ENSOLUM

February 28, 2024

New Mexico Oil Conservation Division
New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Remediation Work Plan
Twin Lakes SA Unit #028
Incident Number nAPP2405245333
Chaves County, New Mexico

To Whom It May Concern:

Ensolum, LLC (Ensolum), on behalf of Oxy USA Inc. (Oxy), has prepared the following *Remediation Work Plan* (*Work Plan*) to document site assessment and delineation activities completed to date and propose remedial actions to address historical impacted soil identified at the Twin Lakes SA Unit #028 well pad (Site). The following *Work Plan* proposes excavation of impacted soil within the historical release area and submittal of a subsequent *Closure Request,* documenting the excavation activities and confirmation soil sample analytical results.

SITE DESCRIPTION AND RELEASE SUMMARY

The Site is located in Unit G, Section 36, Township 8 South, Range 28 East, in Chaves County, New Mexico (33.57927, -104.03858) and is associated with oil and gas exploration and production operations on state land managed by the New Mexico State Land Office (NMSLO).

During 2021, the NMSLO completed an aerial imagery review of plugged and abandoned wells located on state land in Chaves County. Visible indications of a potential historical release were identified at the Site, and as the lease holder, Oxy was notified by the NMSLO of the need to investigate potential impacts to soil. Oxy contracted BBC International, Inc. (BBC) and Ensolum to conduct assessment and delineation activities within the historical release area. Based on the delineation soil sample analytical results, a Notification of Release was submitted to the New Mexico Oil Conservation Division (NMOCD) on February 21, 2024. The release was assigned Incident Number nAPP2405245333.

Oxy is not the Operator of the Twin Lakes SA Unit #028 well, and has no independent knowledge of the facts or circumstances surrounding the nature, content or volume of any release(s), contemporaneous to any such release(s). All information submitted by Oxy herein is based on Oxy's present day observations of the site. Oxy submits this *Work Plan* pursuant to an agreement with the NMSLO, as lessee of record.

Since the release occurred on a previously disturbed well pad, compliance with the Cultural Properties Protection Rule (CPP) is not required. The oil and gas well has been plugged and abandoned. Upon completion of remediation activities and closure approval of Incident Number nAPP2405245333, a

Reclamation Plan will be submitted to the NMSLO proposing final reclamation activities for the well pad and access road.

SITE CHARACTERIZATION AND CLOSURE CRITERIA

The Site was characterized to assess the applicability of Table I, Closure Criteria for Soils Impacted by a Release, of Title 19, Chapter 15, Part 29 (19.15.29) of the New Mexico Administrative Code (NMAC). Results from the characterization are summarized below and detailed in the NMOCD permitting portal Form C-141 Site Characterization section. Potential Site receptors are identified on Figure 1.

Depth to groundwater at the Site is estimated to be less than 50 feet below ground surface (bgs) based on the nearest groundwater well data. The closest permitted groundwater well with depth to groundwater data is United States Geologic Survey (USGS) well 333423104032401, located approximately 1.1 miles southwest of the Site. The well has a recorded depth to groundwater of 35.77 feet bgs and a total depth of 157 feet. The referenced well records are included in Appendix A. All wells used for depth to groundwater determination are depicted on Figure 1.

The closest continuously flowing or significant watercourse is greater than 300 feet from the Site. The Site is greater than 200 feet from a lakebed, sinkhole, or playa lake and greater than 300 feet from an occupied residence, school, hospital, institution, church, or wetland. The Site is greater than 1,000 feet to a freshwater well or spring and is not within a 100-year floodplain or overlying a subsurface mine. The Site is not underlain by unstable geology. Site receptors are identified on Figure 1.

Based on the results of the Site Characterization, the following NMOCD Table I Closure Criteria (Closure Criteria) apply:

- Benzene: 10 milligrams per kilogram (mg/kg)
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX): 50 mg/kg
- Total petroleum hydrocarbons (TPH): 100 mg/kg
- Chloride: 600 mg/kg

SITE ASSESSMENT AND DELINEATION ACTIVITIES

During November 2021 and January 2024, BBC and Ensolum personnel were at the Site to evaluate the historical release extent based on information provided by the NMSLO and visual observations. Five surface soil samples (North, East, East 2, West, and South) were collected around the historical release extent to confirm the lateral extent of the surface release. Potholes were advanced at seven sample points (SP1 through SP7) within the historical release area to delineate the vertical extent of impacted soil. The potholes were advanced to depths ranging from 2 feet to 4 feet bgs. Discrete delineation soil samples were collected from sample points SP1 through SP7 at depths ranging from the ground surface to 4 feet bgs. Soil from the potholes was field screened for volatile organic compounds (VOCs) utilizing a calibrated photoionization detector (PID) and chloride using Hach® chloride QuanTab® test strips. Field screening results and observations for the January 2024 potholes were logged on lithologic soil sampling logs, which are included in Appendix B.

The delineation soil samples were placed directly into pre-cleaned glass jars, labeled with the location, date, time, sampler name, method of analysis, and immediately placed on ice. The soil samples were transported under strict chain-of-custody procedures to Cardinal Laboratories (Cardinal) in Hobbs, New Mexico, for analysis of the following constituents of concern (COCs): BTEX following United States Environmental Protection Agency (EPA) Method 8021B; TPH-gasoline range organics (GRO), TPH-

diesel range organics (DRO), and TPH-oil range organics (ORO) following EPA Method 8015M/D; and chloride following Standard Method SM4500.

The release extent and delineation soil sample locations were mapped utilizing a handheld Global Positioning System (GPS) unit and are depicted on Figure 2. Photographic documentation was completed during the Site visits and a photographic log is included in Appendix C.

LABORATORY ANALYTICAL RESULTS

Laboratory analytical results for surface soil samples North, East, East 2, West, and South indicated all COC concentrations were compliant with the Site Closure Criteria and confirmed the lateral extent of the surface release. Laboratory analytical results for the delineation soil samples collected from sample points SP1 and SP4, collected at depths ranging from the ground surface to 3 feet bgs, indicated all COC concentrations were compliant with the Site Closure Criteria. Laboratory analytical results for the delineation soil samples collected from sample points SP2, SP3, SP5, SP6, and SP7 indicated that TPH and/or chloride concentrations exceeded the Site Closure Criteria at depths ranging from the ground surface to 3 feet bgs. Laboratory analytical results are summarized on the attached Table 1 and the complete laboratory analytical reports are included in Appendix D.

Based on the soil sample analytical results, additional remediation activities are warranted and are proposed below.

PROPOSED REMEDIATION WORKPLAN

The delineation soil sample results indicated soil containing TPH and/or chloride concentrations exceeding the Site Closure Criteria is present across an approximate 11,500 square foot area and extends to a depth ranging from 0.5 feet to 2 feet bgs around sample points sample points SP1, SP3, and SP5 and to a depth greater than 2 feet bgs around sample points SP6 and SP7. Based on the delineation soil sample analytical results, Oxy proposes to complete the following remediation activities:

- The impacted soil identified within the release area will be excavated. Excavation will proceed laterally and vertically until excavation sidewall and floor samples confirm all COC concentrations are compliant with the Site Closure Criteria.
    - 5-point composite soil samples will be collected from the sidewalls and floor of the final excavation extent. The 5-point composite samples will be collected by placing five equivalent aliquots of soil into a 1-gallon, resealable plastic bag and homogenizing the samples by thoroughly mixing.
    - The excavation sidewall samples will be collected at a frequency of every 200 square feet.
    - Due to the estimated size of the excavation (11,500 square feet), Oxy requests a variance for frequency of excavation floor samples. Oxy proposes collecting floor samples at a frequency of every 400 square feet from the floor of the excavation.
    - The excavation confirmation soil samples will be handled as described above and analyzed for BTEX, TPH, and chloride.
- An estimated 800 cubic yards of impacted soil will be excavated. The excavated soil will be transported to an approved landfill facility for disposal.
- Upon completion of excavation activities, the excavation will be backfilled with locally procured backfill and topsoil and recontoured to match pre-existing conditions. Since the well has been plugged and abandoned, a Reclamation Plan for the entire well pad and access road will be submitted to the NMSLO upon closure approval of Incident Number nAPP2405245333.

Oxy will complete the excavation activities within 90 days of the date of approval of this *Work Plan* by the NMOCD. A *Closure Request* detailing the excavation activities will be submitted to the NMOCD and NMSLO upon completion of excavation activities and receipt of final laboratory analytical results.

Oxy believes the scope of work described above meets the requirements set forth in 19.15.29 NMAC and is protective of human health, the environment, and groundwater and respectfully requests approval of this *Work Plan* for Incident Number nAPP2405245333.

If you have any questions or comments, please contact Ms. Aimee Cole at (720) 384-7365 or acole@ensolum.com.

Sincerely,
Ensolum, LLC

Hadlie Green
Project Geologist

Aimee Cole
Senior Managing Scientist

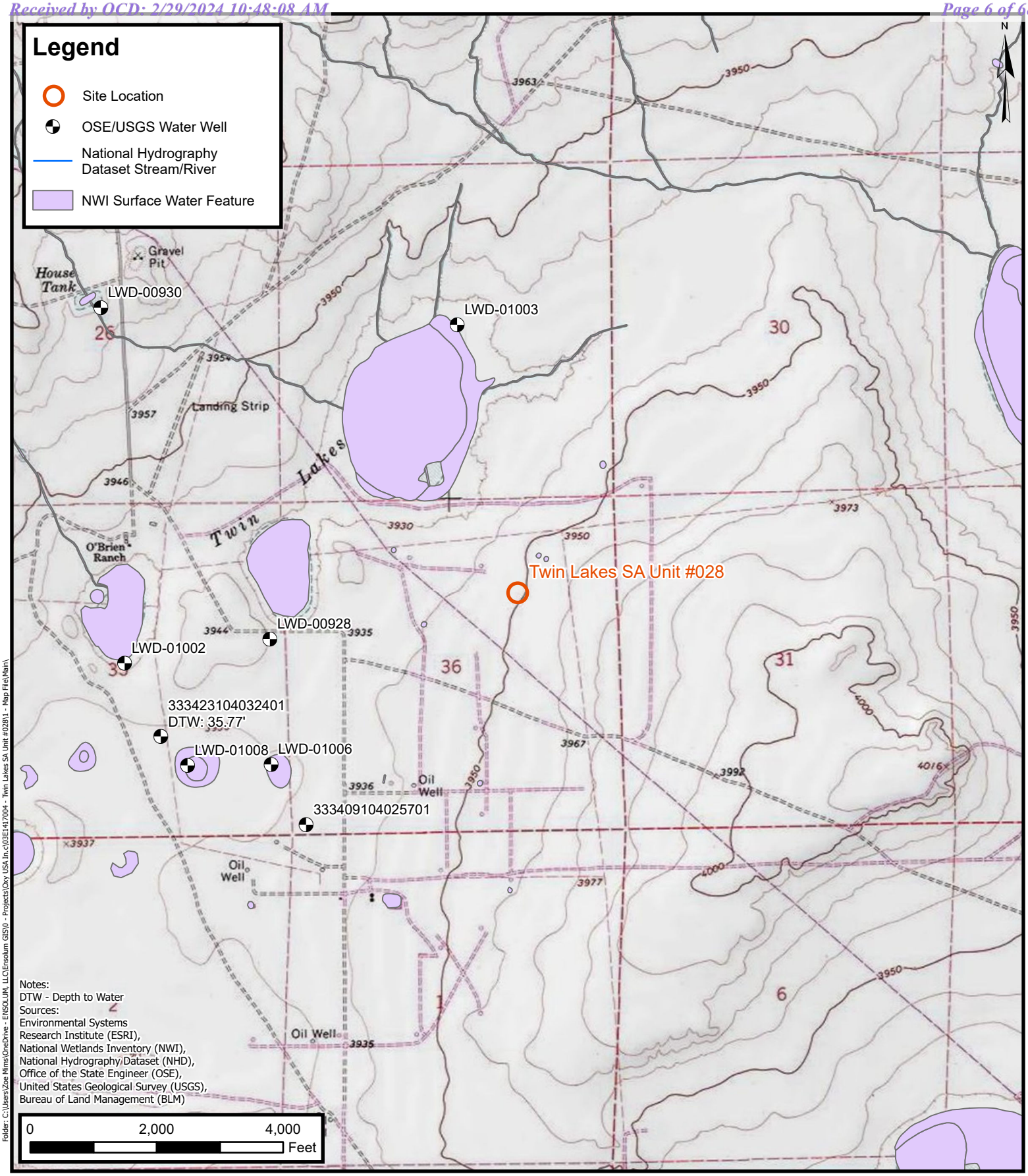
cc: Kalei Jennings, Oxy USA Inc.
New Mexico State Land Office

Appendices:

Figure 1	Site Receptor Map
Figure 2	Delineation Soil Sample Locations
Figure 3	Proposed Excavation Extent
Table 1	Soil Sample Analytical Results
Appendix A	Referenced Well Records
Appendix B	Lithologic Soil Sampling Logs
Appendix C	Photographic Log
Appendix D	Laboratory Analytical Reports & Chain-of-Custody Documentation

ENSOLUM

FIGURES



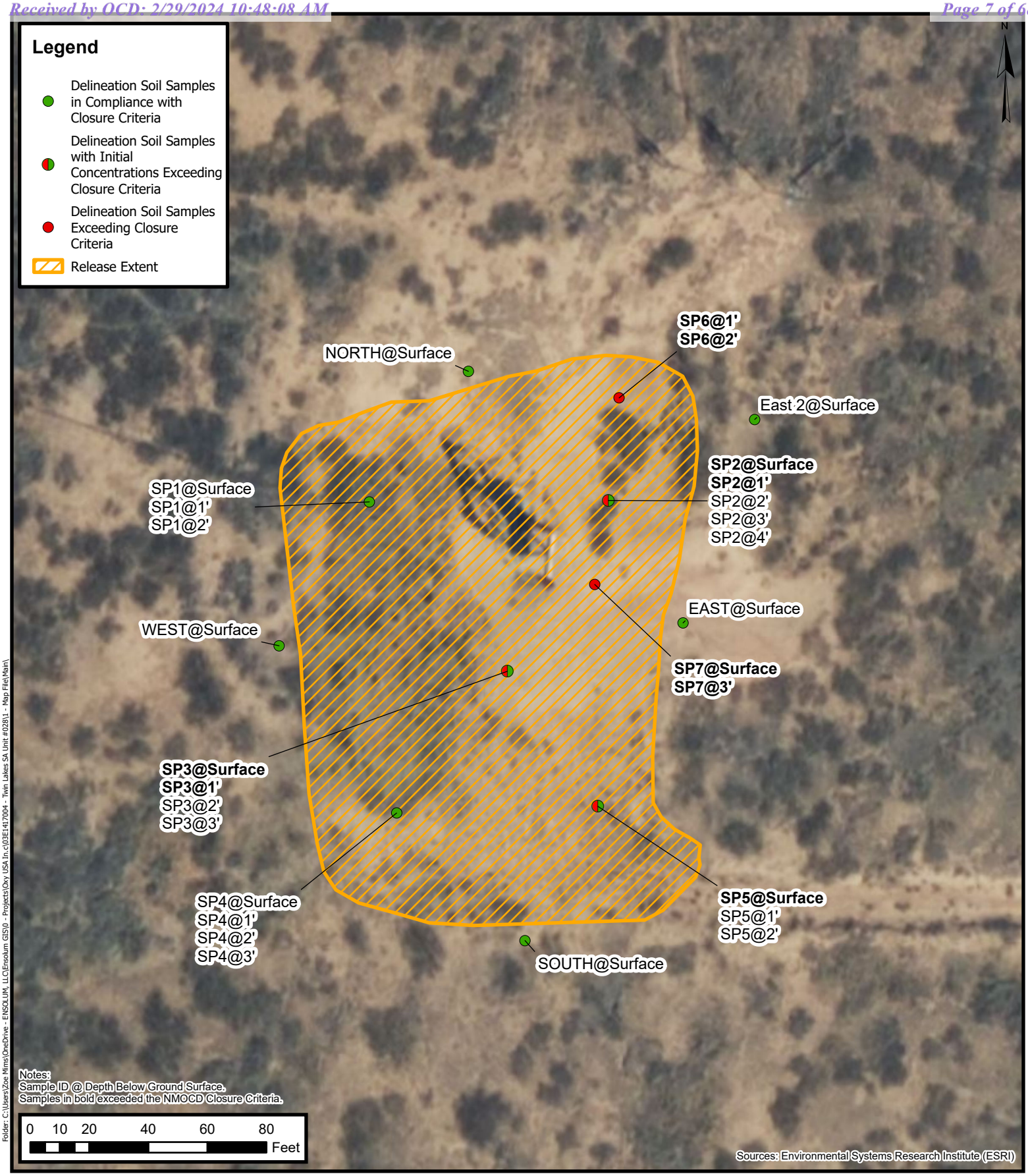
ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Site Receptor Map

Oxy USA Inc.
Twin Lakes SA Unit #028

Incident Number nAPP2405245333
Unit G, Sec 36, T08S, R28E
Chaves County, New Mexico

FIGURE 1



Folder: C:\Users\Zoe Mims\OneDrive - ENSOLUM, LLC\Ensolum GIS\0 - Projects\Oxy USA In.c\03E141.7004 - Twin Lakes SA Unit #028\1 - Map File\Main\

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Delineation Soil Sample Locations

Oxy USA Inc.
Twin Lakes SA Unit #028
Incident Number nAPP2405245333
Unit G, Sec 36, T08S, R28E
Chaves County, New Mexico

FIGURE 2

ENSOLUM
Environmental, Engineering and Hydrogeologic Consultants

Proposed Excavation Extent

Oxy USA Inc.
Twin Lakes SA Unit #028
Incident Number nAPP2405245333
Unit G, Sec 36, T08S, R28E
Chaves County, New Mexico

FIGURE 3

ENSOLUM

TABLES

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Twin Lakes SA Unit #028
Oxy USA Inc.
Chaves County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
Delineation Soil Samples										
North	11/15/2021	Surface	0.191	0.467	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
East	11/15/2021	Surface	0.188	0.454	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
East 2	01/31/2024	Surface	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
West	11/15/2021	Surface	0.266	0.605	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
South	11/15/2021	Surface	0.263	0.642	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SP1	11/15/2021	Surface	0.193	0.486	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SP1	11/15/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SP1	11/15/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SP2	11/15/2021	Surface	0.103	0.367	<10.0	<10.0	<10.0	<10.0	<10.0	**3,320**
SP2	11/15/2021	1	0.103	0.350	<10.0	11.4	14.9	11.4	26.3	**3,160**
SP2	11/15/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	592
SP2	11/15/2021	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	144
SP2	11/15/2021	4	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	244
SP3	11/15/2021	Surface	0.130	0.356	<10.0	1,220	657	1,220	**1,877**	**5,520**
SP3	11/15/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,440**
SP3	11/15/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208
SP3	11/15/2021	3	0.079	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SP4	11/15/2021	Surface	0.133	0.435	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
SP4	11/15/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	576
SP4	11/15/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SP4	11/15/2021	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
SP5	11/15/2021	Surface	0.301	0.645	<10.0	<10.0	<10.0	<10.0	<10.0	**928**
SP5	11/15/2021	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SP5	11/15/2021	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
Twin Lakes SA Unit #028
Oxy USA Inc.
Chaves County, New Mexico

Sample Designation	Date	Depth (feet bgs)	Benzene (mg/kg)	Total BTEX (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)	GRO+DRO (mg/kg)	Total TPH (mg/kg)	Chloride (mg/kg)
NMOCD Table I Closure Criteria (NMAC 19.15.29)			10	50	NE	NE	NE	NE	100	600
SP6	01/25/2024	1	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,600**
SP6	01/25/2024	2	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**1,040**
SP7	01/25/2024	Surface	<0.050	<0.300	<10.0	10.6	<10.0	10.6	10.6	**4,960**
SP7	01/25/2024	3	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	**2,600**

Notes:

bgs: below ground surface

mg/kg: milligrams per kilogram

NMOCD: New Mexico Oil Conservation Division

NMAC: New Mexico Administrative Code

BTEX: Benzene, Toluene, Ethylbenzene, and Xylenes

Concentrations in ***bold*** *exceed the NMOCD Table I Closure Criteria or reclamation standard where applicable.*

GRO: Gasoline Range Organics

DRO: Diesel Range Organics

ORO: Oil Range Organics

TPH: Total Petroleum Hydrocarbon

ENSOLUM

APPENDIX A

Referenced Well Records

National Water Information System: Web Interface

USGS Water Resources

Data Category: Groundwater | Geographic Area: New Mexico | GO

Click to hideNews Bulletins

- Explore the *NEW* USGS National Water Dashboard interactive map to access real-time water data from over 13,500 stations nationwide.
- Full News

Groundwater levels for New Mexico

Click to hide state-specific text

Important: Next Generation Monitoring Location Page

Search Results -- 1 sites found

Agency code = usgs
site_no list =
- 333423104032401

Minimum number of levels = 1
Save file of selected sites to local disk for future upload

USGS 333423104032401 08S.28E.35.41334

Chaves County, New Mexico
Latitude 33°34'23", Longitude 104°03'24" NAD27
Land-surface elevation 3,931 feet above NAVD88
The depth of the well is 157 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Alluvium, Bolson Deposits and Other Surface Deposits (110AVMB) local aquifer.

Output formats

Table of data
Tab-separated data
Graph of data
Reselect period

Date	Time	? Water-level date-time accuracy	? Parameter code	Water level, feet below land surface	Water level, feet above specific vertical datum	Referenced vertical datum	? Status	? Method of measurement	? Measuring agency	? Source of measurement	? Water-level approval status
1978-10-18		D	62610		3895.00	NGVD29	1	Z			A
1978-10-18		D	62611		3896.86	NAVD88	1	Z			A
1978-10-18		D	72019	34.14			1	Z			A
1984-02-16		D	62610		3893.37	NGVD29	1	Z			A
1984-02-16		D	62611		3895.23	NAVD88	1	Z			A
1984-02-16		D	72019	35.77			1	Z			A

Explanation

Section	Code	Description
Water-level date-time accuracy	D	Date is accurate to the Day
Parameter code	62610	Groundwater level above NGVD 1929, feet
Parameter code	62611	Groundwater level above NAVD 1988, feet
Parameter code	72019	Depth to water level, feet below land surface
Referenced vertical datum	NAVD88	North American Vertical Datum of 1988
Referenced vertical datum	NGVD29	National Geodetic Vertical Datum of 1929
Status	1	Static
Method of measurement	Z	Other.
Measuring agency		Not determined
Source of measurement		Not determined
Water-level approval status	A	Approved for publication -- Processing and review completed.

Questions or Comments
Automated retrievals
Help
Data Tips
Explanation of terms
Subscribe for system changes
News

Title: Groundwater for New Mexico: Water Levels
URL: https://nwis.waterdata.usgs.gov/nm/nwis/gwlevels?

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2024-02-07 16:44:11 EST
0.36 0.31 nadww02

New Mexico Office of the State Engineer
Point of Diversion Summary

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	RA 09732			1	22	08S	28E	585283	3719179*

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)
(NAD83 UTM in meters)

Driller License:	1082	**Driller Company:**	SPEARS, JACK DRILLING CO.		
Driller Name:	SPEARS, JACK				
Drill Start Date:	05/14/1999	**Drill Finish Date:**	06/17/1999	**Plug Date:**	
Log File Date:	06/22/1999	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	10 GPM
Casing Size:	5.00	**Depth Well:**	922 feet	**Depth Water:**	600 feet

Water Bearing Stratifications:	Top	Bottom	Description
	862	920	Shallow Alluvium/Basin Fill

Casing Perforations:	Top	Bottom
	832	922

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

ENSOLUM

APPENDIX B

Lithologic Soil Sampling Logs

ENSOLUM

Sample Name: SP6	Date: Jan 25, 2024
Site Name: Twin Lakes SA Unit #028	
Incident Number:	
Job Number: 03E1417004	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: K Shimada	Method: Backhoe
Coordinates: 33.579384, -104.038465	Hole Diameter: N/A
	Total Depth: 2'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. D-Dry; ND-Non Detect; N-No

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
D	ND	1133	N			Surface	SW	SAND, light brown, well graded, fine grain, rounded, dry, no stain, slight odor.
D	465	1.2	N	SP6	1	1	SW	SAND, brown, well graded, fine grain, rounded, dry, no stain, no odor.
D	918	0.0	N	SP6	2	2	SW-SM	SAND, brown, some silt and gravel, well graded, subrounded, dry, no stain, no odor.

ENSOLUM

Sample Name: SP7	Date: Jan 25, 2024
Site Name: Twin Lakes SA Unit #028	
Incident Number:	
Job Number: 03E1417004	

LITHOLOGIC / SOIL SAMPLING LOG

Logged By: K Shimada	Method: Backhoe
Coordinates: 33.579382, -104.038465	Hole Diameter: N/A
	Total Depth: 3'

Comments: Field screening conducted with HACH Chloride Test Strips and PID for chloride and vapor, respectively. Chloride test performed with 1:4 dilution factor of soil to distilled water. 40% correction factor included. M-Moist; D-Dry; N-No; Y-Yes

Moisture Content	Chloride (ppm)	Vapor (ppm)	Staining	Sample ID	Sample Depth (ft bgs)	Depth (ft bgs)	USCS/Rock Symbol	Lithologic Descriptions
M	>3472	83.5	N	SP7	Surface	Surface	CH	CLAY, dark brown, lean, well graded, fine grain, rounded, moist, no stain, no odor.
D	>3472	0.0	N			1	CL	CLAY, reddish brown and white, sandy, lean, rounded, dry, no stain, no odor.
D	>3472	0.0	N			2	CL	CLAY, reddish brown, sandy, lean, rounded, dry, no stain, no odor.
D	>3472	0.0	N	SP7	3	3	CL	CLAY, reddish brown, sandy, lean, rounded, dry, no stain, no odor.

ENSOLUM

APPENDIX C

Photographic Log

ENSOLUM

Photographic Log
Oxy USA Inc.
Twin Lakes SA Unit #028
Incident Number nAPP2405245333

Photograph 1 Date: 01/25/2024
Description: Delineation Activities
View: Northeast

Photograph 2 Date: 01/25/2024
Description: View of well pad
View: Northwest

Photograph 3 Date: 01/25/2024
Description: View of well pad
View: Southwest

Photograph 4 Date: 01/25/2024
Description: Delineation activities
View: Northwest

ENSOLUM

APPENDIX D

Laboratory Analytical Reports & Chain of Custody Documentation

CARDINAL Laboratories

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

2(M$K<$% 9R* 9D9@

À)'FF Ā%G"=("

ĀĀÀ !"#$%"&#'("&)* !"+,

A,B, Ā(C :DE

;(<<=* 2> ::9?@

-./ 01!2 345.6 64 72!0 89:

."+)(=$H &%$ #I$ %$=G)#= (F &"&)J=$= F(% =&KL)$= %$+$&'M$H &# %)J (" @@N@ON9@ @E/DE,

À&%H'"&) 3&<(%&#(%'$= '= &++%$H'#$H #I%(GPI 0$C&= 2.34A F'G'R$% "GK<$% 0@D?QD?RO:S9@S@?, 4++%$H'#&#'("
&LL)'$= #(H%'"T'"P U&#$%* "("SL(#&<)$ U&#$% &"H =()'H &"H KI$K'%&)=, 4)) &++%$H'#$H &"&)J#$= &%$ H$"(#$H <J
&" &=#$%'=T VWX, Y(% & +(KL)$#$)'=# (F &++%$H'#$H &"&)J#$= &"H K$%#'# #I$ 0À.Z U$<='#$ &#
UUU,#+$[,#$C&=,P(MNF'$)HN[&N)&<\&++%$H\+$%#'F,I#K)

À&%H'"&) 3&<(%&#(%'$= '= &++%$H'#&#$H #I%(GPI #I$ &H&;L&P À(K$"# (F AG<)'+ ;$&)#I &"H ."M'%("K$"# F(%/

>$#I(H .A4 EE9,9 ;&)(&+$#'+ 4+'H= V;44SEX
>$#I(H .A4 E9?,9 0(#&) 0%'I&)(K$#I&"$= V00;>X
>$#I(H .A4 E9?,? -$PG)&#$H ^BÀ= V^@* ^9* ^RX

4++%$H'#&#'(" &LL)'$= #(LG<)'+ H%'"T'"P U&#$% K&#%'+$=,

0I'= %$L(%# K$$#= 2.34A %$[G'%$K$"#= &"H '= K&H$ GL (F &"& M"#&)J#'+&) %$=G)#=* &"H & +(LJ (F #I$ (%'P'"&)
+I&'"S(FS+G=#(HJ, !F J(G I&M$ &"J [G$=#'("= +("+$%""P #I'= %$L(%# F$$) F%$$ #(+("#&+# K$,

6'"+$%$)J*

>'T$ 6"JH$% Y(% À$)) 5$$"$
3&<]'%$+#(%&)'# >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: NORTH @ SURFACE (H213339-01)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
Benzene*	**0.191**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.163**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.467**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *97.3 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
Chloride	**32.0**	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

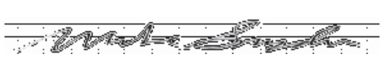
4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *109 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *110 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$K$HJ F(% &"J +)&'K &%'='"P*UI$#I$% <&=$H '" +("#%&+# (% #(%#=I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)$"# F(% &"&)J=$=, 4)) +)&'K=*'"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M%=I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=* (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$ I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, .$=G)#= %$)&#$ (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,



>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(% ZÀ&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: EAST @ SURFACE (H213339-02)

BTEX 8021B **mg/kg** **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
Benzene*	**0.188**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.167**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.454**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PIL *95.5 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
Chloride	**16.0**	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M **mg/kg** **Analyzed By: MS**

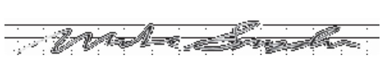
4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *114 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *116 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$ %KHJ F(% &"J +)&'K &%'='"P *UI$#I$% <&=$H '" +("#%&+# (% #(%#=I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=*'"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M% =I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$= '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=*)(== (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, -$=G)#= %$)&#$ (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,



>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%/Z G&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: WEST @ SURFACE (H213339-03)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.266**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.223**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	:,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.605**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *93.9 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
ÀI)(%'H$	g @f,D	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *114 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *115 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$%K$HJ F(% &"J +)&'K &%'='"P*UI$#I$% <&=$H '" +("#%&+# (% #(%#*I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)$"# F(% &"&)J=$=, 4)) +)&'K=*'"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M%=I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$=$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=* == (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, (#$=G)#= %$)&#$ (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,

>'T$ 6"JH$% Y(% À$)$= 5$$"$ *3&<]'%$+#(%/ ZG&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SOUTH @ SURFACE (H213339-04)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.263**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.252**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.642**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *93.3 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
ÀI)(%'H$	g @f,D	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *119 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *121 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$%$HJ F(% &"J +)&'K &%'='"P +UI$#I$% <&=$H '" ("#%&+#(% #(%#=I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=*'"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M%=I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&) U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, ...

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 1 @ SURFACE (H213339-05)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.193**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.187**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.486**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *95.3 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**64.0**	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

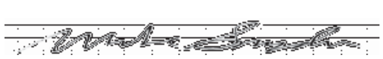
4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *117 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *121 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$ %KHJ F(% &"J +)&'K &%'='"P*UI$#I$% <&=$H '" +("#%&+# (% #(%#* I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=* '"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M%* =I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=* (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, %$)&#$= (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,



>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%Z4&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 1 @ 1' (H213339-06)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *98.2 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**224**	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *106 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *103 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

>'T$ 6"JH$% Y(% À$)$ 5$$"$ *3&<]'%$+#(%8 ?G&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 1 @ 2' (H213339-07)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *96.5 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**192**	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *103 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *101 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

>'T$ 6"JH$% Y(% À$)$ 5$$"$ *3&<]'%$+#NZG&)'J# >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 2 @ SURFACE (H213339-08)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$̀G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.103**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.169**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.367**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *97.7 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$̀G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**3320**	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$̀G ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *109 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *110 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

>'T$ 6"JH$% Y(% À$)'J 5$$"$ *3&<]'%$+#(%NZG&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 2 @ 1' (H213339-09)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.103**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.152**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	:,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.350**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID 97.7 % 69.9-140

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

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**3160**	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
DRO >C10-C28*	**11.4**	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
EXT DRO >C28-C36	**14.9**	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane 111 % 44.3-133

Surrogate: 1-Chlorooctadecane 112 % 38.9-142

À&%H"'&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H"'&)i)'&<')'#J&"H +)'$"#= $C+)G='M$%&K$HJ F(% &"J +)&'K &%'='"P UI$#I$% <&=$H '" +("#%&+# (% #(%#=I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, ...

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 2 @ 2' (H213339-10)

BTEX 8021B mg/kg Analyzed By: JH

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *97.4 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**592**	@f,D	@@N99N9D9@	2]	?R9	@D:	?DD	R,QQ	

TPH 8015M mg/kg Analyzed By: MS

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$G ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *101 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *105 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$%KHJ F(% &"J +)&'K &%'='"P*UI$#I$% <&=$H '" +("#%&+# (% #(%#=I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=*'"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M% =I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&) U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$= ...

>'T$ 6"JH$% Y(% À$)]$ 5$$"$ *3&<]'%$+#(% Z&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀÃÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 2 @ 3' (H213339-11)

BTEX 8021B **mg/kg** **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID	*98.2 %*	*69.9-140*

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

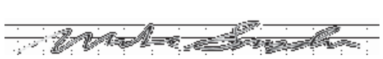
4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
Chloride	**144**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M **mg/kg** **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane	*101 %*	*44.3-133*
Surrogate: 1-Chlorooctadecane	*101 %*	*38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$



>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%* #'#)$ 4G&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 2 @ 4' (H213339-12)

BTEX 8021B **mg/kg** **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *99.3 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**224**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M **mg/kg** **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *98.8 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *99.0 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$%K$HJ F(% &"J +)&'K &%'='"P*UI$#I$% <&=$H '" +("#%&+# (% #(%#=I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=*'"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M% =I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=*)(== (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, (#I$% =GL$ %$)&#$= (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,

>'T$ 6"JH$% Y(% À$)$5$$"$ *3&<]'%$+#(%)ZG&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 3 @ SURFACE (H213339-13)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%G$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.130**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.119**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.356**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%G$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**5520**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS** **S-04**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%G$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
DRO >C10-C28*	**1220**	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
EXT DRO >C28-C36	**657**	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *110 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *224 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$%KHJ F(% &"J +)&'K &%'='"P*UI$#I$% <&=$H '" +("#%&+# (% #(%#=I&)) <$)'K'#$H # #I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=* '"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M%=I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("= (F G=$* (%)(== (F L%(F'#= +G%%$H J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H # #I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, 0$=G)#= %$)&#$ (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, `I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,

>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%&)'# >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 3 @ 1' (H213339-14)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$&(^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *95.3 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$&(^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**1440**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

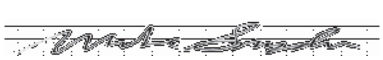
4"&)J#$	-$=G)#	-$L(%#"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$&(^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	9R?	@@Q	9DD	:,fQ	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9RR	@@Q	9DD	O,:O	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *116 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *119 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$&K$HJ F(% &"J +)&'K &%'='"P*UI$#I$% <&=$H '" +("#%&+# (% #(%#*I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=*'"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M%*=I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$=$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=*)(== (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, .$=G)#= %$)&#$ (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,



>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%ZG&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 3 @ 2' (H213339-15)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *95.0 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**208**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

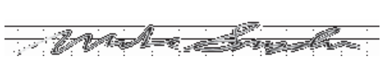
4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *104 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *106 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&))'&<')'#J&"H +)'$"#= $C+)G='M$%KHJ F(% &"J +)&'K &%'='"P UI$#I$% <&=$H '" +("#%&+# (% #(%#=I&)) <$)'K'#$H # #I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K= '"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M%I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&) U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$= '"+)GH'"P U'#I(G#)'K'#&#'(" <G='"$== '"#$%%GL#'("= (F G=$* (%)(== (F L%(F'#= '"+G%%$H +)'$"# '#= =G<='H'&%'$= &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H # #I$ L$%F(%K&"+$ (F #I$ =$%M'+$=I$%$G"H$% <J À&%H'"&) %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, 6$=G)#= %$)&#$ (")J # #I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,



>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%4G&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 3 @ 3' (H213339-16)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.079**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.082**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *94.6 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**64.0**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

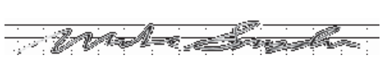
TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$6 ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *90.5 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *89.7 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$



>'T$ 6"JH$% Y(% À$)$ 5$$"$ *3&<]'%$+#(% Z&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 4 @ SURFACE (H213339-17)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.133**	D,DED	@@N99N9D9@	2]	@,:R	O@,f	9,DD	@D,9	
Toluene*	**0.193**	D,DED	@@N99N9D9@	2]	@,:?	O@,:	9,DD	: ,OD	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,:D	:O,O	9,DD	O,R@	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	E,?9	OD,R	f,DD	O,:9	
Total BTEX	**0.435**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID	*96.0 %*	*69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**48.0**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane	*88.1 %*	*44.3-133*
Surrogate: 1-Chlorooctadecane	*87.8 %*	*38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$K$HJ F(% &"J +)&'K &%'='"P*UI$#I$% <&=$H '" +("#%&+# (% #(%#I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=*'"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M% =I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=*)(== (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, (#I$%U'=$ %$)&#$H #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$ =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) <J À&%H'"&) 3&<(%&#(%'$=,

>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%Z ZG&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 4 @ 1' (H213339-18)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	[illegible]	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,QQ	::,Q	9,DD	Q,f:	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,OQ	O:,R	9,DD	f ,9R	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	9,D?	@D9	9,DD	E,E:	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	f,9R	@D?	f,DD	E,f9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *96.4 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	[illegible]	-A]	ZG&)'F'$%
Chloride	**576**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	[illegible]	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *97.6 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *98.8 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

[illegible]

>'T$ 6"JH$% Y(% À$)$ 5$$"$ *3&<]'%$+#(Z&)'# >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 4 @ 2' (H213339-19)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,QQ	::,Q	9,DD	Q,f:	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,OQ	O:,R	9,DD	f ,9R	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	9,D?	@D9	9,DD	E,E:	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	f,9R	@D?	f,DD	E,f9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PIL *96.8 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**224**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

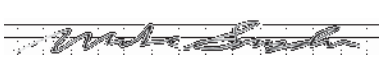
TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *95.2 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *96.0 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$



>'T$ 6"JH$% Y(% À$)$'$ 5$$"$ *3&<]'%$+#(% 4Z/&'# >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEX ROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 4 @ 3' (H213339-20)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,QQ	::,Q	9,DD	Q,f:	
Toluene*	**0.074**	D,DED	@@N99N9D9@	2]	@,OQ	O:,R	9,DD	f,9R	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	9,D?	@D9	9,DD	E,E:	
0(#&) aJ)$"$=W	gD,@ED	D,@ED	@@N99N9D9@	2]	f,9R	@D?	f,DD	E,f9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID	*97.1 %*	*69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**80.0**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g@D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane	*87.6 %*	*44.3-133*
Surrogate: 1-Chlorooctadecane	*87.2 %*	*38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%Z6G&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 5 @ SURFACE (H213339-21)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Benzene*	**0.301**	D,DED	@@N99N9D9@	2]	@,QQ	::,Q	9,DD	Q,f:	
Toluene*	**0.235**	D,DED	@@N99N9D9@	2]	@,OQ	O:,R	9,DD	f,9R	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	9,D?	@D9	9,DD	E,E:	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	f,9R	@D?	f,DD	E,f9	
Total BTEX	**0.645**	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *94.4 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**928**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

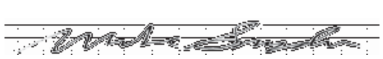
4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%6$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *93.7 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *96.4 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$K$HJ F(% &"J +)&'K &%'='"P UI$#I$% <&=$H '" +("#%&+# (% #(%#I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=* '"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M% =I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #I'%#J VRD X H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=* (== (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, %$)&#$= (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,



>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(%Z &)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 5 @ 1' (H213339-22)

BTEX 8021B mg/kg **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,QQ	::,Q	9,DD	Q,f:	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,OQ	O:,R	9,DD	f ,9R	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	9,D?	@D9	9,DD	E,E:	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	f,9R	@D?	f,DD	E,f9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID *96.9 %* *69.9-140*

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

4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
Chloride	**160**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M mg/kg **Analyzed By: MS**

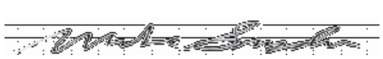
4"&)J#$	-$=G)#	-$L(%#'"P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	Z G&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane *102 %* *44.3-133*

Surrogate: 1-Chlorooctadecane *102 %* *38.9-142*

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, À&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$ KHJ F(% &"J +)&'K &%'='"P UI$#I$% <&=$H '" +("#%&+# (% #(%# =I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=* '"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M% =I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J À&%H'"&)U'#I'" #'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) À&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$=* '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=*)(== (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J À&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$, -$=G)#= %$)&#$ (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F À&%H'"&) 3&<(%&#(%'$=,



>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(% #AZG&)'#J >&"&P$%

CARDINAL Laboratories

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

Analytical Results For:

ĀĀÀ !"#$%"&#'("&)* !"+,
À)'FF Ā%G"=("
A,B, Ā(C :DE
;(<<= 2>* ::9?@
Y&C 0(/ VEQEXROQSDROQ

-$+$'M$H/	@@N@ON9D9@	6&KL)'"P]&#$/	@@N@EN9D9@
-$L(%#$H/	@@N9RN9D9@	6&KL)'"P 0JL$/	6(')
A%(_$+# 2&K$/	01!2 345.6 64 72!0 89:	6&KL)'"P À("H'#'("/	À(() c !"#&+#
A%(_$+# 2GK<$%/	2B2. `!^.2	6&KL)$ -$+$'M$H ĀJ/	0&K&%& B)H&T$%
A%(_$+# 3(+&#'("/	Bab S 2.1 >.a!ÀB		

Sample ID: SP 5 @ 2' (H213339-23)

BTEX 8021B **mg/kg** **Analyzed By: JH**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Ā$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	@,QQ	::,Q	9,DD	Q,f:	
0()G$"$W	g D,DED	D,DED	@@N99N9D9@	2]	@,OQ	O:,R	9,DD	f ,9R	
.#IJ)<$"d$"$W	gD,DED	D,DED	@@N99N9D9@	2]	9,D?	@D9	9,DD	E,E:	
0(#&) aJ)$"$=W	g D,@ED	D,@ED	@@N99N9D9@	2]	f,9R	@D?	f,DD	E,f9	
0(#&) Ā0.a	gD,RDD	D,RDD	@@N99N9D9@	2]					

Surrogate: 4-Bromofluorobenzene (PID 97.2 % 69.9-140

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

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
Chloride	**176**	@f,D	@@N99N9D9@	2]	?@f	@D?	?DD	R,QQ	

TPH 8015M **mg/kg** **Analyzed By: MS**

4"&)J#$	-$=G)#	-$L(%#"'P 3'K'#	4"&)Jd$H	>$#I(H Ā)&"T	Ā6	e -$+(M$%J	0%$ ^&)G$ ZÀ	-A]	ZG&)'F'$%
`-B ÀfSÀ@DW	g@D,D	@D,D	@@N99N9D9@	2]	@O?	Of,O	9DD	@@,Q	
]-B hÀ@DSÀ9:W	g@D,D	@D,D	@@N99N9D9@	2]	9@?	@DQ	9DD	@?,f	
.a0]-B hÀ9:SÀRf	g @D,D	@D,D	@@N99N9D9@	2]					

Surrogate: 1-Chlorooctane 104 % 44.3-133

Surrogate: 1-Chlorooctadecane 103 % 38.9-142

À&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

>'T$ 6"JH$% Y(% À$)'$ 5$$"$ *3&<]'%$+#(% /Z G&)'#J >&"&P$%

CARDINAL Laboratories

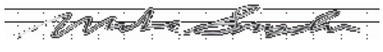
PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

6SD?	0I$ =G%%(P&#$ %$+(M$%J F(% #I'= =&KL)$ '= (G#=+I$(F+$(=#%<))'K'#= HG$ #(& =&KL)$ K&#%'C FF+#,
2]	4"&)J#$ 2B0].0.À0.] &# (% &<(M$ #I$ %$L(%#'"P)'K'#
-A]	-$)&#'M$ A$%+$"#]'FF$%$"+$
WW	6&KL)$= "(# %$+$'M$H &# L%(L$% #$KL$%&#G%$ (F fkÀ (% <$)(U,
WWW	!"=GFF'+'$"# #'K$ #(%$&+I #$KL$%&#G%$,
S	ÀI)(%'H$ <J 6>?EDDÀ)SĀ H($= "(# %$[G'%$ =&KL)$= <$ %$+$'M$H &# fkÀ
	6&KL)$= %$L(%#$H (" &" &= %$+$'M$H <&='= VU$#X G")$== (#I$%U'=$ "(#$H,

Àl&%H'"&) 3&<(%&#(%'$= Wj4++%$H'#$H 4"&)J#$

A3.46. 2B0./ 3'&<')'#J&"H]&K&P$=, Ä&%H'"&)i)'&<')'#J&"H +)'$"#= $C+)G='M$ K$HJ F(% &"J +)&'K &%'='"P UI$#I$% <&=$H '" +("#%&+# (% #(%#, =I&)) <$)'K'#$H #(#I$ &K(G"# L&'H <J +)'$"# F(% &"&)J=$=, 4)) +)&'K=* '"+)GH'"P #I(=$ F(% "$P)'P$"+$ &"H &"J (#I$% +&G=$ UI&#=(M% =I&)) <$ H$$K$H U&'M$H G")$== K&H$ '" U%'#'"P &"H %$+$'M$H <J Ä&%H'"&) U'#I'" #I'%#J VRDX H&J= &F#$% +(KL)$#'(" (F #I$ &LL)'+&<)$ =$%M'+$, !" "(M"# =I&)) Ä&%H'"&) <$)'&<)$ F(% '"+'H$"#&) (% +("=$[G$"#'&) H&K&P$= '"+)GH'"P U'#I(G#)'K'#&#'("* <G='"$== '"#$%%GL#'("=*)(== (F G=$* (%)(== (F L%(F'#= '"+G%%$H <J +)'$"#* '#= =G<='H'&%'$=* &FF')'&#$= (% =G++$==(%= &%'='"P (G# (F (% %$)&#$H #(#I$ L$%F(%K&"+$ (F #I$ =$%M'+$= I$%$G"H$% <J Ä&%H'"&)* %$P&%H)$== (F UI$#I$% =G+I +)&'K '= <&=$H GL(" &"J (F #I$ &<(M$ =#&#$H %$&=("= (% (#I$%U'=$,]$=G)#= %$)&#$ (")J #(#I$ =&KL)$= 'H$"#'F'$H &<(M$, 0I'= %$L(%# =I&)) "(# <$ %$L%(HG+$H $C+$L# '" FG)) U'#I U%'##$" &LL%(M&) (F Ä&%H'"&) 3&<(%&#(%'$=,



>'T$ 6"JH$% Y(% Ä$)$= 5$$"$ *3&<]'%$+#(%Z&)'#J >&"&P$%

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	BBC International, Inc.	BILL TO	
Project Manager:	Cliff Brunson	P.O. #:	
Address:	P.O. Box 805	Company:	OXY
City:	Hobbs	State: NM Zip: 88241	Attn:
Phone #:	575-397-6388	Fax #: 575-397-0397	Address:
Project #:		Project Owner: Oxy	City:
Project Name:	TWIN LAKES SA UNIT #28		State: Zip:
Project Location:	NEW MEXICO		Phone #:
Sampler Name:	SIMON		Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	ANALYSIS REQUEST: Cl	BTEX	TPH EXT
H213339																	
1	NORTH @ SURFACE	G	1			X					X		11/15/21	9:45AM	✓	✓	✓
2	EAST @ SURFACE	G	1			X					X		11/15/21	9:57AM	✓	✓	✓
3	WEST @ SURFACE	G	1			X					X		11/15/21	10:12AM	✓	✓	✓
4	SOUTH @ SURFACE	G	1			X					X		11/15/21	10:20AM	✓	✓	✓
5	SP 1 @ SURFACE	G	1			X					X		11/15/21	10:32AM	✓	✓	✓
6	SP 1 @ 1'	G	1			X					X		11/15/21	10:41AM	✓	✓	✓
7	SP 1 @ 2'	G	1			X					X		11/15/21	10:52AM	✓	✓	✓
8	SP 2 @ SURFACE	G	1			X					X		11/15/21	11:02AM	✓	✓	✓
9	SP 2 @ 1'	G	1			X					X		11/15/21	11:10AM	✓	✓	✓
10	SP 2 @ 2'	G	1			X					X		11/15/21	11:22AM	✓	✓	✓

Relinquished By:	Date: 11-16-21	Received By:		Phone Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:	Time: 8:45AM Date: 11-19-21	Received By:		Fax Result: ☐ Yes ☐ No	Add'l Fax #:
	Time: 1505			REMARKS:	
Delivered By: (Circle One)		Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other:	-2.9°C -0.5°C -3.4°C #113		TO		

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	BBC International, Inc.
Project Manager:	Cliff Brunson
Address:	P.O. Box 805
City:	Hobbs
State:	NM
Zip:	88241
Phone #:	575-397-6388
Fax #:	575-397-0397
Project #:	
Project Owner:	Oxy
Project Name:	TWIN LAKES SA UNIT #28
Project Location:	NEW MEXICO
Sampler Name:	SIMON

BILL TO

P.O. #:	
Company:	Oxy
Attn:	
Address:	
City:	
State:	Zip:
Phone #:	
Fax #:	

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	TIME	CL	BTEX	TPH 8015 EXT
H213339-11	SP 2 @ 3'	C	1			X					X		11/15/21	11:31AM	✓	✓	✓
12	SP 2 @ 4'												11/15/21	11:40AM	✓	✓	✓
13	SP 3 @ SURFACE												11/15/21	11:51AM	✓	✓	✓
14	SP 3 @ 1'												11/15/21	12:05PM	✓	✓	✓
15	SP 3 @ 2'												11/15/21	12:47PM	✓	✓	✓
16	SP 3 @ 3'												11/15/21	12:53PM	✓	✓	✓
17	SP 4 @ SURFACE												11/15/21	1:07PM	✓	✓	✓
18	SP 4 @ 1'												11/15/21	1:18PM	✓	✓	✓
19	SP 4 @ 2'												11/15/21	1:29PM	✓	✓	✓
20	SP 4 @ 3'												11/15/21	1:44PM	✓	✓	✓

Relinquished By:	Date: 11-18-21	Received By:	
	Time: 9:30 AM		
Relinquished By:	Date: 11-19-21	Received By:	
	Time: 1505		
Delivered By: (Circle One)		Sample Condition: Cool ☑ Yes ☐ No; Intact ☑ Yes ☐ No	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other:	-2.9°C -0.5°C -3.4°C #113		

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

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

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name:	BBC International, Inc.
Project Manager:	Cliff Brunson
Address:	P.O. Box 805
City:	Hobbs
State:	NM
Zip:	88241
Phone #:	575-397-6388
Fax #:	575-397-0397
Project #:	
Project Owner:	Oxy
Project Name:	TWIN LAKES SA UNIT #28
Project Location:	NEW MEXICO
Sampler Name:	SIMON

BILL TO

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

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING DATE	SAMPLING TIME	Cl	BTEX	TPH EXT
H213339																	
21	SP 5 @ SURFACE	G	1			✓					✓		11/15/21	2:07PM	✓	✓	✓
22	SP 5 @ 1'	G	1			✓					✓		11/15/21	2:16PM	✓	✓	✓
23	SP 5 @2'	G	1			✓					✓		11/15/21	2:29PM	✓	✓	✓

Relinquished By:	Date: 11-18-21 Time: 4:40PM	Received By:	
Relinquished By:	Date: 11-19-21 Time: 1505	Received By:	Tamara Oldaker
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	-2.9°C C-0.5° -3.4° #113	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) T.O.

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

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

CARDINAL Laboratories

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

January 29, 2024

AIMEE COLE

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: TWIN LAKES SA UNIT #028

Enclosed are the results of analyses for samples received by the laboratory on 01/26/24 14:02.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
AIMEE COLE
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	01/26/2024	Sampling Date:	01/25/2024
Reported:	01/29/2024	Sampling Type:	Soil
Project Name:	TWIN LAKES SA UNIT #028	Sampling Condition:	Cool & Intact
Project Number:	03E1417004	Sample Received By:	Shalyn Rodriguez
Project Location:	OXY-EDDY COUNTY, NM		

Sample ID: SP 7 SURFACE (H240365-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2024	ND	2.19	110	2.00	1.62	
Toluene*	<0.050	0.050	01/26/2024	ND	2.19	110	2.00	1.70	
Ethylbenzene*	<0.050	0.050	01/26/2024	ND	2.18	109	2.00	1.43	
Total Xylenes*	<0.150	0.150	01/26/2024	ND	6.39	106	6.00	1.55	
Total BTEX	<0.300	0.300	01/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.8 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**4960**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/26/2024	ND	167	83.7	200	1.38	
DRO >C10-C28*	**10.6**	10.0	01/26/2024	ND	179	89.4	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/26/2024	ND					

Surrogate: 1-Chlorooctane *96.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *120 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
AIMEE COLE
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	01/26/2024	Sampling Date:	01/25/2024
Reported:	01/29/2024	Sampling Type:	Soil
Project Name:	TWIN LAKES SA UNIT #028	Sampling Condition:	Cool & Intact
Project Number:	03E1417004	Sample Received By:	Shalyn Rodriguez
Project Location:	OXY-EDDY COUNTY, NM		

Sample ID: SP 7 3' (H240365-02)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2024	ND	2.19	110	2.00	1.62	
Toluene*	<0.050	0.050	01/26/2024	ND	2.19	110	2.00	1.70	
Ethylbenzene*	<0.050	0.050	01/26/2024	ND	2.18	109	2.00	1.43	
Total Xylenes*	<0.150	0.150	01/26/2024	ND	6.39	106	6.00	1.55	
Total BTEX	<0.300	0.300	01/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**2600**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/26/2024	ND	167	83.7	200	1.38	
DRO >C10-C28*	<10.0	10.0	01/26/2024	ND	179	89.4	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/26/2024	ND					

Surrogate: 1-Chlorooctane *97.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *120 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
AIMEE COLE
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	01/26/2024	Sampling Date:	01/25/2024
Reported:	01/29/2024	Sampling Type:	Soil
Project Name:	TWIN LAKES SA UNIT #028	Sampling Condition:	Cool & Intact
Project Number:	03E1417004	Sample Received By:	Shalyn Rodriguez
Project Location:	OXY-EDDY COUNTY, NM		

Sample ID: SP 6 1' (H240365-03)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2024	ND	2.19	110	2.00	1.62	
Toluene*	<0.050	0.050	01/26/2024	ND	2.19	110	2.00	1.70	
Ethylbenzene*	<0.050	0.050	01/26/2024	ND	2.18	109	2.00	1.43	
Total Xylenes*	<0.150	0.150	01/26/2024	ND	6.39	106	6.00	1.55	
Total BTEX	<0.300	0.300	01/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *98.3 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1600**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/26/2024	ND	167	83.7	200	1.38	
DRO >C10-C28*	<10.0	10.0	01/26/2024	ND	179	89.4	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/26/2024	ND					

Surrogate: 1-Chlorooctane *99.2 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *125 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
AIMEE COLE
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	01/26/2024	Sampling Date:	01/25/2024
Reported:	01/29/2024	Sampling Type:	Soil
Project Name:	TWIN LAKES SA UNIT #028	Sampling Condition:	Cool & Intact
Project Number:	03E1417004	Sample Received By:	Shalyn Rodriguez
Project Location:	OXY-EDDY COUNTY, NM		

Sample ID: SP 6 2' (H240365-04)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/26/2024	ND	2.19	110	2.00	1.62	
Toluene*	<0.050	0.050	01/26/2024	ND	2.19	110	2.00	1.70	
Ethylbenzene*	<0.050	0.050	01/26/2024	ND	2.18	109	2.00	1.43	
Total Xylenes*	<0.150	0.150	01/26/2024	ND	6.39	106	6.00	1.55	
Total BTEX	<0.300	0.300	01/26/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.9 %* *71.5-134*

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1040**	16.0	01/29/2024	ND	432	108	400	3.64	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/26/2024	ND	167	83.7	200	1.38	
DRO >C10-C28*	<10.0	10.0	01/26/2024	ND	179	89.4	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/26/2024	ND					

Surrogate: 1-Chlorooctane *95.8 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *121 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

1/1

CARDINAL Laboratories

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Ensolum, LLC
Project Manager: Amber Cole
Address: 601 N. Marienfeld St. STE 400
City: Midland State: TX Zip: 79701
Phone #: 780 384 7365 Fax #:
Project #: 03E1417004 Project Owner:
Project Name: Twin Lakes SA Unit #0028
Project Location:
Sampler Name: SK

BILL TO
P.O. #:
Company: Oxy USA Inc
Attn: Wade Dittrich
Address:
City:
State: Zip:
Phone #: 575 390 2878
Fax #:

FOR LAB USE ONLY: 1240365

Lab I.D.	Sample I.D.	Depth (feet)	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX	TPH	Cl-
1	SP7	Surface	G	1			X					X		1/25/24	915	X	X	X
2	↓	3'	↓	↓			↓					↓		↓	934	↓	↓	↓
3	SP8	1'													1143			
4	↓	2'													1202			

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 the client for the 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 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 1/26/24 Time: 0850	Received By:
Relinquished By:	Date: 1-26-24 Time: 1402	Received By: SRodriguez

Verbal Result: ☐ Yes ☒ No Add'l Phone #:
All Results are emailed. Please provide Email address: acole@ensolum.com
REMARKS: 24 hrs Samples 1 + 4 got wet inside cooler. Customer said run anyways. SRodriguez 1-26-24

Delivered By: (Circle One) Sampler - UPS - Bus - Other:
Observed Temp. °C 3.1 Corrected Temp. °C
Sample Condition: Cool ☒ Yes ☐ No Intact ☒ Yes ☐ No
CHECKED BY: (Initials) SK
Turnaround Time: #140 Standard ☐ Rush ☒
Thermometer ID #113 Correction Factor -0.3°C
Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

CARDINAL Laboratories

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

February 04, 2024

AIMEE COLE

ENSOLUM, LLC

705 W WADLEY AVE.

MIDLAND, TX 79705

RE: TWIN LAKES SA UNIT #028

Enclosed are the results of analyses for samples received by the laboratory on 02/01/24 10:27.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-23-16. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

ENSOLUM, LLC
AIMEE COLE
705 W WADLEY AVE.
MIDLAND TX, 79705
Fax To:

Received:	02/01/2024	Sampling Date:	01/31/2024
Reported:	02/04/2024	Sampling Type:	Soil
Project Name:	TWIN LAKES SA UNIT #028	Sampling Condition:	Cool & Intact
Project Number:	03E1417004	Sample Received By:	Shalyn Rodriguez
Project Location:	OXY- CHAVES COUNTY, NM		

Sample ID: EAST 2 SURFACE (H240472-01)

BTEX 8021B mg/kg Analyzed By: JH

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/01/2024	ND	2.20	110	2.00	9.52	
Toluene*	<0.050	0.050	02/01/2024	ND	2.28	114	2.00	10.4	
Ethylbenzene*	<0.050	0.050	02/01/2024	ND	2.41	120	2.00	9.83	
Total Xylenes*	<0.150	0.150	02/01/2024	ND	7.22	120	6.00	10.1	
Total BTEX	<0.300	0.300	02/01/2024	ND					

Surrogate: 4-Bromofluorobenzene (PID *109 %* *71.5-134*

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	02/02/2024	ND	448	112	400	0.00	

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	02/01/2024	ND	201	101	200	3.65	
DRO >C10-C28*	<10.0	10.0	02/01/2024	ND	204	102	200	4.57	
EXT DRO >C28-C36	<10.0	10.0	02/01/2024	ND					

Surrogate: 1-Chlorooctane *87.9 %* *48.2-134*

Surrogate: 1-Chlorooctadecane *85.2 %* *49.1-148*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

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

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name:	Ensolum, LLC	**BILL TO**	
Project Manager:	Aimee Cole	**P.O. #:**	
Address:	601 N. Marienfeld St. STE 400	**Company:**	Oxy USA, Inc.
City:	Midland **State:** TX **Zip:** 79701	**Attn:**	Wade Dittrich
Phone #:	720-384-7365 **Fax #:**	**Address:**	
Project #:	03E141 7004 **Project Owner:**	**City:**	
Project Name:	Twin Lakes SA Unit #028	**State:** **Zip:**	
Project Location:	Chaves County	**Phone #:**	575-390-2828
Sampler Name:	SK	**Fax #:**	

FOR LAB USE ONLY					MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST										
Lab I.D.	**Sample I.D.**	**Sample Depth (feet)**	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	**DATE**	**TIME**	BTEX	TPH	Chloride									
H240472 1	East 2	surface	C	1			X					X		1/31/24	1215	1	1	1								

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 the client for the 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 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	**Date:** 2-1-24	**Received By:**	Verbal Result: ☐ Yes ☒ No Add'l Phone #:
	Time: 1027		All Results are emailed. Please provide Email address:
Relinquished By:	**Date:**	**Received By:**	ACole@ensolum.com
	Time:		REMARKS: 48 hour

Delivered By: (Circle One)	Observed Temp. °C 4.4	**Sample Condition** Cool Intact	**CHECKED BY: (Initials)**	**Turnaround Time:** Standard ☐ Rush ☒	**Bacteria (only) Sample Condition** Cool Intact Observed Temp. °C
Sampler - UPS - Bus - Other:	Corrected Temp. °C	☑ Yes ☑ Yes ☐ No ☐ No	SR	Thermometer ID ~~#113~~ #140 Correction Factor ~~-0.5°C~~	☐ Yes ☐ Yes ☐ No ☐ No Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 318507

QUESTIONS

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318507
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	**nAPP2405245333**
Incident Name	**NAPP2405245333 TWIN LAKES SA UNIT #028 @ 30-005-61633**
Incident Type	**Oil Release**
Incident Status	**Remediation Plan Received**
Incident Well	**[30-005-61633] TWIN LAKES SAN ANDRES UNIT #028**

Location of Release Source	
Please answer all the questions in this group.	
Site Name	Twin Lakes SA Unit #028
Date Release Discovered	11/01/2021
Surface Owner	State

Incident Details	
Please answer all the questions in this group.	
Incident Type	Oil Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Cause: Other | Unknown | Crude Oil | Released: 0 BBL (Unknown Released Amount) | Recovered: 0 BBL | Lost: 0 BBL.
Produced Water Released (bbls) Details	Cause: Other | Unknown | Produced Water | Released: 0 BBL (Unknown Released Amount) | Recovered: 0 BBL | Lost: 0 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	No
Condensate Released (bbls) Details	*Not answered.*
Natural Gas Vented (Mcf) Details	*Not answered.*
Natural Gas Flared (Mcf) Details	*Not answered.*
Other Released Details	*Not answered.*
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Historical release, volume is unknown. Oxy is not the Operator of the Incident Well and has no independent knowledge of the facts or circumstances surrounding the nature, content or volume of any release(s), contemporaneous to any such release(s). All information submitted by Oxy herein is based on Oxy's present day observations of the site, and educated guesses based on those observations. Oxy submits this Notification of Release pursuant to an agreement with the New Mexico State Land Office, as lessee of record.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318507
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	**No, according to supplied volumes this does not appear to be a "gas only" report.**
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	**Yes**
Reasons why this would be considered a submission for a notification of a major release	**From paragraph A. "Major release" determine using:** **(1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.**
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response	
The responsible party must undertake the following actions immediately unless they could create a safety hazard that would result in injury.	
The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	False
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Historical release
Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.	

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.

I hereby agree and sign off to the above statement	Name: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 02/28/2024

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318507
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Site Characterization	
Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
What is the shallowest depth to groundwater beneath the area affected by the release in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	U.S. Geological Survey
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between 1000 (ft.) and ½ (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1000 (ft.) and ½ (mi.)
An occupied permanent residence, school, hospital, institution, or church	Greater than 5 (mi.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between 1 and 5 (mi.)
Any other fresh water well or spring	Between 1 and 5 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between 1000 (ft.) and ½ (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Low
A 100-year floodplain	Between 1 and 5 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
Requesting a remediation plan approval with this submission	Yes
Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No
Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)	
Chloride (EPA 300.0 or SM4500 Cl B)	5520
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	1877
GRO+DRO (EPA SW-846 Method 8015M)	1220
BTEX (EPA SW-846 Method 8021B or 8260B)	0.6
Benzene (EPA SW-846 Method 8021B or 8260B)	0.3
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
On what estimated date will the remediation commence	06/01/2024
On what date will (or did) the final sampling or liner inspection occur	08/30/2024
On what date will (or was) the remediation complete(d)	08/30/2024
What is the estimated surface area (in square feet) that will be reclaimed	11500
What is the estimated volume (in cubic yards) that will be reclaimed	800
What is the estimated surface area (in square feet) that will be remediated	11500
What is the estimated volume (in cubic yards) that will be remediated	800
These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.	
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318507
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
(Select all answers below that apply.)	
(Ex Situ) Excavation and **off-site** disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for **off-site** disposal	R360 Artesia LLC LANDFARM [fEEM0112340644]
OR which OCD approved well (API) will be used for **off-site** disposal	*Not answered.*
OR is the **off-site** disposal site, to be used, out-of-state	*Not answered.*
OR is the **off-site** disposal site, to be used, an NMED facility	*Not answered.*
(Ex Situ) Excavation and **on-site** remediation (i.e. On-Site Land Farms)	*Not answered.*
(In Situ) Soil Vapor Extraction	*Not answered.*
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	*Not answered.*
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	*Not answered.*
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	*Not answered.*
Ground Water Abatement pursuant to 19.15.30 NMAC	*Not answered.*
OTHER (Non-listed remedial process)	*Not answered.*
Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD 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 OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD 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.	
I hereby agree and sign off to the above statement	Name: Wade Dittrich Title: Environmental Coordinator Email: wade_dittrich@oxy.com Date: 02/28/2024
The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318507
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS (continued)

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 318507
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	***{Unavailable.}***

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 318507

CONDITIONS

Operator:	OGRID:
OXY USA INC P.O. Box 4294 Houston, TX 772104294	16696
	Action Number: 318507
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
scwells	Remediation plan approved. Variance approved to collect floor samples from the excavation every 400 square feet. Submit remediation closure report to the OCD by 6/10/2024.	3/11/2024