

# Closure Report

## Site Description

Site Name:	Sundance Federal A CTB
Company:	Oxy Permian Ltd.
Legal Description:	U/L E, Section 4, T24S, R31E
County:	Eddy County, NM
GPS Coordinates:	N 32.24799° W 103.79063°

## Release Data

Date of Release:	08/09/2016
Type of Release:	Oil and produced water
Source of Release:	Lack of alarms caused tank spill
Volume of Release:	0.25 bbl oil, 50 bbls produced water
Volume Recovered:	45 bbls

## Remediation Specifications

Remediation Parameters:	Excavate the entire leak to a depth of 2.5 feet. Backfill the site with clean soil.	
Remediation Activities:	November and December 2016	
Plan Sent to OCD:	09/23/2016	Email from Cliff Brunson to Mike Bratcher
OCD Approval of Plan:	09/28/2016	Email from Mike Bratcher to Cliff Brunson
Plan Sent to BLM:	09/23/2016	Email from Cliff Brunson to Shelly Tucker
BLM Approval of Plan:	10/04/2016	Email from Shelly Tucker to Cliff Brunson

## Supporting Documentation

Initial C-141	Signed 08/12/2016
Final C-141	Signed 12/16/2016
Site Diagram	August 2016
Groundwater Plot	325'
TOPO Maps	August 2016
Lab Summary	08/20/2016
Lab Analysis	08/20/2016
Correspondence	Request and approval of remediation plan via email

## Request for Closure

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

Cliff Brunson, President of BBC International Inc.

12/28/2016

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-141  
Revised August 8, 2011

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

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

**Release Notification and Corrective Action**

**OPERATOR**

Initial Report  Final Report

Name of Company	Oxy Permian Ltd.	Contact	Casey Summers
Address	6 Desta Drive, Midland, TX 79705	Telephone No.	(575) 513-8289
Facility Name	Sundance Federal A CTB	Facility Type	Battery
Surface Owner	BLM	Mineral Owner	
		API No. 30-015-20538	

**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	4	24S	31E					Eddy

Latitude N 32.24799° Longitude W 103.79063°

**NATURE OF RELEASE**

Type of Release	Oil and Produced water	Volume of Release	0.25 bbl oil, 50 bbls of produced water	Volume Recovered	45 bbls
Source of Release	Lack of alarms caused excess water to be pumped in from another battery causing a tank spill	Date and Hour of Occurrence	08/09/2016	Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher, Heather Patterson- NMOCD; Shelly Tucker- BLM		
By Whom?	Kathy Purvis @ BBC International Inc.	Date and Hour	08/09/2016 @ 2:14 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.\*

Lack of alarms caused excess water to be pumped in from another battery causing a tank to spill 0.25 bbl of oil and 50 bbls of produced water. A vacuum truck recovered 45 bbls of produced water and the alarms were reset.

Describe Area Affected and Cleanup Action Taken.\*

The affected area is approximately 125' x 112' on location inside the berm. Remediation will be completed in accordance with an approved remediation plan from 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:		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Casey Summers		Approved by Environmental Specialist:	
Title: NM Environmental Advisor		Approval Date:	Expiration Date:
E-mail Address: Casey_Summers@oxy.com		Conditions of Approval:	
Date: 8-12-16	Phone: (575) 513-8289	Attached <input type="checkbox"/>	

\* Attach Additional Sheets If Necessary

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
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Form C-141  
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1220 South St. Francis Dr.  
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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	Oxy Permian Ltd.	Contact	Casey Summers
Address	PO Box 4294; Houston, TX 77210	Telephone No.	(575) 513-8289
Facility Name	Sundance Federal A CTB	Facility Type	Battery

Surface Owner	BLM	Mineral Owner		API No.	30-015-20538
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**LOCATION OF RELEASE**

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
E	4	24S	31E					Eddy

Latitude N 32.24799° Longitude W 103.79063°

**NATURE OF RELEASE**

Type of Release	Oil and Produced water	Volume of Release	0.25 bbl oil, 50 bbls of produced water	Volume Recovered	45 bbls
Source of Release	Lack of alarms caused excess water to be pumped in from another battery causing a tank spill	Date and Hour of Occurrence	08/09/2016	Date and Hour of Discovery	
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher, Heather Patterson- NMOCD; Shelly Tucker- BLM		
By Whom?	Kathy Purvis @ BBC International Inc.	Date and Hour	08/09/2016 @ 2:14 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.\*  
Lack of alarms caused excess water to be pumped in from another battery causing a tank to spill 0.25 bbl of oil and 50 bbls of produced water. A vacuum truck recovered 45 bbls of produced water and the alarms were reset.

Describe Area Affected and Cleanup Action Taken.\*  
The affected area is approximately 125' x 112' on location inside the berm. Remediation was completed in accordance with the approved remediation plan from Mike Bratcher of NMOCD via email on 09/28/2016 and from Shelly Tucker of the BLM via email on 10/04/2016.

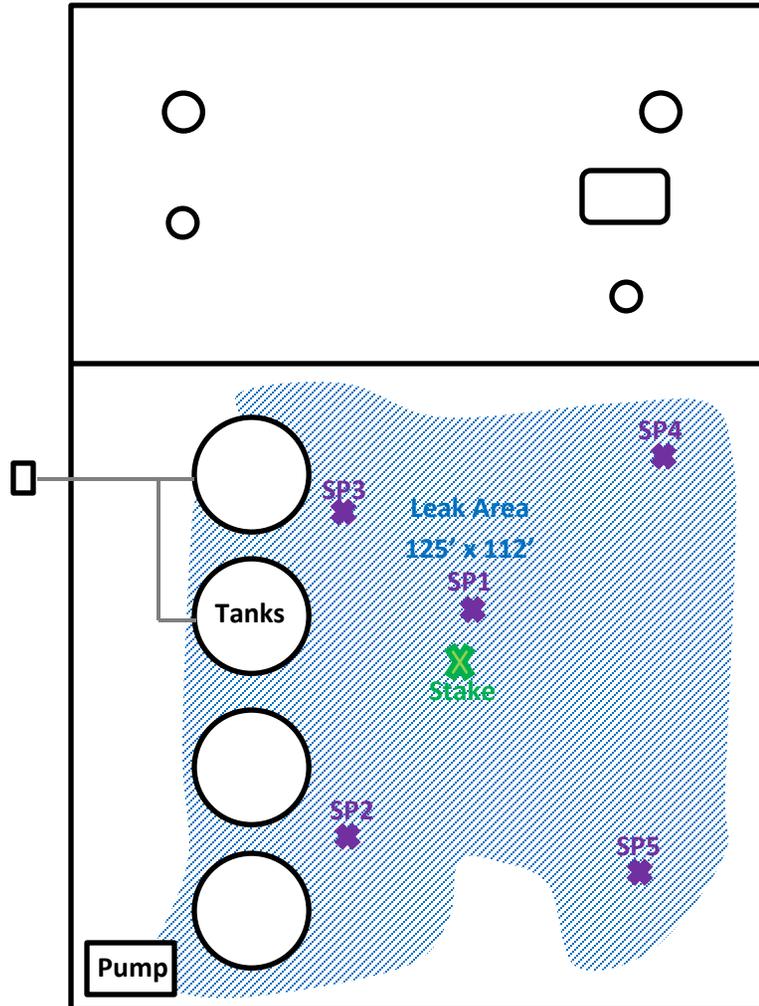
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger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

Signature:	<u>OIL CONSERVATION DIVISION</u>		
Printed Name: Casey Summers	Approved by Environmental Specialist:		
Title: NM Environmental Advisor	Approval Date:	Expiration Date:	
E-mail Address: Casey_Summers@oxy.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 12-16-16	Phone: (575) 513-8289		

\* Attach Additional Sheets If Necessary



Oxy  
Sundance Federal A CTB (8/9/16)



2.5' Excavation across entire leak site

U/L E, Section 4, T24S, R31E

Eddy County, NM

N 32.24799° W 103.79063°

API# 30-015-20538

BBC International, Inc.

Oxy  
Sundance Federal A CTB

Date: 08/12/2016

DRWG by: K. Purvis

NOT TO SCALE

File: Oxy 2016



# Groundwater Plot

## Oxy Sundance Federal A CTB

County  
Eddy

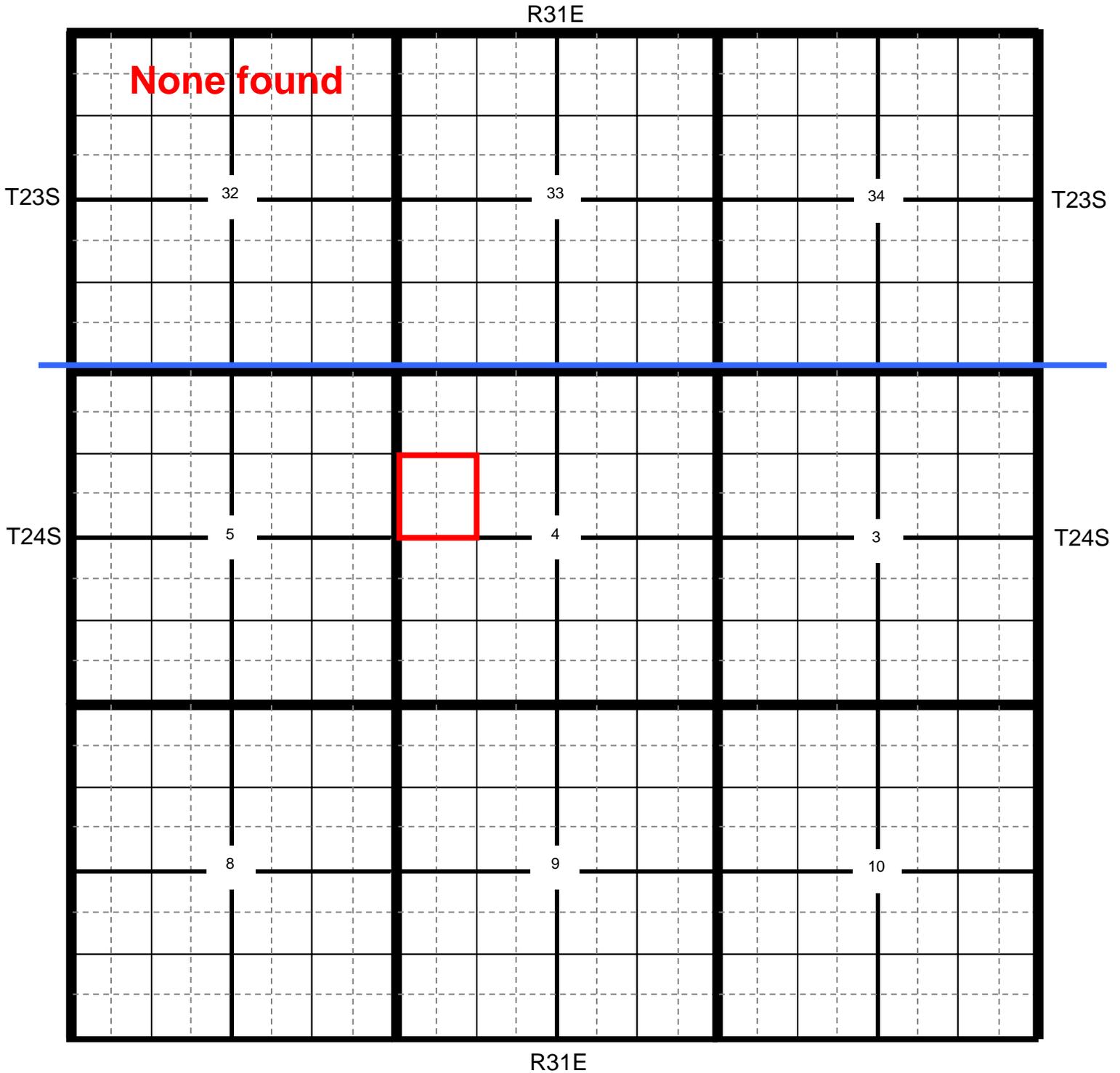
Unit Letter  
E

Section  
4

Township  
24S

Range  
31E

Trend Map 325'



📍 Location

● OCD

● USGS

● SEO

● All Databases

## Oxy Sundance Federal A CTB

County Eddy      Unit Letter E      Section 4      Township 24S      Range 31E

Trend Map 325'

1

2

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

3

4

📍 Location

● OCD

● USGS

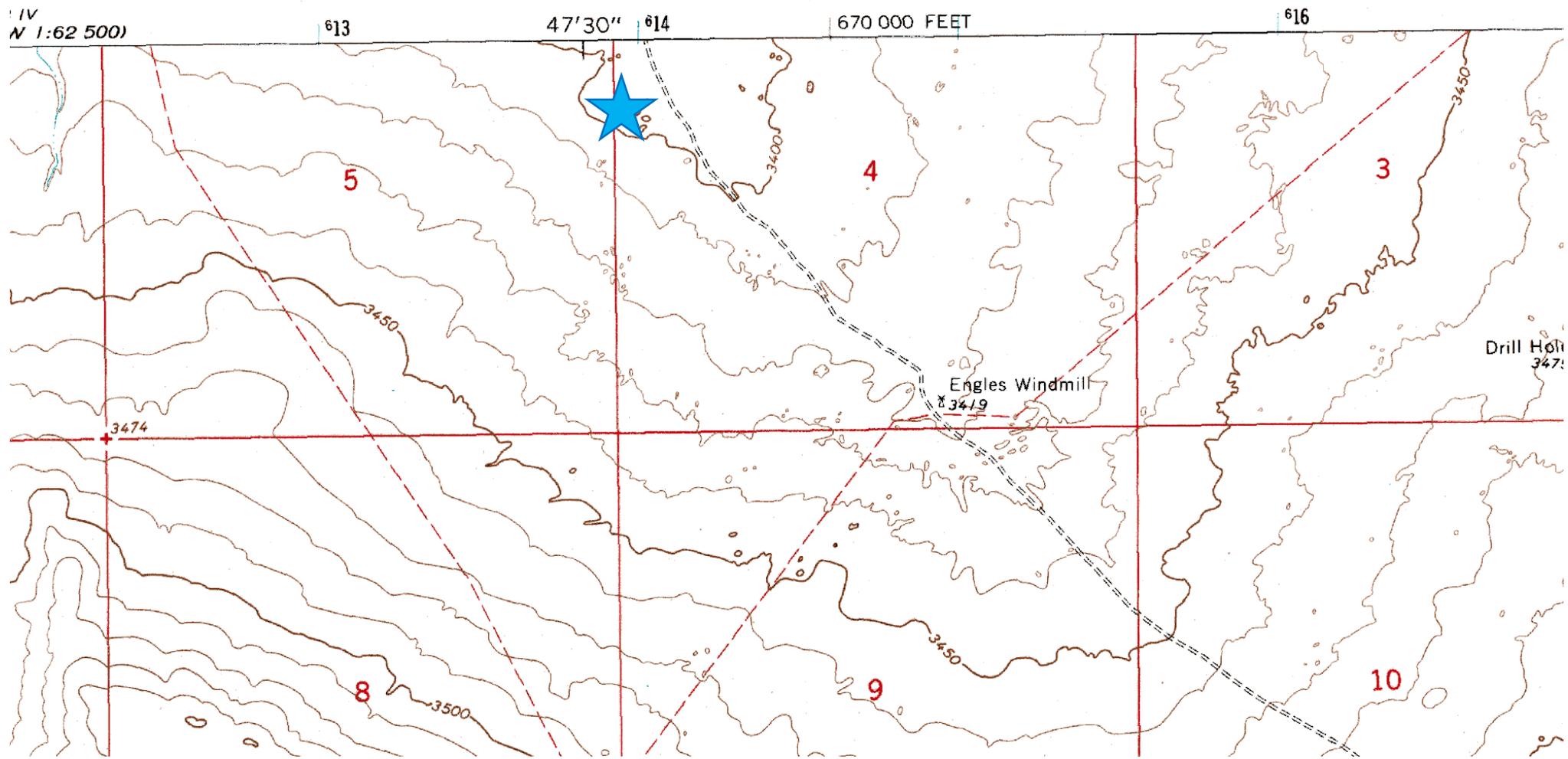
● SEO

● All Databases



# Oxy

## Sundance Federal A CTB



**Laboratory Analytical Results Summary  
Sundance Federal A CTB**

		Sample	SP1 @ 1'	SP1 @ 2'	SP1 @ 3'
Analyte	Method	Date	8/20/16	8/20/16	8/20/16
			mg/Kg	mg/Kg	mg/Kg
<b>Benzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Toluene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Ethylbenzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Total Xylenes</b>	BTEX 8021B		<0.150	<0.150	n/a
<b>Total BTEX</b>	BTEX 8021B		<0.300	<0.300	n/a
<b>Chloride</b>	SM4500Cl-B		<b>10900</b>	<b>1680</b>	<b>64</b>
<b>GRO</b>	TPH 8015M		<10.0	<10.0	n/a
<b>DRO</b>	TPH 8015M		<b>156</b>	<10.0	n/a

		Sample	SP2 @ 1'	SP2 @ 2'	SP2 @ 3'
Analyte	Method	Date	8/20/16	8/20/16	8/20/16
			mg/Kg	mg/Kg	mg/Kg
<b>Benzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Toluene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Ethylbenzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Total Xylenes</b>	BTEX 8021B		<0.150	<0.150	n/a
<b>Total BTEX</b>	BTEX 8021B		<0.300	<0.300	n/a
<b>Chloride</b>	SM4500Cl-B		<b>10700</b>	<b>2880</b>	<b>64</b>
<b>GRO</b>	TPH 8015M		<10.0	<10.0	n/a
<b>DRO</b>	TPH 8015M		<b>69.2</b>	<b>218</b>	n/a

		Sample	SP3 @ 1'	SP3 @ 2'	SP3 @ 3'
Analyte	Method	Date	8/20/16	8/20/16	8/20/16
			mg/Kg	mg/Kg	mg/Kg
<b>Benzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Toluene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Ethylbenzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Total Xylenes</b>	BTEX 8021B		<0.150	<0.150	n/a
<b>Total BTEX</b>	BTEX 8021B		<0.300	<0.300	n/a
<b>Chloride</b>	SM4500Cl-B		<b>10500</b>	<b>944</b>	<b>64</b>
<b>GRO</b>	TPH 8015M		<10.0	<10.0	n/a
<b>DRO</b>	TPH 8015M		<b>70.8</b>	<b>63.6</b>	n/a

		Sample	SP4 @ 1'	SP4 @ 2'	SP4 @ 3'
Analyte	Method	Date	8/20/16	8/20/16	8/20/16
			mg/Kg	mg/Kg	mg/Kg
<b>Benzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Toluene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Ethylbenzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Total Xylenes</b>	BTEX 8021B		<0.150	<0.150	n/a
<b>Total BTEX</b>	BTEX 8021B		<0.300	<0.300	n/a
<b>Chloride</b>	SM4500Cl-B		<b>10700</b>	<b>1440</b>	<b>64</b>
<b>GRO</b>	TPH 8015M		<10.0	<10.0	n/a
<b>DRO</b>	TPH 8015M		<b>63.2</b>	<10.0	n/a

		Sample	SP5 @ 1'	SP5 @ 2'	SP5 @ 3'
Analyte	Method	Date	8/20/16	8/20/16	8/20/16
			mg/Kg	mg/Kg	mg/Kg
<b>Benzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Toluene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Ethylbenzene</b>	BTEX 8021B		<0.050	<0.050	n/a
<b>Total Xylenes</b>	BTEX 8021B		<0.150	<0.150	n/a
<b>Total BTEX</b>	BTEX 8021B		<0.300	<0.300	n/a
<b>Chloride</b>	SM4500Cl-B		<b>7330</b>	<b>2320</b>	<b>160</b>
<b>GRO</b>	TPH 8015M		<10.0	<10.0	n/a
<b>DRO</b>	TPH 8015M		<b>14.5</b>	<10.0	n/a



August 30, 2016

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: SUNDANCE FED A - CTB (8-9-16)

Enclosed are the results of analyses for samples received by the laboratory on 08/24/16 15:30.

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](http://www.tceq.texas.gov/field/qa/lab_accred_certif.html).

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

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

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

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:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 1 @ 1' (H601909-01)**

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	08/25/2016	ND	2.29	115	2.00	0.411	
Toluene*	<0.050	0.050	08/25/2016	ND	2.34	117	2.00	0.253	
Ethylbenzene*	<0.050	0.050	08/25/2016	ND	2.24	112	2.00	0.280	
Total Xylenes*	<0.150	0.150	08/25/2016	ND	6.80	113	6.00	0.295	
Total BTEX	<0.300	0.300	08/25/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.6-140*

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>10900</b>	16.0	08/26/2016	ND	416	104	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
<b>DRO &gt;C10-C28</b>	<b>156</b>	10.0	08/25/2016	ND	210	105	200	1.75	

*Surrogate: 1-Chlorooctane 92.8 % 35-147*
*Surrogate: 1-Chlorooctadecane 104 % 28-171*

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 1 @ 2' (H601909-02)**

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	08/25/2016	ND	2.29	115	2.00	0.411	
Toluene*	<0.050	0.050	08/25/2016	ND	2.34	117	2.00	0.253	
Ethylbenzene*	<0.050	0.050	08/25/2016	ND	2.24	112	2.00	0.280	
Total Xylenes*	<0.150	0.150	08/25/2016	ND	6.80	113	6.00	0.295	
Total BTEX	<0.300	0.300	08/25/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 105 % 73.6-140*

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1680</b>	16.0	08/26/2016	ND	416	104	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
DRO >C10-C28	<10.0	10.0	08/25/2016	ND	210	105	200	1.75	

*Surrogate: 1-Chlorooctane 86.0 % 35-147*
*Surrogate: 1-Chlorooctadecane 89.7 % 28-171*
**Sample ID: SP 1 @ 3' (H601909-03)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	08/26/2016	ND	416	104	400	3.92	

Cardinal Laboratories

\*=Accredited Analyte

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



Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**

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

Received:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 2 @ 1' (H601909-04)**

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	08/25/2016	ND	2.29	115	2.00	0.411	
Toluene*	<0.050	0.050	08/25/2016	ND	2.34	117	2.00	0.253	
Ethylbenzene*	<0.050	0.050	08/25/2016	ND	2.24	112	2.00	0.280	
Total Xylenes*	<0.150	0.150	08/25/2016	ND	6.80	113	6.00	0.295	
Total BTEX	<0.300	0.300	08/25/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>10700</b>	16.0	08/26/2016	ND	416	104	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
<b>DRO &gt;C10-C28</b>	<b>69.2</b>	10.0	08/25/2016	ND	210	105	200	1.75	

Surrogate: 1-Chlorooctane 97.3 % 35-147

Surrogate: 1-Chlorooctadecane 99.1 % 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:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 2 @ 2' (H601909-05)**

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	08/29/2016	ND	2.30	115	2.00	2.94	
Toluene*	<0.050	0.050	08/29/2016	ND	2.35	117	2.00	3.10	
Ethylbenzene*	<0.050	0.050	08/29/2016	ND	2.25	113	2.00	3.13	
Total Xylenes*	<0.150	0.150	08/29/2016	ND	6.83	114	6.00	2.99	
Total BTEX	<0.300	0.300	08/29/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2880</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
<b>DRO &gt;C10-C28</b>	<b>218</b>	10.0	08/25/2016	ND	210	105	200	1.75	

Surrogate: 1-Chlorooctane 101 % 35-147

Surrogate: 1-Chlorooctadecane 109 % 28-171

**Sample ID: SP 2 @ 3' (H601909-06)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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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:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 3 @ 1' (H601909-07)**

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	08/29/2016	ND	2.30	115	2.00	2.94	
Toluene*	<0.050	0.050	08/29/2016	ND	2.35	117	2.00	3.10	
Ethylbenzene*	<0.050	0.050	08/29/2016	ND	2.25	113	2.00	3.13	
Total Xylenes*	<0.150	0.150	08/29/2016	ND	6.83	114	6.00	2.99	
Total BTEX	<0.300	0.300	08/29/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.6-140*

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>10500</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
<b>DRO &gt;C10-C28</b>	<b>70.8</b>	10.0	08/25/2016	ND	210	105	200	1.75	

*Surrogate: 1-Chlorooctane 93.7 % 35-147*
*Surrogate: 1-Chlorooctadecane 102 % 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:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 3 @ 2' (H601909-08)**

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	08/29/2016	ND	2.30	115	2.00	2.94	
Toluene*	<0.050	0.050	08/29/2016	ND	2.35	117	2.00	3.10	
Ethylbenzene*	<0.050	0.050	08/29/2016	ND	2.25	113	2.00	3.13	
Total Xylenes*	<0.150	0.150	08/29/2016	ND	6.83	114	6.00	2.99	
Total BTEX	<0.300	0.300	08/29/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.6-140

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>944</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
<b>DRO &gt;C10-C28</b>	<b>63.6</b>	10.0	08/25/2016	ND	210	105	200	1.75	

Surrogate: 1-Chlorooctane 99.0 % 35-147

Surrogate: 1-Chlorooctadecane 109 % 28-171

**Sample ID: SP 3 @ 3' (H601909-09)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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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:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 4 @ 1' (H601909-10)**

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	08/29/2016	ND	2.30	115	2.00	2.94	
Toluene*	<0.050	0.050	08/29/2016	ND	2.35	117	2.00	3.10	
Ethylbenzene*	<0.050	0.050	08/29/2016	ND	2.25	113	2.00	3.13	
Total Xylenes*	<0.150	0.150	08/29/2016	ND	6.83	114	6.00	2.99	
Total BTEX	<0.300	0.300	08/29/2016	ND					

Surrogate: 4-Bromofluorobenzene (PID) 108 % 73.6-140

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>10700</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
<b>DRO &gt;C10-C28</b>	<b>63.2</b>	10.0	08/25/2016	ND	210	105	200	1.75	

Surrogate: 1-Chlorooctane 90.6 % 35-147

Surrogate: 1-Chlorooctadecane 102 % 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:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 4 @ 2' (H601909-11)**

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	08/29/2016	ND	2.30	115	2.00	2.94	
Toluene*	<0.050	0.050	08/29/2016	ND	2.35	117	2.00	3.10	
Ethylbenzene*	<0.050	0.050	08/29/2016	ND	2.25	113	2.00	3.13	
Total Xylenes*	<0.150	0.150	08/29/2016	ND	6.83	114	6.00	2.99	
Total BTEX	<0.300	0.300	08/29/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 109 % 73.6-140*

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>1440</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
DRO >C10-C28	<10.0	10.0	08/25/2016	ND	210	105	200	1.75	

*Surrogate: 1-Chlorooctane 86.2 % 35-147*
*Surrogate: 1-Chlorooctadecane 91.6 % 28-171*
**Sample ID: SP 4 @ 3' (H601909-12)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>64.0</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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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:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 5 @ 1' (H601909-13)**

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	08/29/2016	ND	2.30	115	2.00	2.94	
Toluene*	<0.050	0.050	08/29/2016	ND	2.35	117	2.00	3.10	
Ethylbenzene*	<0.050	0.050	08/29/2016	ND	2.25	113	2.00	3.13	
Total Xylenes*	<0.150	0.150	08/29/2016	ND	6.83	114	6.00	2.99	
Total BTEX	<0.300	0.300	08/29/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 110 % 73.6-140*

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>7330</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
<b>DRO &gt;C10-C28</b>	<b>14.5</b>	10.0	08/25/2016	ND	210	105	200	1.75	

*Surrogate: 1-Chlorooctane 96.7 % 35-147*
*Surrogate: 1-Chlorooctadecane 102 % 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:	08/24/2016	Sampling Date:	08/20/2016
Reported:	08/30/2016	Sampling Type:	Soil
Project Name:	SUNDANCE FED A - CTB (8-9-16)	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	PURE GOLD ROAD		

**Sample ID: SP 5 @ 2' (H601909-14)**

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	08/29/2016	ND	2.30	115	2.00	2.94	
Toluene*	<0.050	0.050	08/29/2016	ND	2.35	117	2.00	3.10	
Ethylbenzene*	<0.050	0.050	08/29/2016	ND	2.25	113	2.00	3.13	
Total Xylenes*	<0.150	0.150	08/29/2016	ND	6.83	114	6.00	2.99	
Total BTEX	<0.300	0.300	08/29/2016	ND					

*Surrogate: 4-Bromofluorobenzene (PID) 106 % 73.6-140*

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>2320</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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	08/25/2016	ND	195	97.5	200	0.460	
DRO >C10-C28	<10.0	10.0	08/25/2016	ND	210	105	200	1.75	

*Surrogate: 1-Chlorooctane 91.4 % 35-147*
*Surrogate: 1-Chlorooctadecane 103 % 28-171*
**Sample ID: SP 5 @ 3' (H601909-15)**

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
<b>Chloride</b>	<b>160</b>	16.0	08/26/2016	ND	400	100	400	3.92	

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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



---

Celey D. Keene, Lab Director/Quality Manager





**From:** [Bratcher, Mike, EMNRD](#)  
**To:** [Cliff Brunson](#)  
**Cc:** [Patterson, Heather, EMNRD](#); [Casey Summers](#); [Jennifer\\_Duarte@oxy.com](#); [Ken Swinney](#); [Jennifer Gilkey](#); [Kathy Purvis](#); [Tucker, Shelly](#)  
**Subject:** RE: OXY - Sundance Federal A CTB - Remediation Plan  
**Date:** Wednesday, September 28, 2016 4:48:13 PM

---

RE: OXY USA \* Sundance Fed A CTB \* **2RP-3830** \* DOR: 8/9/16

Cliff,

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

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.

If you have any questions or concerns, and for notification, please contact me.

**Mike Bratcher**  
**NMOCD District 2**  
**811 S. First Street**  
**Artesia, NM 88210**  
**O: 575-748-1283 X108**  
**C: 575-626-0857**  
**F: 575-748-9720**

---

**From:** Cliff Brunson [mailto:[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)]  
**Sent:** Friday, September 23, 2016 11:13 AM  
**To:** Bratcher, Mike, EMNRD  
**Cc:** Patterson, Heather, EMNRD; Casey Summers; Jennifer\_Duarte@oxy.com; Ken Swinney; Jennifer Gilkey; Kathy Purvis  
**Subject:** OXY - Sundance Federal A CTB - Remediation Plan

Mike,

This e-mail is to confirm our discussion concerning the remediation plan for the OXY Sundance Federal A CTB release. I have attached the information packet that we used in our discussion with a cover page describing the remediation plan that we agreed upon.

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

Thanks, Cliff

Cliff P. Brunson, CEI, CRS  
President  
BBC International, Inc.  
World-Wide Environmental Specialists  
Mailing Address:  
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](mailto:cbrunson@bbcinternational.com)



\*\*\*\*\*

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\*\*\*\*\*

**From:** [Tucker, Shelly](#)  
**To:** [Bratcher, Mike, EMNRD](#)  
**Cc:** [Cliff Brunson](#); [Patterson, Heather, EMNRD](#); [Casey Summers](#); [Jennifer Duarte@oxy.com](mailto:Jennifer_Duarte@oxy.com); [Ken Swinney](#); [Jennifer Gilkey](#); [Kathy Purvis](#)  
**Subject:** Re: OXY - Sundance Federal A CTB - Remediation Plan  
**Date:** Tuesday, October 4, 2016 10:09:51 AM

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Cliff,

BLM approves your remediation proposal. Please notify the BLM once activities have begun.

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

Sincerely,

**Shelly J Tucker**

Environmental Protection Specialist  
Bureau of Land Management

620 E. Greene St  
Carlsbad, NM 88220

575.234.5905 - Direct  
575.361.0084 - Cellular

[stucker@blm.gov](mailto: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.

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On Wed, Sep 28, 2016 at 4:48 PM, Bratcher, Mike, EMNRD <[mike.bratcher@state.nm.us](mailto:mike.bratcher@state.nm.us)> wrote:

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RE: OXY USA \* Sundance Fed A CTB \* **2RP-3830** \* DOR: 8/9/16

Cliff,

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

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.

If you have any questions or concerns, and for notification, please contact me.

**Mike Bratcher**

**NMOCD District 2**

**811 S. First Street**

**Artesia, NM 88210**

**O: 575-748-1283 X108**

**C: 575-626-0857**

**F: 575-748-9720**

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**From:** Cliff Brunson [mailto:[cbrunson@bbcinternational.com](mailto:cbrunson@bbcinternational.com)]

**Sent:** Friday, September 23, 2016 11:13 AM

**To:** Bratcher, Mike, EMNRD

**Cc:** Patterson, Heather, EMNRD; Casey Summers; [Jennifer\\_Duarte@oxy.com](mailto:Jennifer_Duarte@oxy.com); Ken Swinney; Jennifer Gilkey; Kathy Purvis

**Subject:** OXY - Sundance Federal A CTB - Remediation Plan

Mike,

This e-mail is to confirm our discussion concerning the remediation plan for the OXY Sundance Federal A CTB release. I have attached the information packet that we used in our discussion with a cover page describing the remediation plan that we agreed upon.

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

Thanks, Cliff

Cliff P. Brunson, CEI, CRS

President

BBC International, Inc.

World-Wide Environmental Specialists

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