

Closure Report

Site Description

Site Name:	McKittrick Hills CTB
Company:	Oxy Permian
Legal Description:	U/L A, Section 16, T24S, R29E
County:	Eddy County, NM
GPS Coordinates:	N 32.39740° W-104.46101°

Release Data

Date of Release:	04/18/2017
Type of Release:	Oil and produced water
Source of Release:	Water tanks spilled over
Volume of Release:	85 bbls oil, 10 bbls produced water
Volume Recovered:	80 bbls

Remediation Specifications

Remediation Parameters:	Excavate the areas around SP1 and SP2 to a depth of 2.5 ft. Excavate the areas around SP3 to a depth of 1 foot. Backfill the site with clean soil.	
Remediation Activities:	12/15/2017 to 01/19/2018	
Plan Sent to OCD:	09/11/2017	Email from Cliff Brunson to Mike Bratcher
OCD Approval of Plan:	09/20/2017	Email from Mike Bratcher to Cliff Brunson
Plan Sent to BLM:	09/11/2017	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 04/19/2017
Final C-141	Upon completion
Site Diagram	April 2017
Groundwater Plot	125'
TOPO Maps	April 2017
Lab Summary	05/02/2017
Lab Analysis	05/02/2017
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 Specialist, Oxy Permian

01/22/2018

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

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised April 3, 2017

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 USA WTP LP	Contact	CASEY L SUMMERS
Address	PO BOX 4294; HOUSTON, TX 77210	Telephone No.	575-513-8289
Facility Name	MCKITTRICK HILLS CTB	Facility Type	CENTRAL TANK BATTERY
Surface Owner	STATE	Mineral Owner	STATE
		API No.	30-015-21010

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	14	22S	24E	2390	NORTH	830	EAST	EDDY

Latitude_32.3916512_ Longitude_-104.4632568_ NAD83

NATURE OF RELEASE

Type of Release	OIL & PRODUCED WATER	Volume of Release	85 bbls OIL - 10 bbls PW	Volume Recovered	80 bbls
Source of Release	WATER TANKS SPILLED OVER	Date and Hour of Occurrence	4-18-2017	Date and Hour of Discovery	4-19-2017
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	MIKE BRATCHER-NMOCD; CRYSTAL WEAVER-NMOCD; SHELLY TUCKER-BLM		
By Whom?	CASEY SUMMERS	Date and Hour	4-19-2017 9:54AM		
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.*

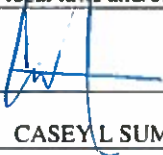
Describe Cause of Problem and Remedial Action Taken.*

Spill was caused by water tanks spilling over due to the injection pumps not running properly. Pumps and alarm were repaired and check to prevent future release. 80 bbls of free fluid was recovered by vacuum truck.

Describe Area Affected and Cleanup Action Taken.*

The affected area is approximately 80' X 40' on location (measurements are subject to change with future GPS track) . Remediation will be completed in accordance with a remediation plan approved by the NMOCD and 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: 		<u>OIL CONSERVATION DIVISION</u>	
Printed Name: CASEY L SUMMERS		Approved by Environmental Specialist:	
Title: ENVIRONMENTAL ADVISOR		Approval Date:	Expiration Date:
E-mail Address: casey_summers@oxy.com		Conditions of Approval:	Attached <input type="checkbox"/>
Date: 4-19-17 Phone: 575-513-8289			

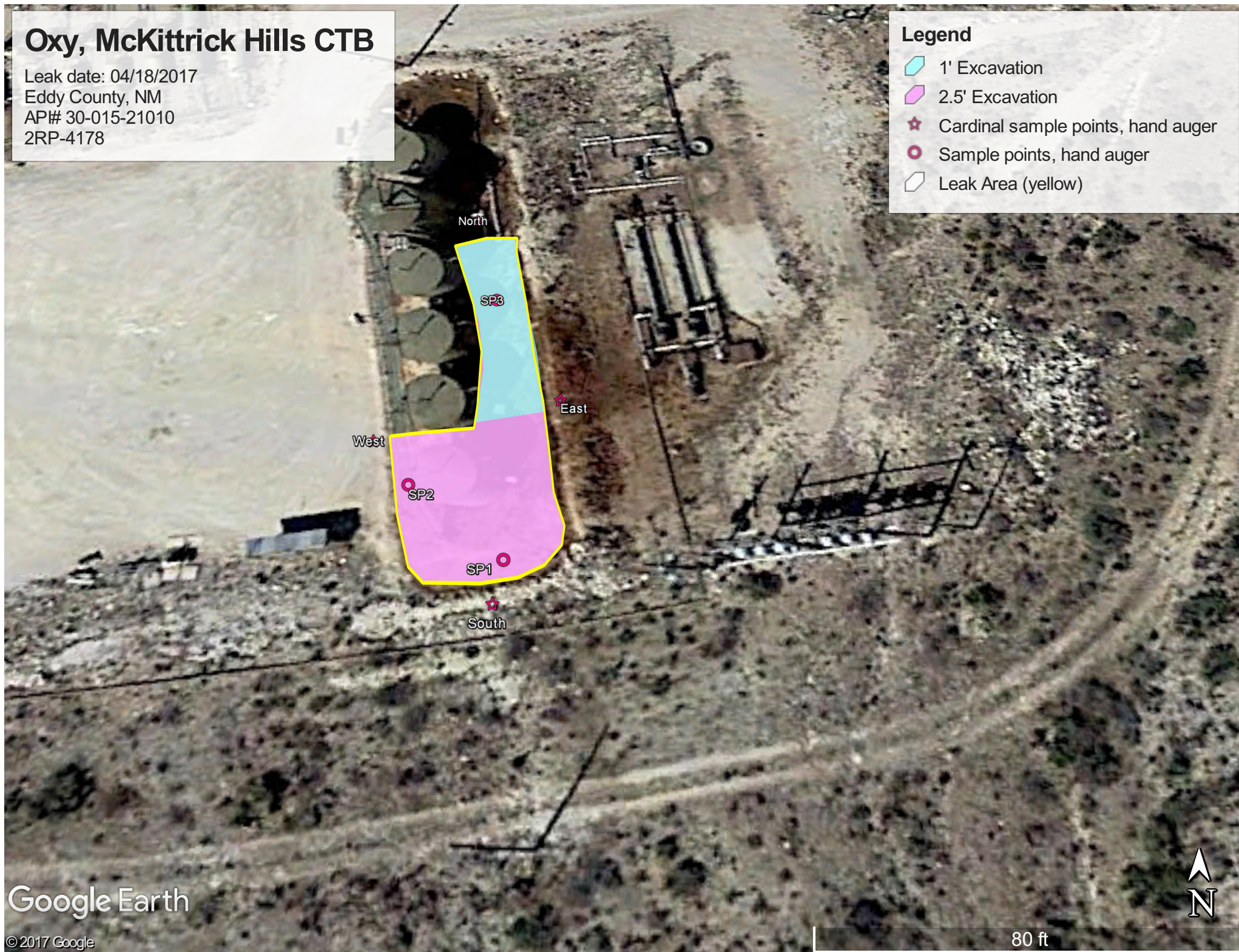
* Attach Additional Sheets If Necessary

Oxy, McKittrick Hills CTB

Leak date: 04/18/2017
Eddy County, NM
API# 30-015-21010
2RP-4178

Legend

- 1' Excavation
- 2.5' Excavation
- Cardinal sample points, hand auger
- Sample points, hand auger
- Leak Area (yellow)



Oxy, McKittrick Hills CTB

Sample points, hand auger

SP1, N 32.39731 W-104.46090

SP2, N 32.39736 W-104.46097

SP3, N 32.39751 W-104.46091

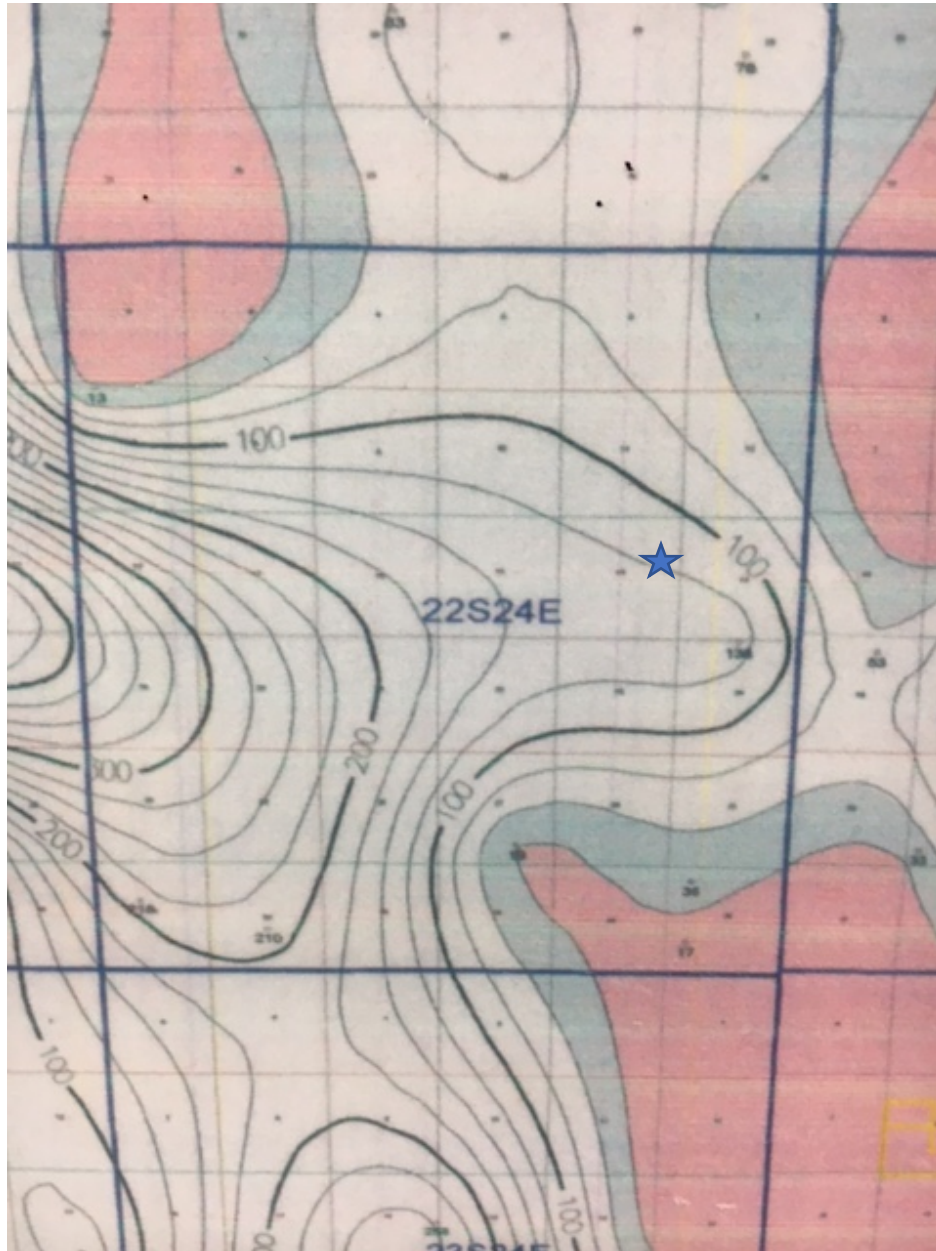
NORTH, N 32.39758 W-104.46093

SOUTH, N 32.39728 W-104.46090

EAST, N 32.39743 W-104.46086

WEST, N 32.39739 W-104.46100

Oxy, McKittrick Hills CTB
U/L H, Section 14, T22S, R24E
Groundwater: 125'





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_01403		C	ED	3	2	1	24	22S	24E	551238	3582798*	<input type="text"/>	1483	238	213 25

Average Depth to Water: **213 feet**

Minimum Depth: **213 feet**

Maximum Depth: **213 feet**

Record Count: 1

UTMNAD83 Radius Search (in meters):

Easting (X): 550529

Northing (Y): 3584101

Radius: 1700

*UTM location was derived from PLSS - see Help

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

4/27/17 9:57 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

Public Land Survey System (PLSS)

Q64:Q16: SEQ4: NESec: 14Tws: 22SRng: 24E

State Plane Coordinate System - NAD27

X:ftY:ftZone:

State Plane Coordinate System - NAD83

X:ftY:ftZone:

Degrees/Minutes/Seconds

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

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

UTM - NAD27

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

SUBMIT

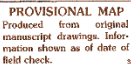
All Conversion Results are displayed as NAD 1983 UTM Zone 13

Easting (X):550529.0mtrsNorthing (Y):3584101.0mtrs

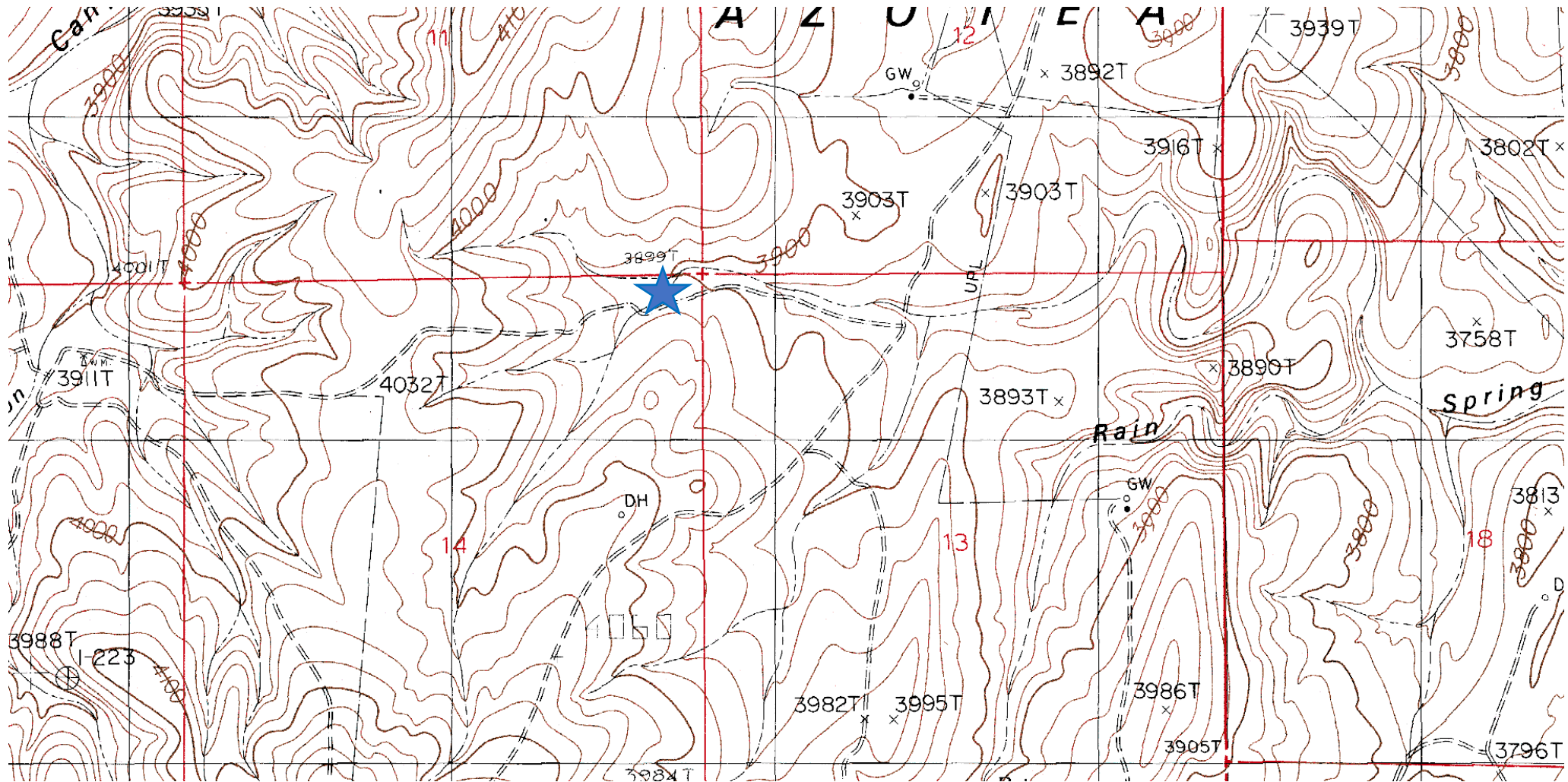
~~ Please keep screen open to copy UTM values for Reports. ~~

Oxy

AZOTEA PEAK QUADRANGLE
NEW MEXICO-EDDY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Oxy



**Laboratory Analytical Results Summary
McKittrick Hills CTB**

		Sample	SP1 @ 1'	SP1 @ 2'	SP1 @ 2.5'
Analyte	Method	Date	5/2/17	5/2/17	5/2/17
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		1.08	<0.200	<0.050
Toluene	BTEX 8021B		26.4	5.53	<0.050
Ethylbenzene	BTEX 8021B		18.4	<0.200	<0.050
Total Xylenes	BTEX 8021B		158	40.8	0.459
Total BTEX	BTEX 8021B		204	46.3	0.459
Chloride	SM4500Cl-B		32	32	160
GRO	TPH 8015M		7040	1560	<10.0
DRO	TPH 8015M		32000	10900	517

		Sample	SP2 @ 1'	SP2 @ 2'	SP2 @ 2.5'
Analyte	Method	Date	5/2/17	5/2/17	5/2/17
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<1.00	<0.200	<0.050
Toluene	BTEX 8021B		25.8	3.74	0.082
Ethylbenzene	BTEX 8021B		17.8	<0.200	<0.050
Total Xylenes	BTEX 8021B		155	30.4	1.34
Total BTEX	BTEX 8021B		199	34.1	1.42
Chloride	SM4500Cl-B		32	48	128
GRO	TPH 8015M		6430	991	21.4
DRO	TPH 8015M		30800	7760	463

		Sample	SP3 @ 1'	SP3 @ 2'	SP3 @ 2.5'
Analyte	Method	Date	5/2/17	5/2/17	5/2/17
			mg/Kg	mg/Kg	mg/Kg
Benzene	BTEX 8021B		<0.050	<0.050	<0.050
Toluene	BTEX 8021B		<0.050	<0.050	<0.050
Ethylbenzene	BTEX 8021B		<0.050	<0.050	0.068
Total Xylenes	BTEX 8021B		0.208	<0.150	0.854
Total BTEX	BTEX 8021B		<0.300	<0.300	0.921
Chloride	SM4500Cl-B		224	144	192
GRO	TPH 8015M		<10.0	<10.0	29.7
DRO	TPH 8015M		801	211	577

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

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

		Sample	WEST @ SURFACE
Analyte	Method	Date	5/2/17
			mg/Kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		<16.0
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

		Sample	SOUTH @ SURFACE
Analyte	Method	Date	5/2/17
			mg/Kg
Benzene	BTEX 8021B		<0.050
Toluene	BTEX 8021B		<0.050
Ethylbenzene	BTEX 8021B		<0.050
Total Xylenes	BTEX 8021B		<0.150
Total BTEX	BTEX 8021B		<0.300
Chloride	SM4500Cl-B		16
GRO	TPH 8015M		<10.0
DRO	TPH 8015M		<10.0

May 12, 2017

Cliff Brunson

BBC International, Inc.

P.O. Box 805

Hobbs, NM 88241

RE: MCKITTRICK HILLS CTB

Enclosed are the results of analyses for samples received by the laboratory on 05/04/17 16:53.

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	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 1 @ 1 (H701209-01)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	1.08	1.00	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	26.4	1.00	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	18.4	1.00	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	158	3.00	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTX	204	6.00	05/09/2017	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						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	7040	50.0	05/09/2017	ND	198	98.8	200	1.70		
DRO >C10-C28	32000	50.0	05/09/2017	ND	193	96.4	200	5.15		

Surrogate: 1-Chlorooctane 304 % 28.3-164

Surrogate: 1-Chlorooctadecane 766 % 34.7-157

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:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 1 @ 2 (H701209-02)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	5.53	0.200	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	<0.200	0.200	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	40.8	0.600	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEX	46.3	1.20	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 156 % 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					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	1560	100	05/10/2017	ND	198	98.8	200	1.70		
DRO >C10-C28	10900	100	05/10/2017	ND	193	96.4	200	5.15		

Surrogate: 1-Chlorooctane 148 % 28.3-164

Surrogate: 1-Chlorooctadecane 262 % 34.7-157

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*=Accredited Analyte

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Received:	05/04/2017	Sampling Date:	05/02/2017
Reported:	05/12/2017	Sampling Type:	Soil
Project Name:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 1 @ 2.5 (H701209-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	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*	0.459	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTX	0.459	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 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	160	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	05/09/2017	ND	198	98.8	200	1.70	
DRO >C10-C28	517	10.0	05/09/2017	ND	193	96.4	200	5.15	

Surrogate: 1-Chlorooctane 76.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 80.5 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 2 @ 1 (H701209-04)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<1.00	1.00	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	25.8	1.00	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	17.8	1.00	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	155	3.00	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEX	199	6.00	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 122 % 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					S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	6430	50.0	05/09/2017	ND	198	98.8	200	1.70		
DRO >C10-C28	30800	50.0	05/09/2017	ND	193	96.4	200	5.15		

Surrogate: 1-Chlorooctane 279 % 28.3-164

Surrogate: 1-Chlorooctadecane 731 % 34.7-157

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*=Accredited Analyte

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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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 2 @ 2 (H701209-05)

BTEx 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.200	0.200	05/09/2017	ND	2.12	106	2.00	1.77	
Toluene*	3.74	0.200	05/09/2017	ND	1.95	97.4	2.00	1.70	
Ethylbenzene*	<0.200	0.200	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	30.4	0.600	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEX	34.1	1.20	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 147 % 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	48.0	16.0	05/09/2017	ND	448	112	400	3.64		

TPH 8015M		mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	991	10.0	05/09/2017	ND	198	98.8	200	1.70		
DRO >C10-C28	7760	10.0	05/09/2017	ND	193	96.4	200	5.15		

Surrogate: 1-Chlorooctane 150 % 28.3-164

Surrogate: 1-Chlorooctadecane 179 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 2 @ 2.5 (H701209-06)

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*	0.082	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*	1.34	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEX	1.42	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	21.4	10.0	05/09/2017	ND	198	98.8	200	1.70	
DRO >C10-C28	463	10.0	05/09/2017	ND	193	96.4	200	5.15	

Surrogate: 1-Chlorooctane 69.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 75.0 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 3 @ 1 (H701209-07)

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*	0.208	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) 99.0 % 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	224	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	05/09/2017	ND	198	98.8	200	1.70	
DRO >C10-C28	801	10.0	05/09/2017	ND	193	96.4	200	5.15	

Surrogate: 1-Chlorooctane 75.4 % 28.3-164

Surrogate: 1-Chlorooctadecane 90.6 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 3 @ 2 (H701209-08)

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*	<0.050	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 BTX	<0.300	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.8 % 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	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	05/09/2017	ND	198	98.8	200	1.70	
DRO >C10-C28	211	10.0	05/09/2017	ND	193	96.4	200	5.15	

Surrogate: 1-Chlorooctane 82.5 % 28.3-164

Surrogate: 1-Chlorooctadecane 86.2 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: 3 @ 2.5 (H701209-09)

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	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*	0.068	0.050	05/09/2017	ND	1.91	95.6	2.00	1.62	
Total Xylenes*	0.854	0.150	05/09/2017	ND	5.39	89.8	6.00	1.89	
Total BTEX	0.921	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 99.9 % 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	192	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	29.7	10.0	05/10/2017	ND	198	98.8	200	1.70	
DRO >C10-C28	577	10.0	05/10/2017	ND	193	96.4	200	5.15	

Surrogate: 1-Chlorooctane 91.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 91.6 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: NORTH @ SURFACE (H701209-10)

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	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) 96.1 % 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	05/10/2017	ND	198	98.8	200	1.70	
DRO >C10-C28	<10.0	10.0	05/10/2017	ND	193	96.4	200	5.15	

Surrogate: 1-Chlorooctane 80.6 % 28.3-164

Surrogate: 1-Chlorooctadecane 81.0 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: EAST @ SURFACE (H701209-11)

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	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 BTX	<0.300	0.300	05/09/2017	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.1 % 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	05/10/2017	ND	198	98.8	200	1.70	
DRO >C10-C28	<10.0	10.0	05/10/2017	ND	193	96.4	200	5.15	

Surrogate: 1-Chlorooctane 76.3 % 28.3-164

Surrogate: 1-Chlorooctadecane 81.6 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: WEST @ SURFACE (H701209-12)

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	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) 95.4 % 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	<16.0	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	05/10/2017	ND	198	98.8	200	1.70	
DRO >C10-C28	<10.0	10.0	05/10/2017	ND	193	96.4	200	5.15	

Surrogate: 1-Chlorooctane 80.2 % 28.3-164

Surrogate: 1-Chlorooctadecane 82.1 % 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:	MCKITTRICK HILLS CTB	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	EDDY COUNTY, NM		

Sample ID: SOUTH @ SURFACE (H701209-13)

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	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) 94.9 % 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	16.0	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 75.8 % 28.3-164

Surrogate: 1-Chlorooctadecane 76.0 % 34.7-157

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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.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

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 McKittrick Hills CTB (2RP-4178) - Delineation Workplan
Date: Wednesday, September 20, 2017 11:19:09 AM

RE: OXY USA * McKittrick Hills 14 Fed SWD 1 (McKittrick Hills CTB) * **2RP-4178** * DOR: 4/18/17

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: Monday, September 11, 2017 7:18 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 McKittrick Hills CTB (2RP-4178) - Delineation Workplan

Mike and Shelly,

Please find the attached Delineation Workplan and remediation proposal for the OXY McKittrick Hills CTB (2RP-4178). 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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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 McKittrick Hills CTB (2RP-4178) - Delineation Workplan
Date: Tuesday, October 3, 2017 4:09:08 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.

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On Wed, Sep 20, 2017 at 11:17 AM, Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us> wrote:

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DOR: 4/18/17

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Mike Bratcher

NMOCD District 2

[811 South First Street](#)

[Artesia, NM 88210](#)

[575](#)-748-1283 Ext 108

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Cliff P. Brunson, CEI, CRS

President

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