



January 12, 2015

Mr. Mike Bratcher
NMOCD District 2
811 S. 1st Street
Artesia, NM 88210

AMARILLO
921 North Bivins
Amarillo, Texas 79107
Phone 806.467.0607
Fax 806.467.0622

ARTESIA
408 West Texas Ave.
Artesia, New Mexico 88210
Phone 575.746.8768
Fax 575.746.8905

Subject: **Soil Assessment and Remediation Work Plan**
Oxy USA WTP Limited Partnership
Martha Creek Gas Com Battery
API: 30-015-10323 – 2RP-2653
AMENDED

Dear Mr. Bratcher,

HOBBBS
318 East Taylor Street
Hobbs, New Mexico 88240
Phone 575.393.4261
Fax 575.393.4658

Oxy USA WTP Limited Partnership (Oxy) has contracted Talon/LPE (Talon) to perform soil assessment and remediation services at the above referenced location. The results of our soil assessment and proposed remediation activities consist of the following.

MIDLAND
2901 State Hwy 349
Midland, Texas 79706
Phone 432.522.2133
Fax 432.522.2180

Background Information

The Martha Creek Gas Com Battery is located approximately 35 miles southwest of Artesia, New Mexico. The legal location for this release is Unit Letter I, Section 30, Township 21 South, and Range 24 East in Eddy County, New Mexico. More specifically the latitude and longitude for the release are 32.4476087 North and - 104.533986 West. A site plan is presented in Appendix I.

OKLAHOMA CITY
7700 North Hudson Avenue
Suite 10
Oklahoma City, Oklahoma 73116
Phone 405.486.7030
Fax 806.467.0622

According to the soil survey provided by the United States Department of Agriculture National Resources Conservation Services, the soil in this area is made up of Ector rocky loam with a 0 to 9 percent slopes. The local surface and shallow geology, Paleozoic Age sedimentary deposits, is comprised of the Guadeloupian Artesia Group, Tansil and Yates formations, which are made up of residuum weathered limestone underlain by very cobbly loam and hard caliches. Groundwater in the project vicinity is approximately 90-feet below ground surface (bgs) according to the New Mexico Office for the State Engineer. See Appendix II for the referenced groundwater data.

SAN ANTONIO
13111 Lookout Way
San Antonio, Texas 78233
Phone 210.265.8025
Fax 210.568.2191

The ranking for this site is 10 based on the following:

Depth to ground water	50' - 100'
Wellhead Protection Area	>1000'
Distance to surface water body	>1000'

ENVIRONMENTAL CONSULTING
ENGINEERING
DRILLING
CONSTRUCTION
SPILL MANAGEMENT
GENERAL CONTRACTING

Toll Free: 866.742.0742
www.talonlpe.com

Incident Description

A manway gasket malfunctioned on the heater treater caused a release of 15 barrels of oil and 5 barrels of produced water. A vacuum truck was immediately called to the location and 15 barrels of oil was recovered. The facility was shut-in, the heater treater was repaired and put back into service. The affected area measured approximately 70-feet long by 20-60 feet wide around the heater treater. All fluids stayed on location. Talon mobilized personnel to conduct a site assessment and conduct soil sampling activities utilizing a hand auger within the impacted areas. The results of our soil sampling activities are summarized in the table below.

Laboratory Results

See [Appendix III](#) for complete report of laboratory results.

Sample ID	Depth (feet)	BTEX (mg/kg)	Chlorides (mg/kg)	TPH (mg/kg) GRO	TPH (mg/kg) DRO
S-1	1'	50.5	1040	950	13100
S-2	1'	1.53	880	35.7	3480
S-3 Refusal	1'	<0.300	1360	10.5	1510

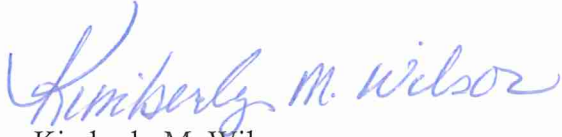
Based upon the site ranking of **0**, NMOCD Recommended Remedial Action Levels (RRAL's) are 50 mg/kg for BTEX, 10 mg/kg for Benzene, 1,000 mg/kg for TPH and 1,000 mg/kg for Chlorides.

Proposed Remedial Actions

- The impacted area in the vicinity of S-1 will be excavated to a minimum depth of 3-feet bgs. Field PID readings will be used to guide the excavation. Once field results indicate that the impacted soil is below NMOCD Recommended Remedial Action Level's (RRAL's) a confirmation soil sample will be taken to insure all of the impacted material was removed.
- The impacted area in the vicinity S-2 and S-3 will be excavated a minimum of 2-feet deep. Field PID readings will be used to guide the excavation. Once field results indicate that the impacted soil is below NMOCD Recommended Remedial Action Level's (RRAL's) confirmation soil samples will be taken to insure all of the impacted material was removed.
- All of the excavated material will be hauled to an NMOCD approved solid waste disposal facility.
- Upon approval by the NMOCD, the excavated areas on location will be backfilled with caliche and re-contoured to match the surrounding location.

Should you have any questions or if further information is required, please do not hesitate to contact our office at (575)-746-8768.

Respectfully submitted,



Kimberly M. Wilson
Project Manager

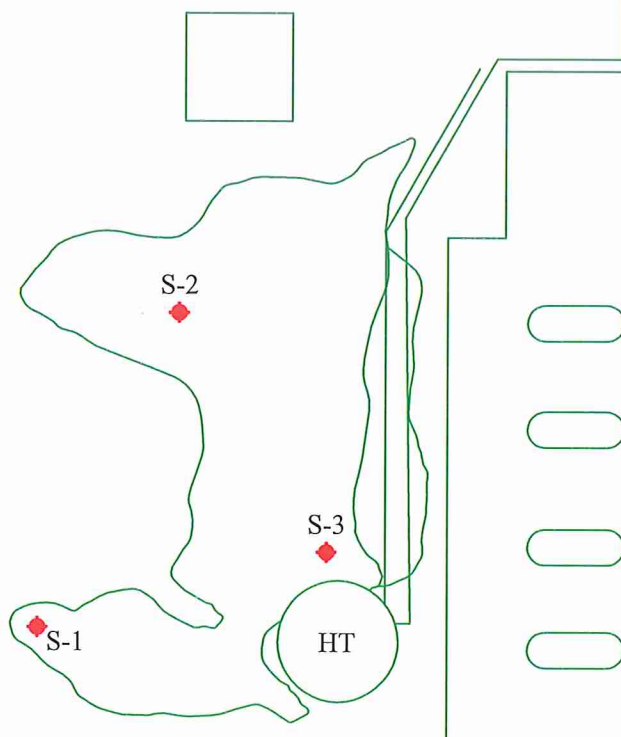


David J. Adkins
District Manager

APPENDIX I

SITE MAP

Poly & Steel Lines



NTS



Scale in Feet

Legend

◆ - Sample Location



Date: 12/18/2014

Scale: NTS

Drawn By: TJS

Martha Creek
Oxy - NM - North
Eddy County, New Mexico
Figure 1 - Site Plan

APPENDIX II
GROUNDWATER DATA
INITIAL C-141



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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
RA 09741			ED	2	1	1	32	21S	23E	534813	3589438*	570	200	180	20
RA 10046			ED	4	1	4	36	21S	22E	532553	3588361*	2372	247	215	32

Average Depth to Water: **197 feet**

Minimum Depth: **180 feet**

Maximum Depth: **215 feet**

Record Count: 2

UTMNAD83 Radius Search (in meters):

Easting (X): 534408

Northing (Y): 3589840

Radius: 3000

*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.

NM OIL CONSERVATION

ARTESIA DISTRICT

DEC 10 2014

Form C-141
Revised August 8, 2011

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

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

Release Notification and Corrective Action

19AB143445634-1 Name of Company: OXY USA Limited Partnership 192463		OPERATOR ☒ Initial Report ☐ Final Report	
Address: 102 S. Main St. Carlsbad, NM 88220		Contact: Chris Jones Telephone No.: 575-628-4121	
Facility Name: Martha Creek Gas Com Battery		Facility Type: Battery	
Surface Owner: Federal		Mineral Owner:	
		API No.: 30-015-10323 Lease #: NM D-29301	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	30	21S	24E					Eddy

Latitude 32.447610 N Longitude -104.5340 W

NATURE OF RELEASE

Type of Release: Oil & Produced Water	Volume of Release: 5 bbls PW & 15 bbls oil	Volume Recovered: 15 bbls oil
Source of Release: Heater Treater	Date and Hour of Occurrence: 11/7/14 @ 11:30 am	Date and Hour of Discovery: 11/7/14 @ 11:30
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Mike Bratcher @ NMOCD Jeff Robertson BLM	
By Whom? Kimberly Wilson	Date and Hour: 11/13/14	
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.* The man way gasket on the heater treater malfunctioned causing 5 barrels of produced water and 15 barrels of oil to be released within the berms. The facility was shut-in, the heater treater was repaired and put back into service. A vacuum truck was immediately called to the location and 15 barrels of oil was recovered. Talon/LPE was contracted to perform an initial site assessment and soil sampling.

Describe Area Affected and Cleanup Action Taken.*

The affected area is approximately 25' X 63' around the heater treater. All fluids stayed on location.

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>Chris Jones</u>		OIL CONSERVATION DIVISION	
Printed Name: Chris Jones		Approved by Environmental Specialist: <u>Mike Bratcher</u>	
Title: HES Specialist		Approval Date: 12/10/14	Expiration Date: N/A
E-mail Address: Christopher.Jones@oxy.com		Conditions of Approval:	
Date: 11/18/2014 Phone: 575-499-3337		Attached ☐	

Remediation per O.C.D. Rules & Guidelines

SUBMIT REMEDIATION PROPOSAL NO

LATER THAN: 11/10/15

2RP-2653

* Attach Additional Sheets If Necessary

APPENDIX III
LABORATORY RESULTS

December 03, 2014

DAVID ADKINS

TALON LPE

408 W. TEXAS AVE.

ARTESIA, NM 88210

RE: MARTHA CREEK CTB

Enclosed are the results of analyses for samples received by the laboratory on 12/02/14 13:46.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. 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/ga/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,



Caley D. Keene

Lab Director/Quality Manager

Analytical Results For:

 TALON LPE
 DAVID ADKINS
 408 W. TEXAS AVE.
 ARTESIA NM, 88210
 Fax To: (575) 745-8905

 Received: 12/02/2014
 Reported: 12/03/2014
 Project Name: MARTHA CREEK CTB
 Project Number: 700608.384.01
 Project Location: EDDY COUNTY, NM

 Sampling Date: 12/01/2014
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Kathy Perez

Sample ID: S - 1 1' (H403672-01)

BTX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.500	0.500	12/03/2014	ND	1.93	96.7	2.00	3.49	
Toluene*	4.42	0.500	12/03/2014	ND	1.90	95.2	2.00	2.81	
Ethylbenzene*	3.10	0.500	12/03/2014	ND	1.79	89.6	2.00	3.02	
Total Xylenes*	43.0	1.50	12/03/2014	ND	5.42	90.4	6.00	3.67	
Total BTX	50.5	3.00	12/03/2014	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1040	16.0	12/03/2014	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK						S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	950	50.0	12/02/2014	ND	196	98.1	200	5.01		
DRO >C10-C28	13100	50.0	12/02/2014	ND	200	99.9	200	8.07		

Surrogate: 1-Chlorooctane 212 % 47.2-157

Surrogate: 1-Chlorooctadecane 392 % 52.1-176

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TALON LPE
DAVID ADKINS
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 12/02/2014
Reported: 12/03/2014
Project Name: MARTHA CREEK CTB
Project Number: 700608.384.01
Project Location: EDDY COUNTY, NM

Sampling Date: 12/01/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S - 2 1' (H403672-02)

BTEX 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2014	ND	1.93	96.7	2.00	3.49	
Toluene*	0.072	0.050	12/03/2014	ND	1.90	95.2	2.00	2.81	
Ethylbenzene*	0.088	0.050	12/03/2014	ND	1.79	89.6	2.00	3.02	
Total Xylenes*	1.37	0.150	12/03/2014	ND	5.42	90.4	6.00	3.67	
Total BTEX	1.53	0.300	12/03/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 100 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	880	16.0	12/03/2014	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK						S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
GRO C6-C10	35.7	10.0	12/02/2014	ND	196	98.1	200	5.01		
DRO >C10-C28	3480	10.0	12/02/2014	ND	200	99.9	200	8.07		

Surrogate: 1-Chlorooctane 141 % 47.2-157

Surrogate: 1-Chlorooctadecane 208 % 52.1-176

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TALON LPE
DAVID ADKINS
408 W. TEXAS AVE.
ARTESIA NM, 88210
Fax To: (575) 745-8905

Received: 12/02/2014
Reported: 12/03/2014
Project Name: MARTHA CREEK CTB
Project Number: 700608.384.01
Project Location: EDDY COUNTY, NM

Sampling Date: 12/01/2014
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Kathy Perez

Sample ID: S - 3 1' (H403672-03)

BTEx 8021B		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	12/03/2014	ND	1.93	96.7	2.00	3.49	
Toluene*	<0.050	0.050	12/03/2014	ND	1.90	95.2	2.00	2.81	
Ethylbenzene*	<0.050	0.050	12/03/2014	ND	1.79	89.6	2.00	3.02	
Total Xylenes*	<0.150	0.150	12/03/2014	ND	5.42	90.4	6.00	3.67	
Total BTEx	<0.300	0.300	12/03/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIE) 103 % 61-154

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1360	16.0	12/03/2014	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	10.5	10.0	12/02/2014	ND	196	98.1	200	5.01	
DRO >C10-C28	1510	10.0	12/02/2014	ND	200	99.9	200	8.07	

Surrogate: 1-Chlorooctane 124 % 47.2-157

Surrogate: 1-Chlorooctadecane 174 % 52.1-176

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

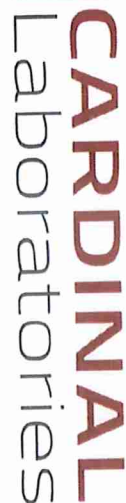
Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Page 6 of 6



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	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 02701			ED	3	3	3	20	21S	24E	544393	3591373*	1437	230	90	140
C 02261	C		ED	1	2	2	29	21S	24E	545598	3591170*	2250		20	
C 01136	C		ED		4	3	28	21S	24E	546455	3589868*	2903	138	83	55
RA 05131			ED	2	3	2	23	21S	23E	540424	3592266*	3767	255		
RA 05131 S			ED	2	3	2	23	21S	23E	540424	3592266*	3767	292	180	112

Average Depth to Water: **93 feet**

Minimum Depth: **20 feet**

Maximum Depth: **180 feet**

Record Count: 5

Basin/County Search:

County: Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 543570

Northing (Y): 3590194

Radius: 4000

*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.