

# **Remediation Plan**

Prepared for  
Oxy USA

**State DW #4 Flowline Leak**  
**Lea County, NM**

1RP-09-5-2169

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Prepared by  
***Elke Environmental, Inc.***

P.O. Box 14167 Odessa, TX 79768  
Phone (432) 366-0043 Fax (432) 366-0884

# *Elke Environmental, Inc.*

P.O. Box 14167 Odessa, TX 79768  
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May 21, 2009

New Mexico Oil Conservation Division  
Mr. Geoffrey Leking  
1625 N French Drive  
Hobbs, New Mexico 88240

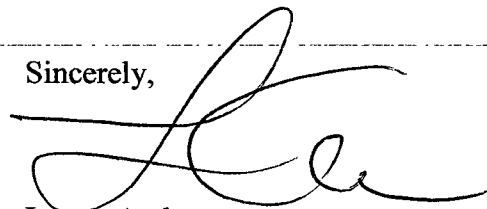
Re: Remediation Plan for Oxy USA – State DW #4 Flowline Leak  
UL 'F' Sec. 13 T18S R33E Lea County  
1RP-09-5-2169

Mr. Geoffrey Leking,

Elke Environmental was contracted by Oxy USA to complete the remediation of the impacted soil at the State DW #4 Flowline Leak. The leak is located in the legals referenced above, the State DW #4 Well is in the following legals: UL 'F' Sec. 12 T18s R33E. A vertical and horizontal delineation of the site was started with a backhoe and completed using an air rotary rig. A borehole was drilled at the site and left open for 72 hours then gauged to determine the groundwater depth. The ranking criteria for this site is as follows: Surface Body of Water – 0 points; Wellhead Protection Area – 0 points; Groundwater Depth – 10 points (GW = 83'). The total ranking for the site is 10 points. Attached is a plat map, driller's logs, field analytical and lab confirmation for the site.

Oxy USA proposes to excavate 4' of impacted soil and haul to Lea Land Disposal. After 4' of impacted soil is removed, all areas that impacted soil is below 4' bgs a 1' thick layer of red bed clay will be installed, compacted and tested to 95% dry density. After installation of the red bed clay liner 4' of clean native soil will be backfilled and contoured to the surrounding area. The site will be re-seeded with BLM Seed Mixture #2. A final report will be submitted at the completion of the remediation. If you have any questions about the enclosed report please contact me at the office.

Sincerely,

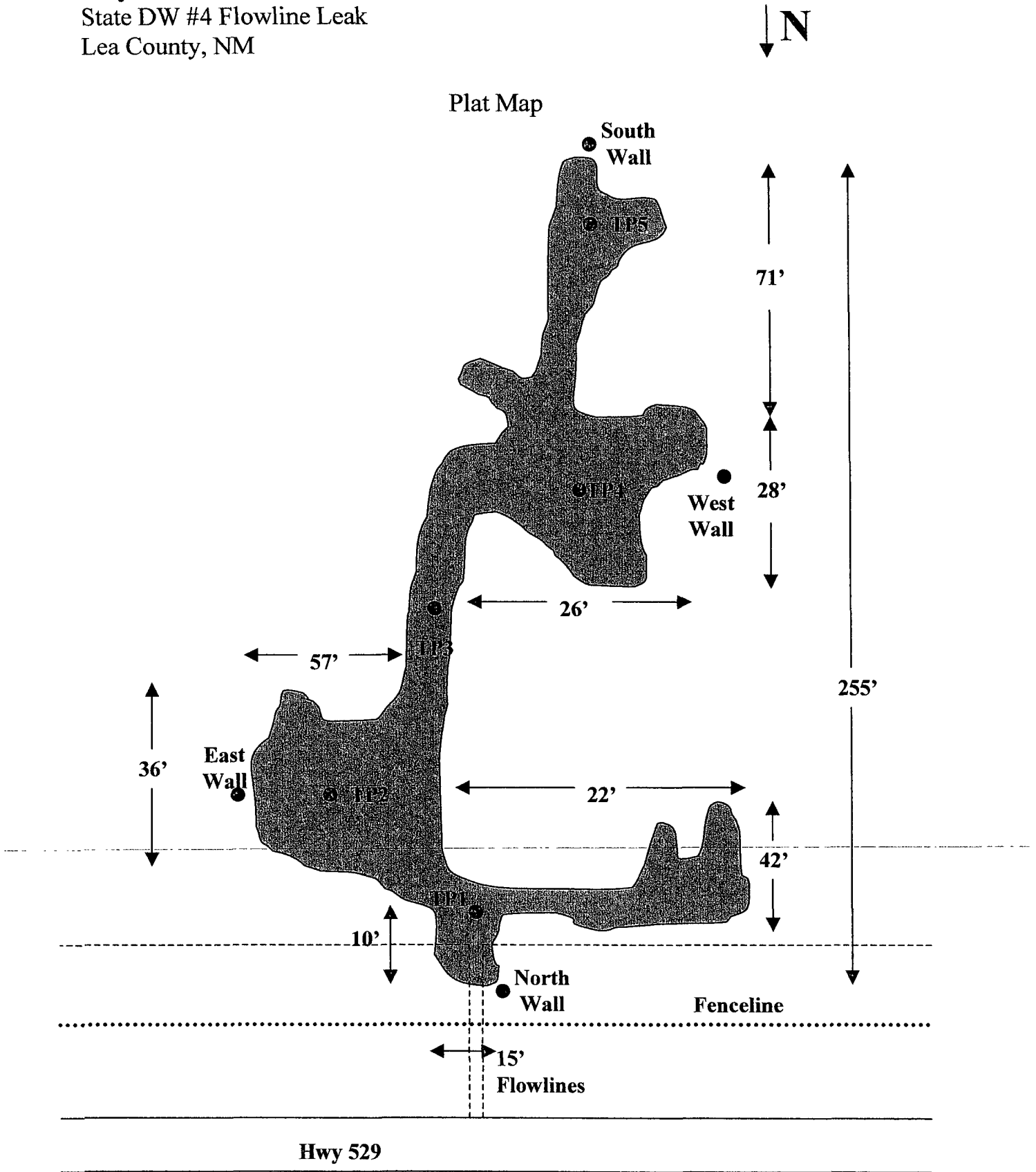


Logan Anderson

# Oxy USA

State DW #4 Flowline Leak  
Lea County, NM

Plat Map



# *Elke Environmental, Inc.*

P.O. Box 14167 Odessa, TX 79768

## Field Analytical Report Form

**Client** Oxy USA **Analyst** Bobby Steadham / Jason Jessup

**Site** State DW #4

Sample ID	Date	Depth	TPH / PPM	CI / PPM	PID / PPM	GPS
TP1	4-29-09	2'		8,087	123	32° 45.439' N 103° 37.208' W
TP1	4-29-09	4'		9,327	108	32° 45.439' N 103° 37.208' W
TP1	4-29-09	6'		9,538	96.4	32° 45.439' N 103° 37.208' W
TP1	4-29-09	8'		9,627	48.7	32° 45.439' N 103° 37.208' W
TP1	4-29-09	10'		9,866	16.9	32° 45.439' N 103° 37.208' W
TP1	4-29-09	12'		9,327	13.1	32° 45.439' N 103° 37.208' W
TP1	4-29-09	14'	137	9,956	2.9	32° 45.439' N 103° 37.208' W
TP1	5-11-09	20'		4,453		32° 45.439' N 103° 37.208' W
TP1	5-11-09	25'		7,377		32° 45.439' N 103° 37.208' W
TP1	5-11-09	30'		11,514		32° 45.439' N 103° 37.208' W
TP1	5-11-09	35'		9,147		32° 45.439' N 103° 37.208' W
TP1	5-11-09	40'		6,415		32° 45.439' N 103° 37.208' W
TP1	5-11-09	45'		4,733		32° 45.439' N 103° 37.208' W
TP1	5-11-09	50'		1,942		32° 45.439' N 103° 37.208' W
TP1	5-11-09	55'		2,549		32° 45.439' N 103° 37.208' W
TP1	5-11-09	60'		787		32° 45.439' N 103° 37.208' W
TP1	5-11-09	65'		703		32° 45.439' N 103° 37.208' W

**Analyst Notes** \_\_\_\_\_

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P.O. Box 14167 Odessa, TX 79768

## **Field Analytical Report Form**

**Client** Oxy USA **Analyst** Bobby Steadham / Jason Jessup

**Site** State DW #4

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP1	5-11-09	67'		242	0.0	32° 45.439' N 103° 37.208' W
TP2	4-29-09	2'		6,627	27.4	32° 45.436' N 103° 37.204' W
TP2	4-29-09	4'		12,476	32.3	32° 45.436' N 103° 37.204' W
TP2	4-29-09	6'		10,556	29.1	32° 45.436' N 103° 37.204' W
TP2	4-29-09	8'		11,110	14.8	32° 45.436' N 103° 37.204' W
TP2	4-29-09	10'		9,537	17.3	32° 45.436' N 103° 37.204' W
TP2	4-29-09	12'		8,397	4.7	32° 45.436' N 103° 37.204' W
TP2	4-29-09	14'	192	7,857	1.9	32° 45.436' N 103° 37.204' W
TP2	5-11-09	20'		7,990		32° 45.436' N 103° 37.204' W
TP2	5-11-09	25'		6,944		32° 45.436' N 103° 37.204' W
TP2	5-11-09	30'		16,576		32° 45.436' N 103° 37.204' W
TP2	5-11-09	35'		6,782		32° 45.436' N 103° 37.204' W
TP2	5-11-09	40'		5,825		32° 45.436' N 103° 37.204' W
TP2	5-11-09	45'		6,600		32° 45.436' N 103° 37.204' W
TP2	5-11-09	50'		6,672		32° 45.436' N 103° 37.204' W
TP2	5-11-09	55'		4,512		32° 45.436' N 103° 37.204' W
TP2	5-11-09	60'		4,675		32° 45.436' N 103° 37.204' W

**Analyst Notes** \_\_\_\_\_

# ***Elke Environmental, Inc.***

P.O. Box 14167 Odessa, TX 79768

## **Field Analytical Report Form**

**Client** Oxy USA **Analyst** Bobby Steadham / Jason Jessup

**Site** State DW #4

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP2	5-11-09	65'		1,400		32° 45.436' N 103° 37.204' W
TP2	5-11-09	70'		566		32° 45.436' N 103° 37.204' W
TP2	5-11-09	72'		238	0.0	32° 45.436' N 103° 37.204' W
TP3	4-29-09	2'		7,647	22.9	32° 45.425' N 103° 37.206' W
TP3	4-29-09	4'		9,806	19.0	32° 45.425' N 103° 37.206' W
TP3	4-29-09	6'		10,586	21.7	32° 45.425' N 103° 37.206' W
TP3	4-29-09	8'		8,697	15.9	32° 45.425' N 103° 37.206' W
TP3	4-29-09	10'		7,527	6.1	32° 45.425' N 103° 37.206' W
TP3	4-29-09	12'		8,097	0.9	32° 45.425' N 103° 37.206' W
TP3	4-29-09	14'	109	7,527	0.0	32° 45.425' N 103° 37.206' W
TP3	5-12-09	20'		8,847		32° 45.425' N 103° 37.206' W
TP3	5-12-09	25'		11,246		32° 45.425' N 103° 37.206' W
TP3	5-12-09	30'		13,837		32° 45.425' N 103° 37.206' W
TP3	5-12-09	35'		8,359		32° 45.425' N 103° 37.206' W
TP3	5-12-09	40'		5,809		32° 45.425' N 103° 37.206' W
TP3	5-12-09	45'		5,642		32° 45.425' N 103° 37.206' W
TP3	5-12-09	50'		6,135		32° 45.425' N 103° 37.206' W

**Analyst Notes** \_\_\_\_\_

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## Field Analytical Report Form

Client Oxy USA Analyst Bobby Steadham / Jason Jessup

Site State DW #4

Sample ID	Date	Depth	TPH / PPM	CI / PPM	PID / PPM	GPS
TP3	5-12-09	55'		4,956		32° 45.425' N 103° 37.206' W
TP3	5-12-09	60'		1,555		32° 45.425' N 103° 37.206' W
TP3	5-12-09	65'		902		32° 45.425' N 103° 37.206' W
TP3	5-12-09	70'		454		32° 45.425' N 103° 37.206' W
TP3	5-12-09	72'		240	0.0	32° 45.425' N 103° 37.206' W
TP4	4-29-09	2'		7,300	18.5	32° 45.420' N 103° 37.214' W
TP4	4-29-09	4'		8,427	21.2	32° 45.420' N 103° 37.214' W
TP4	4-29-09	6'		10,406	37.6	32° 45.420' N 103° 37.214' W
TP4	4-29-09	8'		10,983	18.7	32° 45.420' N 103° 37.214' W
TP4	4-29-09	10'		9,327	19.3	32° 45.420' N 103° 37.214' W
TP4	4-29-09	12'		8,397	21.7	32° 45.420' N 103° 37.214' W
TP4	4-29-09	14'	209	7,677	5.7	32° 45.420' N 103° 37.214' W
TP4	5-12-09	20'		16,465		32° 45.420' N 103° 37.214' W
TP4	5-12-09	25'		20,462		32° 45.420' N 103° 37.214' W
TP4	5-12-09	30'		8,995		32° 45.420' N 103° 37.214' W
TP4	5-12-09	35'		7,499		32° 45.420' N 103° 37.214' W
TP4	5-12-09	40'		6,616		32° 45.420' N 103° 37.214' W

Analyst Notes \_\_\_\_\_

**Elke Environmental, Inc.**

P.O. Box 14167 Odessa, TX 79768

**Field Analytical Report Form****Client** Oxy USA **Analyst** Bobby Steadham / Jason Jessup**Site** State DW #4

Sample ID	Date	Depth	TPH / PPM	CI / PPM	PID / PPM	GPS
TP4	5-12-09	45'		6,295		32° 45.420' N 103° 37.214' W
TP4	5-12-09	50'		9,979		32° 45.420' N 103° 37.214' W
TP4	5-12-09	55'		7,275		32° 45.420' N 103° 37.214' W
TP4	5-12-09	60'		1,336		32° 45.420' N 103° 37.214' W
TP4	5-12-09	65'		601		32° 45.420' N 103° 37.214' W
TP4	5-12-09	70'		623		32° 45.420' N 103° 37.214' W
TP4	5-12-09	72'		240	0.0	32° 45.420' N 103° 37.214' W
TP5	4-29-09	2'		812	5.5	32° 45.414' N 103° 37.220' W
TP5	4-29-09	4'		119	0.3	32° 45.414' N 103° 37.220' W
TP5	4-29-09	6'	26	150	0.0	32° 45.414' N 103° 37.220' W
North Wall	4-30-09	2'	13	169	0.0	32° 45.447' N 103° 37.212' W
South Wall	4-30-09	7'	17	139	0.0	32° 45.408' N 103° 37.224' W
East Wall	4-30-09	7'	9	149	0.0	32° 45.431' N 103° 37.196' W
West Wall	4-30-09	7'	28	149	0.0	32° 45.424' N 103° 37.218' W

**Analyst Notes** \_\_\_\_\_





# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) STATE DW #4 SB-1				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) OXY USA				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS P.O. BOX 1988				CITY CARLSBAD		STATE NM	ZIP 88221
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 45	SECONDS 26.00 N	* ACCURACY REQUIRED ONE TENTH OF A SECOND * DATUM REQUIRED WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS FROM 62/180 GO N.W. ON 529 FOR 15.1 MILES TURN L ON TO LOCATION								
2. OPTIONAL	(2.5 ACRE) 1/4	(10 ACRE) 1/4	(40 ACRE) 1/4	(160 ACRE) 1/4	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY					MAP NUMBER	TRACT NUMBER	
3. DRILLING INFORMATION	LICENSE NUMBER WD1478		NAME OF LICENSED DRILLER EDWARD BRYAN			NAME OF WELL DRILLING COMPANY STRAUB CORPORATION		
	DRILLING STARTED 5-11-09		DRILLING ENDED 5-11-09	DEPTH OF COMPLETED WELL (FT) 0	BORE HOLE DEPTH (FT) 67	DEPTH WATER FIRST ENCOUNTERED (FT)		
	COMPLETED WELL IS <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A		
	DRILLING FLUID <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY							
	DRILLING METHOD <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY							
	DEPTH (FT) FROM TO		BORE HOLE DIA (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
	0 67		5	N/A	N/A	N/A	N/A	N/A
4. WATER BEARING STRATA	DEPTH (FT) FROM TO		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA						TOTAL ESTIMATED WELL YIELD (GPM)		

FOR OSE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>STATE DW #4 SB-2</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>OXY USA</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>P.O. BOX 1988</b>				CITY <b>CARLSBAD</b>		STATE <b>NM</b>	ZIP <b>88221</b>
	WELL LOCATION (FROM GPS)	DEGREES <b>32</b>	MINUTES <b>45</b>	SECONDS <b>26.00 N</b>	* ACCURACY REQUIRED ONE TENTH OF A SECOND * DATUM REQUIRED WGS 84			
		LONGITUDE <b>103</b>	<b>37</b>	<b>12.00 W</b>				
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>FROM 62/180 GO N.W. ON 529 FOR 15.1 MILES TURN L ON TO LOCATION</b>								
2. OPTIONAL	(2.5 ACRE) <b>1/4</b>	(10 ACRE) <b>1/4</b>	(40 ACRE) <b>1/4</b>	(160 ACRE) <b>1/4</b>	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY				MAP NUMBER		TRACT NUMBER	
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>		NAME OF LICENSED DRILLER <b>EDWARD BRYAN</b>			NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>		
	DRILLING STARTED <b>5-11-09</b>		DRILLING ENDED <b>5-11-09</b>		DEPTH OF COMPLETED WELL (FT) <b>0</b>	BORE HOLE DEPTH (FT) <b>72</b>	DEPTH WATER FIRST ENCOUNTERED (FT)	
	COMPLETED WELL IS <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) <b>N/A</b>		
	DRILLING FLUID <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY							
	DRILLING METHOD <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY							
	DEPTH (FT)		BORE HOLE DIA (IN) <b>5</b>	CASING MATERIAL <b>N/A</b>	CONNECTION TYPE (CASING) <b>N/A</b>	INSIDE DIA CASING (IN) <b>N/A</b>	CASING WALL THICKNESS (IN) <b>N/A</b>	SLOT SIZE (IN) <b>N/A</b>
	FROM <b>0</b>	TO <b>72</b>						
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)			YIELD (GPM)	
	FROM	TO						
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA					TOTAL ESTIMATED WELL YIELD (GPM)			

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WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2



# WELL RECORD & LOG

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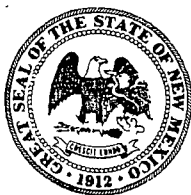
[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>STATE DW #4 SB-3</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>OXY USA</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>P.O. BOX 1988</b>				CITY <b>CARLSBAD</b>		STATE <b>NM</b>	ZIP <b>88221</b>
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32	SECONDS 45	26.00	N	* ACCURACY REQUIRED ONE TENTH OF A SECOND * DATUM REQUIRED WGS 84	
		LONGITUDE	103	37	12.00	W		
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>FROM 62/180 GO N.W. ON 529 FOR 15.1 MILES TURN L ON TO LOCATION</b>								
2. OPTIONAL	(2.5 ACRE) <b>1/4</b>	(10 ACRE) <b>1/4</b>	(40 ACRE) <b>1/4</b>	(160 ACRE) <b>1/4</b>	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY				MAP NUMBER		TRACT NUMBER	
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>		NAME OF LICENSED DRILLER <b>EDWARD BRYAN</b>			NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>		
	DRILLING STARTED <b>5-11-09</b>		DRILLING ENDED <b>5-11-09</b>		DEPTH OF COMPLETED WELL (FT) <b>0</b>	BORE HOLE DEPTH (FT) <b>70</b>	DEPTH WATER FIRST ENCOUNTERED (FT)	
	COMPLETED WELL IS <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) <b>N/A</b>		
	DRILLING FLUID <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY							
	DRILLING METHOD <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY							
	DEPTH (FT) FROM TO		BORE HOLE DIA (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
	<b>0 70</b>							
	<b>5</b>		<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	
4. WATER BEARING STRATA	DEPTH (FT) FROM TO		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA						TOTAL ESTIMATED WELL YIELD (GPM)		

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WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION	PAGE 1 OF 2	



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>STATE DW #4 SB-4</b>				OSE FILE NUMBER(S)						
	WELL OWNER NAME(S) <b>OXY USA</b>				PHONE (OPTIONAL)						
	WELL OWNER MAILING ADDRESS <b>P.O. BOX 1988</b>				CITY <b>CARLSBAD</b>		STATE <b>NM</b>		ZIP <b>88221</b>		
	WELL LOCATION (FROM GPS)	DEGREES <b>32</b>		MINUTES <b>45</b>	SECONDS <b>26.00</b>	N		* ACCURACY REQUIRED ONE TENTH OF A SECOND			
		LONGITUDE <b>103</b>		37	12.00	W		* DATUM REQUIRED WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>FROM 62/180 GO N.W. ON 529 FOR 15.1 MILES TURN L ON TO LOCATION</b>											
2. OPTIONAL	(2.5 ACRE) <b>1/4</b>	(10 ACRE) <b>1/4</b>	(40 ACRE) <b>1/4</b>	(160 ACRE) <b>1/4</b>	SECTION		TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH		RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST		
	SUBDIVISION NAME				LOT NUMBER		BLOCK NUMBER		UNIT/TRACT		
	HYDROGRAPHIC SURVEY						MAP NUMBER		TRACT NUMBER		
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>		NAME OF LICENSED DRILLER <b>EDWARD BRYAN</b>				NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>				
	DRILLING STARTED <b>5-12-09</b>		DRILLING ENDED <b>5-12-09</b>		DEPTH OF COMPLETED WELL (FT) <b>0</b>		BORE HOLE DEPTH (FT) <b>70</b>		DEPTH WATER FIRST ENCOUNTERED (FT)		
	COMPLETED WELL IS <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)						STATIC WATER LEVEL IN COMPLETED WELL (FT) <b>N/A</b>				
	DRILLING FLUID <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY										
	DRILLING METHOD <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY										
	DEPTH (FT)		BORE HOLE DIA (IN) <b>5</b>	CASING MATERIAL <b>N/A</b>	CONNECTION TYPE (CASING) <b>N/A</b>	INSIDE DIA CASING (IN) <b>N/A</b>	CASING WALL THICKNESS (IN) <b>N/A</b>	SLOT SIZE (IN) <b>N/A</b>			
	FROM <b>0</b>	TO <b>70</b>									
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)			
	FROM	TO									
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA							TOTAL ESTIMATED WELL YIELD (GPM)				

FOR OSE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER		POD NUMBER		TRN NUMBER	
LOCATION				PAGE 1 OF 2	



# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) STATE DW #4 SB-5				OSE FILE NUMBER(S)									
	WELL OWNER NAME(S) OXY USA				PHONE (OPTIONAL)									
	WELL OWNER MAILING ADDRESS P.O. BOX 1988				CITY CARLSBAD		STATE NM		ZIP 88221					
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32		MINUTES 45	SECONDS 26.00 N	* ACCURACY REQUIRED ONE TENTH OF A SECOND * DATUM REQUIRED WGS 84								
		LONGITUDE 103		37	12.00 W									
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS FROM 62/180 GO N.W. ON 529 FOR 15.1 MILES TURN L ON TO LOCATION														
2. OPTIONAL	(2.5 ACRE) 1/4	(10 ACRE) 1/4	(40 ACRE) 1/4	(160 ACRE) 1/4	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST							
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT							
	HYDROGRAPHIC SURVEY					MAP NUMBER	TRACT NUMBER							
3. DRILLING INFORMATION	LICENSE NUMBER WD1478		NAME OF LICENSED DRILLER EDWARD BRYAN			NAME OF WELL DRILLING COMPANY STRAUB CORPORATION								
	DRILLING STARTED 5-12-09		DRILLING ENDED 5-12-09		DEPTH OF COMPLETED WELL (FT) 0		BORE HOLE DEPTH (FT) 100		DEPTH WATER FIRST ENCOUNTERED (FT)					
	COMPLETED WELL IS <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) N/A								
	DRILLING FLUID <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY													
	DRILLING METHOD <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY													
	DEPTH (FT) FROM TO		BORE HOLE DIA (IN)		CASING MATERIAL		CONNECTION TYPE (CASING)		INSIDE DIA CASING (IN)		CASING WALL THICKNESS (IN)		SLOT SIZE (IN)	
	0 100		5		N/A		N/A		N/A		N/A		N/A	
4. WATER BEARING STRATA	DEPTH (FT) FROM TO		THICKNESS (FT)		FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)							YIELD (GPM)		
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA										TOTAL ESTIMATED WELL YIELD (GPM)				

FOR OSE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION	PAGE 1 OF 2	

# **Analytical Report 332317**

**for**

**Elke Environmental, Inc.**

**Project Manager: Logan Anderson**

**Oxy USA**

**State DW # 4**

**18-MAY-09**



**12600 West I-20 East Odessa, Texas 79765**

Texas certification numbers:

Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX

Florida certification numbers:

Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675

Miramar, FL E86349

Norcross(Atlanta), GA E87429

South Carolina certification numbers:

Norcross(Atlanta), GA 98015

North Carolina certification numbers:

Norcross(Atlanta), GA 483

Houston - Dallas - San Antonio - Tampa - Miami - Latin America

Midland - Corpus Christi - Atlanta



18-MAY-09

Project Manager: **Logan Anderson**  
**Elke Environmental, Inc.**  
4817 Andrews Hwy  
P.O. Box 14167 Odessa, tx 79768  
Odessa, TX 79762

Reference: XENCO Report No: **332317**  
**Oxy USA**  
Project Address:

**Logan Anderson:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report-Number 332317. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 332317 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

---

**Brent Barron, II**  
Odessa Laboratory Manager

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## Sample Cross Reference 332317



Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP 5 @ 6'	S	May-04-09 12:15	6 ft	332317-001





# Certificate of Analysis Summary 332317

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA



Project Id: State DW # 4

Contact: Logan Anderson

Project Location:

Date Received in Lab: Mon May-11-09 11:58 am


Report Date: 18-MAY-09

Project Manager: Brent Barron, II

<b>Analysis Requested</b>	<b>Lab Id:</b>	332317-001					
	<b>Field Id:</b>	TP 5 @ 6'					
	<b>Depth:</b>	6 ft					
	<b>Matrix:</b>	SOIL					
	<b>Sampled:</b>	May-04-09 12:15					
<b>Anions by EPA 300</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	May-11-09 16:01					
	<b>Units/RL:</b>	mg/kg RL					
Chloride		33.6 5.01					
<b>Percent Moisture</b>	<b>Extracted:</b>						
	<b>Analyzed:</b>	May-12-09 08:43					
	<b>Units/RL:</b>	% RL					
Percent Moisture		ND 1.00					
<b>TPH By SW8015 Mod</b>	<b>Extracted:</b>	May-13-09 11:30					
	<b>Analyzed:</b>	May-13-09 21:53					
	<b>Units/RL:</b>	mg/kg RL					
C6-C12 Gasoline Range Hydrocarbons		ND 15.0					
C12-C28 Diesel Range Hydrocarbons		ND 15.0					
C28-C35 Oil Range Hydrocarbons		ND 15.0					
Total TPH		ND 15.0					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
Brent Barron  
Odessa Laboratory Director

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- BRL** Below Reporting Limit.
- RL** Reporting Limit
- \* Outside XENCO's scope of NELAC Accreditation.

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4143 Greenbriar Dr, Stafford, Tx 77477  
 9701 Harry Hines Blvd , Dallas, TX 75220  
 5332 Blackberry Drive, San Antonio TX 78238  
 2505 North Falkenburg Rd, Tampa, FL 33619  
 5757 NW 158th St, Miami Lakes, FL 33014  
 12600 West I-20 East, Odessa, TX 79765  
 842 Cantwell Lane, Corpus Christi, TX 78408

Phone	Fax
(281) 240-4200	(281) 240-4280
(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



## Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Work Orders : 332317,

Project ID: State DW # 4

Lab Batch #: 758877

Sample: 529945-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/13/09 17:19

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	105	100	105	70-135	
o-Terphenyl	47.2	50.0	94	70-135	

Lab Batch #: 758877

Sample: 529945-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/13/09 17:44

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	45.2	50.0	90	70-135	

Lab Batch #: 758877

Sample: 529945-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/13/09 18:09

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.7	100	90	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 758877

Sample: 332317-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/13/09 21:53

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	113	100	113	70-135	
o-Terphenyl	62.5	50.0	125	70-135	

Lab Batch #: 758877

Sample: 332238-004 D / MD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/14/09 04:04

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	2110	2000	106	70-135	
o-Terphenyl	1190	1000	119	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



# Blank Spike Recovery



Project Name: Oxy USA

Work Order #: 332317

Project ID:

State DW # 4

Lab Batch #: 758598

Sample: 758598-1-BKS

Matrix: Solid

Date Analyzed: 05/11/2009

Date Prepared: 05/11/2009

Analyst: LATCOR

Reporting Units: mg/kg

Batch #: 1

## BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300 Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.46	95	80-120	

Blank Spike Recovery [D] =  $100 * [C] / [B]$

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



## BS / BSD Recoveries



Project Name: Oxy USA

Work Order #: 332317

Analyst: BHW

Date Prepared: 05/13/2009

Project ID: State DW # 4

Date Analyzed: 05/13/2009

Lab Batch ID: 758877

Sample: 529945-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1060	106	1000	1040	104	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1030	103	1000	1000	100	3	70-135	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: Oxy USA

Work Order #: 332317

Lab Batch #: 758598

Date Analyzed: 05/11/2009

Date Prepared: 05/11/2009

Project ID: State DW # 4

Analyst: LATCOR

QC- Sample ID: 332150-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	2090	1000	2960	87	80-120	

Matrix Spike Percent Recovery [D] =  $100 \times (C-A)/B$

Relative Percent Difference [E] =  $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



# Sample Duplicate Recovery



Project Name: Oxy USA

Work Order #: 332317

Lab Batch #: 758598

Date Analyzed: 05/11/2009

QC- Sample ID: 332150-001 D

Reporting Units: mg/kg

Date Prepared: 05/11/2009

Batch #: 1

Project ID: State DW # 4

Analyst: LATCOR

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	2090	2040	2	20	

Lab Batch #: 758550

Date Analyzed: 05/12/2009

QC- Sample ID: 332317-001 D

Reporting Units: %

Date Prepared: 05/12/2009

Batch #: 1

Analyst: BEV

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	ND	ND	NC	20	

Lab Batch #: 758877

Date Analyzed: 05/14/2009

QC- Sample ID: 332238-004 D

Reporting Units: mg/kg

Date Prepared: 05/13/2009

Batch #: 1

Analyst: BHW

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TPH By SW8015 Mod	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
C6-C12 Gasoline Range Hydrocarbons	ND	ND	NC	35	
C12-C28 Diesel Range Hydrocarbons	194	191	2	35	
C28-C35 Oil Range Hydrocarbons	ND	ND	NC	35	

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

**Environmental Lab of Texas**

**A Xenco Laboratories Company**

### CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East  
Odessa, Texas 79785

Phone: 432-583-1800  
Fax: 432-583-1713

**Project Manager:** Logan Anderson

Project Name: Oxy USA

**Company Name**      **Elke Environmental**

Project #: STATE DW#4

Company Address P O Box 14187

Project Loc:

Telephone No. 432-366-0043

Fax No: 432-386-0884

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

**Sampler Signature:**

e-mail: la\_elkeenv@yahoo.com

[illegible]



**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client Elke Environmental  
Date/ Time 5/11/09 11 58  
Lab ID # 332317  
Initials AL

**Sample Receipt Checklist**

			Client Initials	
#1	Temperature of container/ cooler?	<input checked="" type="radio"/> Yes	No	6 ° C
#2	Shipping container in good condition?	<input checked="" type="radio"/> Yes	No	
#3	Custody Seals intact on shipping container/ cooler?	<input checked="" type="radio"/> Yes	No	(Not Present)
#4	Custody Seals intact on sample bottles/ container?	<input checked="" type="radio"/> Yes	No	Not Present
#5	Chain of Custody present?	<input checked="" type="radio"/> Yes	No	
#6	Sample instructions complete of Chain of Custody?	<input checked="" type="radio"/> Yes	No	
#7	Chain of Custody signed when relinquished/ received?	<input checked="" type="radio"/> Yes	No	
#8	Chain of Custody agrees with sample label(s)?	<input checked="" type="radio"/> Yes	No	ID written on Cont / Lid.
#9	Container label(s) legible and intact?	<input checked="" type="radio"/> Yes	No	Not Applicable
#10	Sample matrix/ properties agree with Chain of Custody?	<input checked="" type="radio"/> Yes	No	
#11	Containers supplied by ELOT?	<input checked="" type="radio"/> Yes	No	
#12	Samples in proper container/ bottle?	<input checked="" type="radio"/> Yes	No	See Below
#13	Samples properly preserved?	<input checked="" type="radio"/> Yes	No	See Below
#14	Sample bottles intact?	<input checked="" type="radio"/> Yes	No	
#15	Preservations documented on Chain of Custody?	<input checked="" type="radio"/> Yes	No	
#16	Containers documented on Chain of Custody?	<input checked="" type="radio"/> Yes	No	
#17	Sufficient sample amount for indicated test(s)?	<input checked="" type="radio"/> Yes	No	See Below
#18	All samples received within sufficient hold time?	<input checked="" type="radio"/> Yes	No	See Below
#19	Subcontract of sample(s)?	<input checked="" type="radio"/> Yes	No	(Not Applicable)
#20	VOC samples have zero headspace?	<input checked="" type="radio"/> Yes	No	Not Applicable

**Variance Documentation**

Contact \_\_\_\_\_ Contacted by \_\_\_\_\_ Date/ Time \_\_\_\_\_

Regarding \_\_\_\_\_

Corrective Action Taken

Check all that Apply

- ☐ See attached e-mail/ fax  
☐ Client understands and would like to proceed with analysis  
☐ Cooling process had begun shortly after sampling event

# **Analytical Report 332661**

**for**

**Elke Environmental, Inc.**

**Project Manager: Logan Anderson**

**Oxy USA**

**State DW # 4 Spill**

**20-MAY-09**



**12600 West I-20 East Odessa, Texas 79765**

**Texas certification numbers:**

**Houston, TX T104704215-08B-TX - Odessa/Midland, TX T104704400-08-TX**

**Florida certification numbers:**

**Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675**

**Miramar, FL E86349**

**Norcross(Atlanta), GA E87429**

**South Carolina certification numbers:**

**Norcross(Atlanta), GA 98015**

**North Carolina certification numbers:**

**Norcross(Atlanta), GA 483**

**Houston - Dallas - San Antonio - Tampa - Miami - Latin America**

**Midland - Corpus Christi - Atlanta**



20-MAY-09

Project Manager: **Logan Anderson**  
**Elke Environmental, Inc.**  
4817 Andrews Hwy  
P.O. Box 14167 Odessa, tx 79768  
Odessa, TX 79762

Reference: XENCO Report No: **332661**  
**Oxy USA**  
Project Address:

**Logan Anderson:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 332661. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 332661 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron, II**

Odessa Laboratory Manager

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## Sample Cross Reference 332661



Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP # 1 @ 67'	S	May-11-09 10:50	0 - 67 ft	332661-001
TP # 2 @ 72'	S	May-12-09 09:25	0 - 72 ft	332661-002
TP # 3 @ 72'	S	May-12-09 11:20	0 - 72 ft	332661-003
TP # 4 @ 72'	S	May-12-09 13:40	0 - 72 ft	332661-004



# Certificate of Analysis Summary 332661

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA



Project Id: State DW # 4 Spill

Contact: Logan Anderson

Project Location:

Date Received in Lab: Wed May-13-09 04:50 pm


Report Date: 20-MAY-09

Project Manager: Brent Barron, II

Analysis Requested	Lab Id:	332661-001	332661-002	332661-003	332661-004		
	Field Id:	TP # 1 @ 6'	TP # 2 @ 72'	TP # 3 @ 72'	TP # 4 @ 72'		
	Depth:	0-67 ft	0-72 ft	0-72 ft	0-72 ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL		
	Sampled:	May-11-09 10:50	May-12-09 09:25	May-12-09 11:20	May-12-09 13:40		
Anions by EPA 300	Extracted:						
	Analyzed:	May-14-09 14:10	May-14-09 14:10	May-14-09 14:10	May-14-09 14:10		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		88.9 5.25	5.77 5.02	8.51 5.35	7.53 5.02		
Percent Moisture	Extracted:						
	Analyzed:	May-15-09 08:50	May-15-09 08:50	May-15-09 08:50	May-15-09 08:50		
	Units/RL:	% RL	% RL	% RL	% RL		
Percent Moisture		4.74 1.00	ND 1.00	6.48 1.00	ND 1.00		
TPH By SW8015 Mod	Extracted:	May-18-09 12:04	May-18-09 12:04	May-18-09 12:04	May-18-09 12:04		
	Analyzed:	May-18-09 15:17	May-18-09 15:42	May-18-09 16:07	May-18-09 16:32		
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
C6-C12 Gasoline Range Hydrocarbons		ND 15.7	ND 15.1	ND 16.0	ND 15.1		
C12-C28 Diesel Range Hydrocarbons		ND 15.7	ND 15.1	ND 16.0	ND 15.1		
C28-C35 Oil Range Hydrocarbons		ND 15.7	ND 15.1	ND 16.0	ND 15.1		
Total TPH		ND 15.7	ND 15.1	ND 16.0	ND 15.1		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing

Since 1990 Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America - Atlanta - Corpus Christi

  
Brent Barron  
Odessa Laboratory Director



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
  
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
  
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
  
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
  
- F** RPD exceeded lab control limits.
  
- J** The target analyte was positively identified below the MQL and above the SQL.
  
- U** Analyte was not detected.
  
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
  
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
  
- K** Sample analyzed outside of recommended hold time.
  
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
  
- BRL** Below Reporting Limit.
  
- RL** Reporting Limit
  
- \* Outside XENCO's scope of NELAC Accreditation.

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

***A Small Business and Minority Status Company that delivers SERVICE and QUALITY***

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 12600 West I-20 East, Odessa, TX 79765  
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Phone	Fax
(281) 240-4200	(281) 240-4280
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(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(305) 823-8500	(305) 823-8555
(432) 563-1800	(432) 563-1713
(361) 884-0371	(361) 884-9116



## Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Work Orders : 332661,

Project ID: State DW # 4 Spill

Lab Batch #: 759347

Sample: 530230-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/18/09 12:24

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	46.2	50.0	92	70-135	

Lab Batch #: 759347

Sample: 530230-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/18/09 12:48

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	45.3	50.0	91	70-135	

Lab Batch #: 759347

Sample: 530230-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/18/09 13:13

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	100	91	70-135	
o-Terphenyl	51.2	50.0	102	70-135	

Lab Batch #: 759347

Sample: 332661-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/09 15:17

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	100	88	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 759347

Sample: 332661-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/09 15:42

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.6	100	88	70-135	
o-Terphenyl	47.1	50.0	94	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



## Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Work Orders : 332661,

Project ID: State DW # 4 Spill

Lab Batch #: 759347

Sample: 332661-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/09 16:07

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.6	100	87	70-135	
o-Terphenyl	49.2	50.0	98	70-135	

Lab Batch #: 759347

Sample: 332661-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/09 16:32

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	86.9	100	87	70-135	
o-Terphenyl	46.9	50.0	94	70-135	

Lab Batch #: 759347

Sample: 332562-004 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/09 20:17

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	100	103	70-135	
o-Terphenyl	45.8	50.0	92	70-135	

Lab Batch #: 759347

Sample: 332562-004 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/09 20:42

### SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	45.7	50.0	91	70-135	

\* Surrogate outside of Laboratory QC limits

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.





# Blank Spike Recovery



Project Name: Oxy USA

Work Order #: 332661

Project ID:

State DW # 4 Spill

Lab Batch #: 759013

Sample: 759013-1-BKS

Matrix: Solid

Date Analyzed: 05/14/2009

Date Prepared: 05/14/2009

Analyst: BEV

Reporting Units: mg/kg

Batch #: 1

## BLANK /BLANK SPIKE RECOVERY STUDY

Anions by EPA 300  Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Chloride	ND	10.0	9.40	94	90-110	

Blank Spike Recovery [D] =  $100 * [C] / [B]$

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit



## BS / BSD Recoveries



Project Name: Oxy USA

Work Order #: 332661

Analyst: BHW

Date Prepared: 05/18/2009

Project ID: State DW # 4 Spill

Date Analyzed: 05/18/2009

Lab Batch ID: 759347

Sample: 530230-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1070	107	1000	1080	108	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1030	103	1000	1030	103	0	70-135	35	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS Recoveries



Project Name: Oxy USA

Work Order #: 332661

Lab Batch #: 759013

Date Analyzed: 05/14/2009

Date Prepared: 05/14/2009

Project ID: State DW # 4 Spill

Analyst: BEV

QC- Sample ID: 332660-001 S

Batch #: 1

Matrix: Soil

Reporting Units: mg/kg

## MATRIX / MATRIX SPIKE RECOVERY STUDY

Inorganic Anions by EPA 300  Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	5290	2190	7270	90	80-120	

Matrix Spike Percent Recovery [D] =  $100 \times (C-A)/B$

Relative Percent Difference [E] =  $200 \times (C-A)/(C+B)$

All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



## Form 3 - MS / MSD Recoveries

Project Name: Oxy USA



Work Order #: 332661

Project ID: State DW # 4 Spill

Lab Batch ID: 759347

QC- Sample ID: 332562-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/18/2009

Date Prepared: 05/18/2009

Analyst: BHW

Reporting Units: mg/kg

TPH By SW8015 Mod  Analytes	MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY										
	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	ND	1010	1010	100	1010	1020	101	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1010	988	98	1010	1010	100	2	70-135	35	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable  
N = See Narrative, EQL = Estimated Quantitation Limit



# Sample Duplicate Recovery



Project Name: Oxy USA

Work Order #: 332661

Lab Batch #: 759013

Date Analyzed: 05/14/2009

QC- Sample ID: 332660-001 D

Reporting Units: mg/kg

Project ID: State DW # 4 Spill

Analyst: BEV

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Anions by EPA 300	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Chloride	5290	5070	4	20	

Lab Batch #: 759005

Date Analyzed: 05/15/2009

QC- Sample ID: 332661-001 D

Reporting Units: %

Date Prepared: 05/15/2009

Analyst: BEV

Batch #: 1

Matrix: Soil

SAMPLE / SAMPLE DUPLICATE RECOVERY					
Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	4.74	5.08	7	20	

Spike Relative Difference  $RPD = 200 * |(B-A)/(B+A)|$

All Results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

# Environmental Lab of Texas

A Xenco Laboratories Company

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East  
Odessa, Texas 79755

Phone 432-563-1800  
Fax 432-563-1713

Project Manager Logan Anderson  
Company Name Elke Environmental  
Company Address P O Box 14167  
City/State/Zip Odessa, TX 79768  
Telephone No 432-366-0043  
Sampler Signature [Signature]

Project Name OXY UST  
Project #   
Project Loc State Ow #4 spill  
PO #

Fax No 432-366-0884 Report Format ☒ Standard ☐ TRRP ☐ NPDES

e-mail la\_elkeen@yahoo.com

(lab use only)

ORDER #

332641

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Vials Filled	Vials # of Col. Analyt.	Preservation & # of Containers										Matrix										ANALYZE FOR	TOTAL	TOTAL	ANALYST INITIALS	DATE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Special Instructions

Received by <u>[Signature]</u>		Date <u>5-13-09</u>	Time <u>4:50pm</u>	Received by <u>[Signature]</u>		Date <u>5-13-09</u>	Time <u>10:50</u>
Received by <u>[Signature]</u>		Date <u>5-13-09</u>	Time <u>10:50</u>	Received by <u>[Signature]</u>		Date <u>5-13-09</u>	Time <u>10:50</u>
Received by <u>[Signature]</u>		Date <u>5-13-09</u>	Time <u>10:50</u>	Received by <u>[Signature]</u>		Date <u>5-13-09</u>	Time <u>10:50</u>

Laboratory Comments:  
Sample Containers Intact?  
VOCs Free of Headspace?  
Labels on container(s)  
Custody seals on container(s)  
Custody seals on cooler(s)  
Sample Hand Delivered  
by Sample/Client Rep?  
by Courier? UPS DHL FedEx Lone Star  
Temperature Upon Receipt 3.5 °C

### Variance/ Corrective Action Report- Sample Log-In

### Sample Receipt Checklist

Client Initials

## Variance Documentation

Check all that Apply ☐ See attached e-mail/ fax  
☐ Client understands and would like to proceed with analysis  
☐ Cooling process had begun shortly after sampling event

District I  
1625 N. French Dr., Hobbs, NM 88246  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

**RECEIVED** State of New Mexico  
Energy Minerals and Natural Resources  
APR 23 2009 Oil Conservation Division  
**HOBBSOCD** 1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company OXY USA	Contact Kelton Beaird
Address 102 S Main Carlsbad, NM 88220	Telephone No. (O) 505-887-8337 C) 575-390-1903
Facility Name State DW #4	Facility Type Tank battery

Surface Owner State	Mineral Owner	Lease No.
---------------------	---------------	-----------

#### LOCATION OF RELEASE

API # 30-025-28766-00-00

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
F	13	18S	33E					Lea

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

#### NATURE OF RELEASE

Type of Release Produced Water/Oil	Volume of Release +50bbls. water/5bbls. oil	Volume Recovered 5 bbls.
Source of Release Transfer line	Date and Hour of Occurrence	Date and Hour of Discovery 4-13-09 @ 9:00am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson-NMOCD	
By Whom? Kelton Beaird- HES Oxy	Date and Hour See above	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.\*

WATER @ 148'

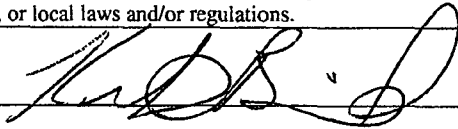
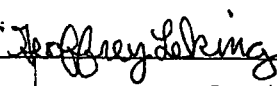
Describe Cause of Problem and Remedial Action Taken.\*

Transfer line corroded causing produced water to leak into pasture. A skim of oil mixed with the water was released as well. A vac truck was called to pick up what they could. Chlorides are to be approx. 50,000 ppm in the water.

Describe Area Affected and Cleanup Action Taken.\*

Area affected was at the corrosion point running south approx. 150 yds. The area will be assessed for contamination and a work plan will be submitted for approval.

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

Signature: 	<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Kelton Beaird	Approved by <b>ENV ENGR.</b> District Supervisor 	
Title: HES Specialist	Approval Date: 05/04/09	Expiration Date: 07/03/09
E-mail Address: kelton_beaird@oxy.com	Conditions of Approval: SUBMIT FINAL C-141 BY	Attached <input type="checkbox"/>
Date:		IRP-09-5-2169

\* Attach Additional Sheets If Necessary

FGRL0912438791



District I  
1625 N French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-141  
Revised October 10, 2003

Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

**Release Notification and Corrective Action**

**OPERATOR**

☒ Initial Report ☐ Final Report

Name of Company - OXY USA	Contact - Kelton Beaird	
Address - P O Box 1988 / 102 South Main St Carlsbad, NM	Telephone No. - 575-887-8337	
Facility Name - State DW #4	Facility Type - Flowline	
Surface Owner - State	Mineral Owner	Lease No. - 30-025-28766

**LOCATION OF RELEASE**

Unit Letter F	Section 13	Township 18S	Range 33E	Feet from the	North/South Line	Feet from the	East/West Line	County Lea
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Latitude 32° 45.435' N Longitude 103° 37.208' W

**NATURE OF RELEASE**

Type of Release - Produced Water/Crude Oil	Volume of Release +50 bbls water / 5 bbls oil	Volume Recovered - 5 bbls
Source of Release - Transfer Line	Date and Hour of Occurrence -	Date and Hour of Discovery 4-13-09 @ 9:00am
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson - NMOCD	
By Whom? - Kelton Beaird - HES Oxy	Date and Hour - see above	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Transfer line corroded causing produced water to leak into pasture. A skim of oil mixed with the water was released as well. A vac truck was called to pick up what they could. Chlorides are to be approx. 50,000 ppm in the water. Area affected was at the corrosion point running south 150 yds. The area was delineated vertically and horizontally using a backhoe and air rotary rig. A borehole was drilled at the site and left open for 72 hour and gauged to determine groundwater depth at 83' bgs. The site ranking for the site is as follows: Wellhead Protection Area - 0 points, Surface Body of Water - 0 points and Groundwater - 10 points. The total ranking for the site is 10 points.		
Describe Area Affected and Cleanup Action Taken.* The remediation plan is to excavate 4' of impacted soil and haul to Lea Land Disposal. After the excavation of 4' of impacted soil the areas where impacted soil are below 4' bgs a 1' thick layer of red bed clay will be installed, compacted and tested to 95% dry density. After the installation of the red bed clay liner clean native soil will then be backfilled into the excavation and contoured to the surrounding area. The site will be seeded with BLM Seed Mixture #2. A final report will be submitted at the completion of the project.		
Hobbs NMOCD will be notified before start of job and before backfill of the clean soil.		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.		
Signature: 		<b>OIL CONSERVATION DIVISION</b>
Printed Name: Kelton Beaird		Approved by District Supervisor:
Title: HES Specialist	Approval Date:	Expiration Date:
E-mail Address: kelton_beaird@oxy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date 5-21-09	Phone: 575-887-8337	

\* Attach Additional Sheets If Necessary