	25E	545972	3605636*	1540	150		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 544435 **Northing (Y):** 3605539 **Radius:** 1700

***UTM location was derived from PLSS - see Help**

Public Land Survey System (PLSS)

Q64: Q16: NE Q4: SW Sec: 07 Tws: 20S Rng: 25E

State Plane Coordinate System - NAD27

X: 0 ft Y: 0 ft Zone:

State Plane Coordinate System - NAD83

X: 0 ft Y: 0 ft Zone:

Degrees/Minutes/Seconds

Longitude (X): Degrees: 0 ° Minutes: 0 ' Seconds: 0 "

Latitude (Y): Degrees: 0 ° Minutes: 0 ' Seconds: 0 "

UTM - NAD27

Easting (X): 0 mtrs Northing (Y): 0 mtrs Zone:

SUBMIT

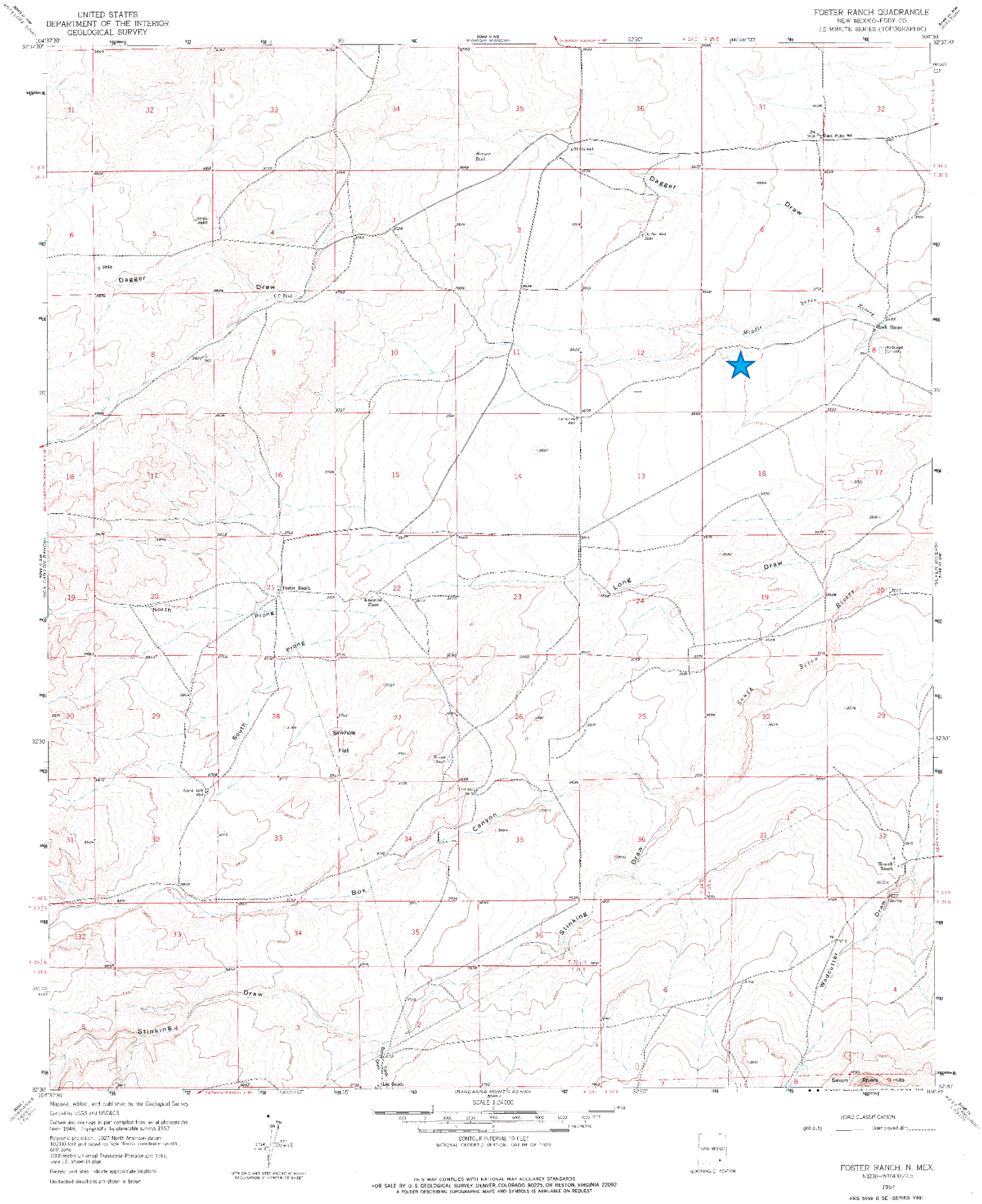
All Conversion Results are displayed as NAD 1983 UTM Zone 13

Easting (X): 544435.0 mtrs Northing (Y): 3605539.0 mtrs

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

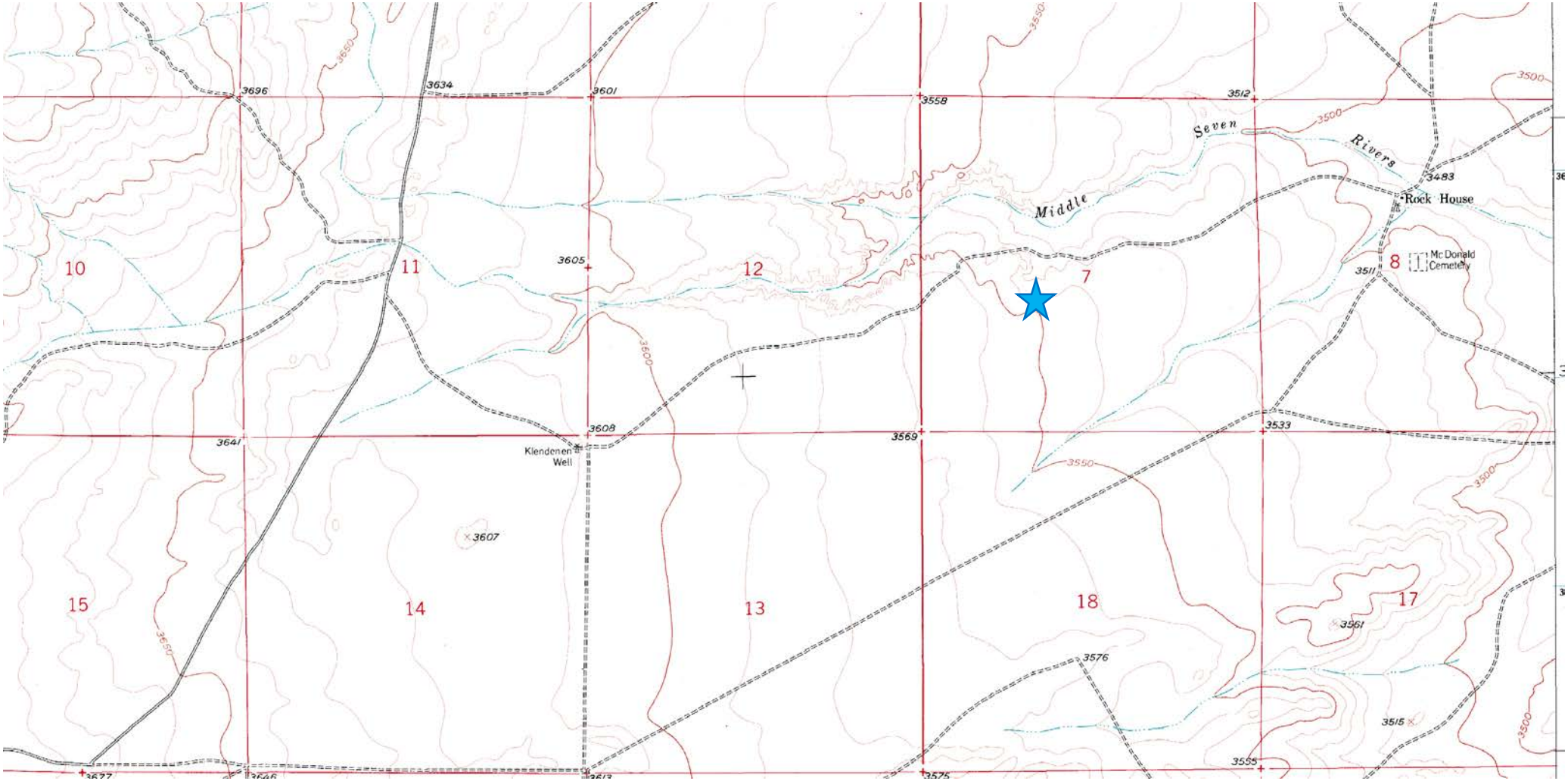
Oxy

MOC SWD #001



Oxy

MOC SWD #001



Laboratory Analytical Results Summary
MOC SWD #1

		Sample	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'	SP1 @ 8'
Analyte	Method	Date	4/7/17	4/7/17	4/7/17	4/7/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		**400**	**592**	**80**	**48**
GRO	TPH 8015M		<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a

		Sample	NORTH @ SURFACE
Analyte	Method	Date	4/7/17
			mg/Kg
Chloride	SM4500Cl-B		**208**

		Sample	EAST @ SURFACE
Analyte	Method	Date	4/7/17
			mg/Kg
Chloride	SM4500Cl-B		**208**

		Sample	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'	SP2 @ 8'
Analyte	Method	Date	4/7/17	4/7/17	4/7/17	4/7/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		**720**	**416**	**96**	**16**

		Sample	WEST @ SURFACE
Analyte	Method	Date	4/7/17
			mg/Kg
Chloride	SM4500Cl-B		**224**

		Sample	SOUTH @ SURFACE
Analyte	Method	Date	4/7/17
			mg/Kg
Chloride	SM4500Cl-B		**224**

		Sample	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'	SP3 @ 8'
Analyte	Method	Date	4/7/17	4/7/17	4/7/17	4/7/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Toluene	BTEX 8021B		<0.050	n/a	n/a	n/a
Ethylbenzene	BTEX 8021B		<0.050	n/a	n/a	n/a
Total Xylenes	BTEX 8021B		<0.150	n/a	n/a	n/a
Total BTEX	BTEX 8021B		<0.300	n/a	n/a	n/a
Chloride	SM4500Cl-B		**560**	**544**	**80**	**80**
GRO	TPH 8015M		<10.0	n/a	n/a	n/a
DRO	TPH 8015M		<10.0	n/a	n/a	n/a

Sum

		Sample	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'	SP4 @ 8'
Analyte	Method	Date	4/7/17	4/7/17	4/7/17	4/7/17
			mg/Kg	mg/Kg	mg/Kg	mg/Kg
Chloride	SM4500Cl-B		**544**	**560**	**32**	**32**

CARDINAL Laboratories

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

April 13, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MOC SWD #1

Enclosed are the results of analyses for samples received by the laboratory on 04/10/17 11:22.

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 accreditated 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

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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:	04/10/2017	Sampling Date:	04/07/2017
Reported:	04/13/2017	Sampling Type:	Soil
Project Name:	MOC SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	INDIAN BASIN		

Sample ID: SP1 @ 1 (H700946-01)

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	04/12/2017	ND	1.78	88.9	2.00	0.00	
Toluene*	<0.050	0.050	04/12/2017	ND	1.67	83.4	2.00	0.00	
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.66	83.0	2.00	0.00	
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.69	78.1	6.00	0.00	
Total BTEX	<0.300	0.300	04/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *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	**400**	16.0	04/12/2017	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	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	

Surrogate: 1-Chlorooctane *89.3 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *90.4 %* *34.7-157*

Sample ID: SP1 @ 2 (H700946-02)

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**592**	16.0	04/12/2017	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	04/10/2017	Sampling Date:	04/07/2017
Reported:	04/13/2017	Sampling Type:	Soil
Project Name:	MOC SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	INDIAN BASIN		

Sample ID: SP1 @ 3 (H700946-03)

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	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP1 @ 8 (H700946-04)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP2 @ 1 (H700946-05)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**720**	16.0	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP2 @ 2 (H700946-06)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP2 @ 3 (H700946-07)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**96.0**	16.0	04/12/2017	ND	432	108	400	3.64	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	04/10/2017	Sampling Date:	04/07/2017
Reported:	04/13/2017	Sampling Type:	Soil
Project Name:	MOC SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	INDIAN BASIN		

Sample ID: SP2 @ 8 (H700946-08)

Chloride, SM4500Cl-B mg/kg Analyzed By: AC

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP3 @ 1 (H700946-09)

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	04/12/2017	ND	1.78	88.9	2.00	0.00	
Toluene*	<0.050	0.050	04/12/2017	ND	1.67	83.4	2.00	0.00	
Ethylbenzene*	<0.050	0.050	04/12/2017	ND	1.66	83.0	2.00	0.00	
Total Xylenes*	<0.150	0.150	04/12/2017	ND	4.69	78.1	6.00	0.00	
Total BTEX	<0.300	0.300	04/12/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.4 %* *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	**560**	16.0	04/12/2017	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	04/11/2017	ND	194	96.8	200	2.14	
DRO >C10-C28	<10.0	10.0	04/11/2017	ND	200	100	200	3.91	

Surrogate: 1-Chlorooctane *86.9 %* *28.3-164*

Surrogate: 1-Chlorooctadecane *90.5 %* *34.7-157*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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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:	04/10/2017	Sampling Date:	04/07/2017
Reported:	04/13/2017	Sampling Type:	Soil
Project Name:	MOC SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	INDIAN BASIN		

Sample ID: SP3 @ 2 (H700946-10)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**544**	16.0	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP3 @ 3 (H700946-11)

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	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP3 @ 8 (H700946-12)

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	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP4 @ 1 (H700946-13)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**544**	16.0	04/12/2017	ND	432	108	400	3.64	

Sample ID: SP4 @ 2 (H700946-14)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**560**	16.0	04/12/2017	ND	432	108	400	3.64	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	04/10/2017	Sampling Date:	04/07/2017
Reported:	04/13/2017	Sampling Type:	Soil
Project Name:	MOC SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	INDIAN BASIN		

Sample ID: SP4 @ 3 (H700946-15)

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	04/12/2017	ND	448	112	400	0.00	

Sample ID: SP4 @ 8 (H700946-16)

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	04/12/2017	ND	448	112	400	0.00	

Sample ID: N @ SUR (H700946-17)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	04/12/2017	ND	448	112	400	0.00	

Sample ID: E @ SUR (H700946-18)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**208**	16.0	04/12/2017	ND	448	112	400	0.00	

Sample ID: W @ SUR (H700946-19)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	04/12/2017	ND	448	112	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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:	04/10/2017	Sampling Date:	04/07/2017
Reported:	04/13/2017	Sampling Type:	Soil
Project Name:	MOC SWD #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Celey D. Keene
Project Location:	INDIAN BASIN		

Sample ID: S @ SUR (H700946-20)

Chloride, SM4500Cl-B **mg/kg** **Analyzed By: AC**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**224**	16.0	04/12/2017	ND	448	112	400	0.00	

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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:** OXY
Project Name:	MOC SWD #1
Project Location:	Indian Basin
Sampler Name:	VO

BILL TO

P.O. #:	
Company:	OXY
Attn:	Summers
Address:	
City:	
State:	**Zip:**
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	BTEX	TPH	Cl-
H700940 01	Spl #1	G	1			X					X		9-7	905	X	X	X
02	#2	G	1			X					X			911			X
03	#3	G	1			X					X			930			X
04	#4	G	1			X					X			1019			X
05	Sp 2 #1	G	1			X					X			1038			X
06	#2	G	1			X					X			1045			X
07	#3	G	1			X					X			1111			X
08	#4	G	1			X					X			1150			X
09	Sp 3 #1	G	1			X					X			1255	X	X	X
10	#2	G	1			X					X			111			X

Relinquished By:	**Date:** 9-10-17	**Received By:**	
	Time: 11:22		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Delivered By: (Circle One) Sampler - UPS - Bus - Other: -11°C

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

CHECKED BY: (Initials) Coll #75

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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:** OXY
Project Name:	MOC SWD #1
Project Location:	Indian Basin
Sampler Name:	VO

BILL TO

P.O. #:	
Company:	OXY
Attn:	Summers
Address:	
City:	
State:	**Zip:**
Phone #:	
Fax #:	

ANALYSIS REQUEST

BTEX, TPH, Cl

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	BTEX	TPH	Cl
H100946-11	SP SC 3	C	1			X					X		4-7	129			X
12	6	C	1			X					X			159			X
13	SP AC 1	C	1			X					X			215			X
14	2	C	1			X					X			230			X
15	3	C	1			X					X			240			X
16	8	C	1			X					X			259			X
17	V @ Surf	C	1			X					X			301			X
18	E @ Surf	C	1			X					X			305			X
19	W @ Surf	C	1			X					X			309			X
20	SC @ Surf	C	1			X					X		V	315			X

Relinquished By:	**Date:** 4-10-17	**Received By:**	
	Time: 11:22		
Relinquished By:	**Date:**	**Received By:**	
	Time:		

Delivered By: (Circle One)
Sampler - UPS - Bus - Other: -11°C

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

CHECKED BY: (Initials) CK HTS

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

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

From:	Bratcher, Mike, EMNRD
To:	Cliff Brunson; Shelly Tucker
Cc:	Wade Dittrich; Jennifer_Smith@oxy.com; Weaver, Crystal, EMNRD; Ken Swinney; Jennifer Gilkey; Kathy Purvis
Subject:	RE: OXY MOC SWD #1 (2RP-4163) - Delineation Workplan
Date:	Thursday, September 21, 2017 9:53:48 AM

RE: OXY USA * MOC SWD 1 * 2RP-4163 * DOR: 3/15/17

Cliff,

Your proposal for remediation of the above referenced release is approved. Federal sites will require like approval from BLM. Please advise once remedial activities have been scheduled.

Mike Bratcher
NMOCD District 2
811 South First Street
Artesia, NM 88210
575-748-1283 Ext 108

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: Thursday, September 14, 2017 6:53 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Shelly Tucker <stucker@blm.gov>
Cc: Wade Dittrich <Wade_Dittrich@oxy.com>; Jennifer_Smith@oxy.com; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey <jgilkey@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>
Subject: OXY MOC SWD #1 (2RP-4163) - Delineation Workplan

Mike and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the OXY MOC SWD #1 (2RP-4163). OXY is requesting that you review this plan and is looking forward to both the OCD's and BLM's approval. Mike, this plan is one we discussed recently.

If you have any questions, please let me know.

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

****

****

From:	Tucker, Shelly
To:	Bratcher, Mike, EMNRD
Cc:	Cliff Brunson; Wade Dittrich; Jennifer_Smith@oxy.com; Weaver, Crystal, EMNRD; Ken Swinney; Jennifer Gilkey; Kathy Purvis
Subject:	Re: OXY MOC SWD #1 (2RP-4163) - Delineation Workplan
Date:	Tuesday, October 3, 2017 4:24:59 PM

BLM concurs with NMOCD approval.

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

Sincerely,

Shelly J Tucker

Environmental Protection Specialist
O&G Spill/Release Coordinator

Bureau of Land Management
620 E. Greene St
Carlsbad, NM 88220

575.234.5905 - Direct
575.361.0084 - Cellular
575.234.6235 - Emergency Spill Number

stucker@blm.gov

The **BLM acceptance/approval does not** relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment or if the location fails to reclaim properly. In such an event that the location does not revegetate, or future issues with contaminants are encountered, the operator will be asked to address the issues until the contaminant issues are fully mitigated and the location is successfully reclaimed. In addition, BLM approval does not relieve the operator of responsibility for compliance with any other federal, state or local laws/regulations.

On Thu, Sep 21, 2017 at 9:53 AM, Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us> wrote:

> RE: OXY USA * MOC SWD 1 * 2RP-4163 * DOR: 3/15/17
>
> Cliff,

Your proposal for remediation of the above referenced release is approved. Federal sites will require like approval from BLM. Please advise once remedial activities have been scheduled.

Mike Bratcher

NMOCD District 2

811 South First Street

Artesia, NM 88210

575-748-1283 Ext 108

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From: Cliff Brunson [mailto:cbrunson@bbcinternational.com]
Sent: Thursday, September 14, 2017 6:53 PM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>; Shelly Tucker <stucker@blm.gov>
Cc: Wade Dittrich <Wade_Dittrich@oxy.com>; Jennifer_Smith@oxy.com; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Ken Swinney <kswinney@bbcinternational.com>; Jennifer Gilkey <jgilkey@bbcinternational.com>; Kathy Purvis <kathy@bbcinternational.com>
Subject: OXY MOC SWD #1 (2RP-4163) - Delineation Workplan

Mike and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the OXY MOC SWD #1 (2RP-4163). OXY is requesting that you review this plan and is looking forward to both the OCD's and BLM's approval. Mike, this plan is one we discussed recently.

If you have any questions, please let me know.

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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03/16/2017


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02/09/2018


02/09/2018


02/13/2018


02/13/2018


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