Elke Environmental, Inc.

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

March 13, 2009

New Mexico Oil Conservation Division
Mr. Larry Johnson
1625 N French Drive
Hobbs, New Mexico 88240

Re: Remediation Plan for Oxy USA – Todd Lower San Andres #8 Leak
UL 'H' Sec. 35 T7S R35E Roosevelt County
1RP-~~2029~~ 2152

Mr. Larry Johnson,

Elke Environmental was contracted by Oxy USA to complete the remediation of the impacted soil at the Todd Lower San Andres #8 Flowline Leak. Vertical and horizontal delineation of the site was started with a backhoe and completed using an air rotary rig. The ranking criteria for this site is as follows: Surface Body of Water – 0 points; Wellhead Protection Area – 0 points; Groundwater Depth – 0 points (GW = 109'). The total ranking for the site is 0 points. Attached is a plat map, driller's logs, field analytical and lab confirmation for the site.

A monitor well was set at the site to prove groundwater conditions. During the drilling of the borehole no signs of a water bearing zone were present. The borehole was left open for 72 hrs and an interface probe was used to show groundwater at 126' bgs. Seven days after the borehole was drilled a monitor well was set. The initial borehole was drilled to 150' bgs, after 7 days the borehole collapsed and Total Depth was 114' bgs. After setting the monitor well a groundwater reading was taken a 112' bgs. During the development, the well dried up. A water reading was taken every 15 minutes until an estimated yield was determined. The estimated yield was determined to be 0.4 Gallons per Day. The groundwater was sampled for TDS and returned a result of 516 mg/L. NMAC 19.15.1.19, Section B, Subsection 2 states **"Ground-water pollution at any place of withdrawal for present or reasonably foreseeable future use, where the TDS concentration is 10,000 mg/L or less, shall be abated"**. With only 0.4 GPD recharge rate, Oxy USA feels that the yield from that water zone is too low for any foreseeable future use and proposes the following remediation plan.

Oxy USA proposes to excavate 4' of impacted soil and haul to Gandy Marley Disposal. A 20 mil poly liner will be installed at 4' bgs with 4 oz geo-textile liner above and below the poly liner. 4' of clean native soil will be backfilled and contoured tot he surrounding area. The site will be re-seeded with a mixture approved by the landowner. 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

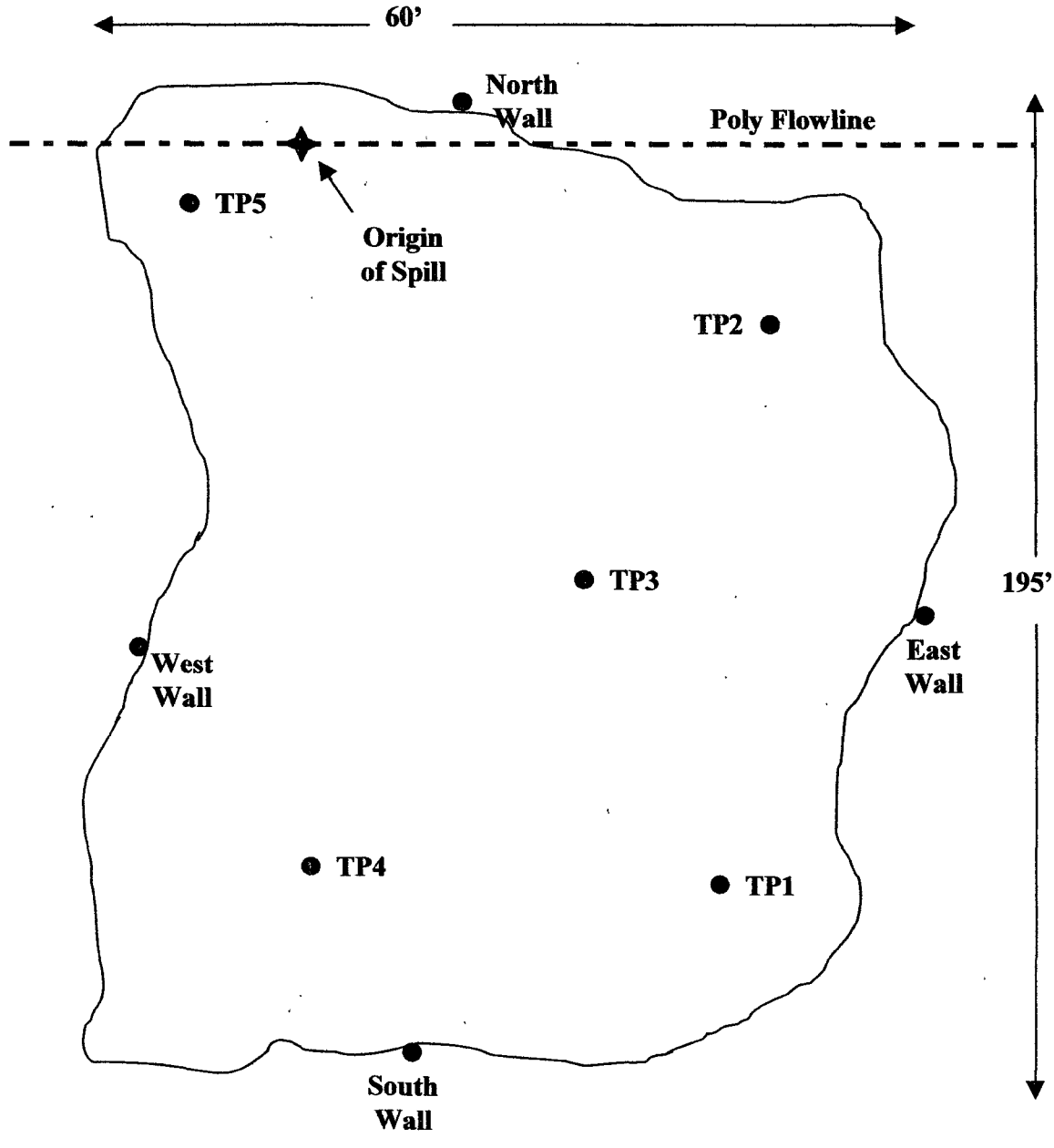
Oxy USA

Todd Lower San Andres #8 Flowline Leak

UL 'H' Sec. 35 T7S R35E

Roosevelt County, NM

Plat Map



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P.O. Box 14167 Odessa, TX 79768

Field Analytical Report Form

Client Oxy USA **Analyst** Curtis Elam/Logan Anderson

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP1	12-24-08	Surface	60,800	993		33° 40.272' N 103° 18.826' W
TP1	12-24-08	2'	30,400	2,038		33° 40.272' N 103° 18.826' W
TP1	1-19-09	3'	1,490	2,350		33° 40.272' N 103° 18.826' W
TP1	1-19-09	5'	67	894		33° 40.272' N 103° 18.826' W
TP1	1-19-09	7'		823		33° 40.272' N 103° 18.826' W
TP1	1-20-09	9'		732		33° 40.272' N 103° 18.826' W
TP1	1-20-09	12'	33	657		33° 40.272' N 103° 18.826' W
TP1	2-10-09	15'		2,149		33° 40.272' N 103° 18.826' W
TP1	2-10-09	20'		259		33° 40.272' N 103° 18.826' W
TP1	2-10-09	25'		139	0.0	33° 40.272' N 103° 18.826' W
TP2	12-24-08	Surface	50,900	1,780		33° 40.284' N 103° 18.812' W
TP2	12-24-08	2'	23,800	1,591		33° 40.284' N 103° 18.812' W
TP2	1-19-09	3'	3,830	6,235		33° 40.284' N 103° 18.812' W
TP2	1-19-09	5'	45	7,105		33° 40.284' N 103° 18.812' W
TP2	1-19-09	7'		6,821		33° 40.284' N 103° 18.812' W
TP2	1-20-09	9'		7,651		33° 40.284' N 103° 18.812' W
TP2	1-20-09	12'	56	7,824		33° 40.284' N 103° 18.812' W

Analyst Notes

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Field Analytical Report Form

Client Oxy USA **Analyst** Curtis Elam/Logan Anderson

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP2	2-10-09	15'		1,965		33° 40.284' N 103° 18.812' W
TP2	2-10-09	20'		4,220		33° 40.284' N 103° 18.812' W
TP2	2-10-09	25'		4,752		33° 40.284' N 103° 18.812' W
TP2	2-10-09	30'		3,959		33° 40.284' N 103° 18.812' W
TP2	2-10-09	35'		3,457		33° 40.284' N 103° 18.812' W
TP2	2-10-09	40'		2,762		33° 40.284' N 103° 18.812' W
TP2	2-10-09	45'		3,306		33° 40.284' N 103° 18.812' W
TP2	2-10-09	50'		4,021		33° 40.284' N 103° 18.812' W
TP2	2-10-09	55'		5,359		33° 40.284' N 103° 18.812' W
TP2	2-10-09	60'		1,750		33° 40.284' N 103° 18.812' W
TP2	2-10-09	65'		282		33° 40.284' N 103° 18.812' W
TP2	2-10-09	70'		160	0.0	33° 40.284' N 103° 18.812' W
TP3	12-24-08	Surface	55,100	866		33° 40.283' N 103° 18.817' W
TP3	12-24-08	2'	27,700	1,284		33° 40.283' N 103° 18.817' W
TP3	1-19-09	3'	4,880	7,811		33° 40.283' N 103° 18.817' W
TP3	1-19-09	5'	89	7,701		33° 40.283' N 103° 18.817' W
TP3	1-19-09	7'		7,535		33° 40.283' N 103° 18.817' W

Analyst Notes

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Field Analytical Report Form

Client Oxy USA **Analyst** Curtis Elam/Logan Anderson

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP3	1-19-09	9'		7,202		33° 40.283' N 103° 18.817' W
TP3	1-19-09	12'	77	6,881		33° 40.283' N 103° 18.817' W
TP3	2-10-09	15'		2,752		33° 40.283' N 103° 18.817' W
TP3	2-10-09	20'		2,742		33° 40.283' N 103° 18.817' W
TP3	2-10-09	25'		921		33° 40.283' N 103° 18.817' W
TP3	2-10-09	30'		183		33° 40.283' N 103° 18.817' W
TP3	2-10-09	35'		196	0.0	33° 40.283' N 103° 18.817' W
TP4	12-24-08	Surface	29,870	577		33° 40.281' N 103° 18.826' W
TP4	12-24-08	2'	11,520	1,692		33° 40.281' N 103° 18.826' W
TP4	1-19-09	3'	2,100	4,320		33° 40.281' N 103° 18.826' W
TP4	1-19-09	5'	71	1,382		33° 40.281' N 103° 18.826' W
TP4	1-19-09	7'		2,451		33° 40.281' N 103° 18.826' W
TP4	1-20-09	9'		1,821		33° 40.281' N 103° 18.826' W
TP4	1-20-09	12'	66	1,299		33° 40.281' N 103° 18.826' W
TP4	2-10-09	15'		1,454		33° 40.281' N 103° 18.826' W
TP4	2-10-09	20'		104		33° 40.281' N 103° 18.826' W
TP4	2-10-09	25'		196	0.0	33° 40.281' N 103° 18.826' W

Analyst Notes

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Field Analytical Report Form

Client Oxy USA **Analyst** Curtis Elam/Logan Anderson

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP5	12-24-08	Surface	61,400	1,311		33° 40.292' N 103° 18.809' W
TP5	12-24-08	2'	37,600	2,151		33° 40.292' N 103° 18.809' W
TP5	1-20-09	3'	5,600	7,851		33° 40.292' N 103° 18.809' W
TP5	1-20-09	5'	470	8,390		33° 40.292' N 103° 18.809' W
TP5	1-20-09	7'	70	8,233		33° 40.292' N 103° 18.809' W
TP5	1-20-09	9'		8,271		33° 40.292' N 103° 18.809' W
TP5	1-20-09	12'	79	8,638		33° 40.292' N 103° 18.809' W
TP5	2-11-09	15'		5,915		33° 40.292' N 103° 18.809' W
TP5	2-11-09	20'		4,776		33° 40.292' N 103° 18.809' W
TP5	2-11-09	25'		5,642		33° 40.292' N 103° 18.809' W
TP5	2-11-09	30'		4,580		33° 40.292' N 103° 18.809' W
TP5	2-11-09	35'		4,224		33° 40.292' N 103° 18.809' W
TP5	2-11-09	40'		3,588		33° 40.292' N 103° 18.809' W
TP5	2-11-09	45'		4,395		33° 40.292' N 103° 18.809' W
TP5	2-11-09	50'		5,234		33° 40.292' N 103° 18.809' W
TP5	2-11-09	55'		1,955		33° 40.292' N 103° 18.809' W
TP5	2-11-09	60'		1,130		33° 40.292' N 103° 18.809' W

Analyst Notes

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Field Analytical Report Form

Client Oxy USA **Analyst** Curtis Elam/Logan Anderson

Site Todd Lower San Andres #8 Flowline Leak

Sample ID	Date	Depth	TPH / PPM	Cl / PPM	PID / PPM	GPS
TP5	2-11-09	65'		212		33° 40.292' N 103° 18.809' W
TP5	2-11-09	70'		204	0.0	33° 40.292' N 103° 18.809' W
Background	1-20-09	Surface	27	123		33° 40.290' N 103° 18.816' W
Background	1-20-09	5'	56	138		33° 40.290' N 103° 18.816' W
Background	1-20-09	9'	38	146		33° 40.290' N 103° 18.816' W
North Wall	1-20-09	2'	57	171		33° 40.293' N 103° 18.801' W
North Wall	1-20-09	5'	66	139		33° 40.293' N 103° 18.801' W
South Wall	1-20-09	2'	36	154		33° 40.272' N 103° 18.820' W
South Wall	1-20-09	5'	78	126		33° 40.272' N 103° 18.820' W
East Wall	1-20-09	2'	37	127		33° 40.292' N 103° 18.809' W
East Wall	1-20-09	5'	59	147		33° 40.292' N 103° 18.809' W
West Wall	1-20-09	2'	34	134		33° 40.290' N 103° 18.826' W
West Wall	1-20-09	5'	28	168		33° 40.290' N 103° 18.826' W

Analyst Notes

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768

Monitor Well Report Form

Client Oxy USA **Date** 3-10-2009

Site Todd Lower San Andres #8

Monitor Well ID	Depth of Water	Total Depth of Well	Feet of Water	Gallons of Water to Purge	Gallons of Water Purged	Time
MW - 1	109.03'	116.21'	7.18'	3.5	1.25	12:43 pm

Notes During 3 well volume purge, monitor well showed signs of becoming dry. Sample was taken due To decreasing volume of water in monitor well.

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER)		OSE FILE NUMBER(S)		
TODD LOWER SAN ANDRES #8 MW-1 PAGE 1 OF 2				
WELL OWNER NAME(S)		PHONE (OPTIONAL)		
OXY USA				
WELL OWNER MAILING ADDRESS		CITY	STATE	ZIP
P.O. BOX 1988		CARLSBAD	NM	88221

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	33	40	15.00	N
	LONGITUDE	103	18	43.00	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS

MILNESAND GO N ON 206 TURN R GO E FOR 1.5 MI TURN R AGAIN S FOR 2THS MILE - ROOSEVELT CO, NM

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	¼	¼	¼		☐ NORTH ☑ SOUTH	☑ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD1478	EDWARD BRYAN	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
2-25-09	2-25-09	114	150	

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DRILLING FLUID: ☑ AIR ☐ MUD ☐ ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
114	94	5	SCH 40 PVC .010 SCREEN	FJ	2	0.154	0.10
94	+43	5	SCH 40 PVC RISER	FJ	2	0.154	RISER

4. WATER BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) 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

5. SEAL AND PUMP

TYPE OF PUMP: ☐ SUBMERSIBLE ☐ JET ☐ NO PUMP – WELL NOT EQUIPPED
☐ TURBINE ☐ CYLINDER ☐ OTHER – SPECIFY:

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	114	81	5	6 BAGS 20/40 SAND		TOPLOAD
	81	2	5	16 BAGS OF 3/8 PLUG		TOPLOAD
	0	2	5	.5 BAGS OF CEMENT		TOPLOAD

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
0	1	1	TAN FINE SAND - CALICHE	☐ YES ☑ NO
1	3	2	REDDISH TAN FINE SAND - CALICHE	☐ YES ☑ NO
3	9	6	CALICHE - TAN FINE SAND - SANDSTONE	☐ YES ☑ NO
9	11	2	CALICHE SANDSTONE - TAN SAND	☐ YES ☑ NO
11	26	15	CALICHE - TAN SANDSTONE - TAN FINE SAND	☐ YES ☑ NO
26	33	7	TAN FINE SAND - SANDSTONE	☐ YES ☑ NO
33	39	6	TAN FINE SAND	☐ YES ☑ NO
39	47	8	TAN FINE SAND - GRAVEL	☐ YES ☑ NO
47	51	4	TAN FINE SAND - SANDSTONE (CMT)	☐ YES ☑ NO
51	64	13	TAN FINE SAND SANDSTONE	☐ YES ☑ NO
64	76	12	TAN FINE - VERY FINE SAND - SANDSTONE	☐ YES ☑ NO
76	79	3	DARK TAN FNE SAND - WITH TAN CLAY	☐ YES ☑ NO
79	89	10	TAN SILTY CLAY TAN VERY FINE SAND	☐ YES ☑ NO
89	93	4	DARK GRAY CLAY	☐ YES ☑ NO
93	96	53	GOLD SILT CLAY- CLAY - WITH VERY FINE SAND	☐ YES ☑ NO
96	103	7	TAN VERY FINE SAND	☐ YES ☑ NO
103	107	4	TAN WHITE FINE SAND (BEIGE)	☑ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO

WELL TEST — METHOD: ☐ BAILER ☑ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY:

TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

ADDITIONAL STATEMENTS OR EXPLANATIONS:

2X2 PAD - 4X4 HIGH RISER - WELL CAVED IN AT 114 FT TO 150 FT

8. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

SIGNATURE OF DRILLER _____ DATE _____

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER)		OSE FILE NUMBER(S)	
TODD LOWER SAN ANDRES #8 MW-1 PAGE 2 OF 2			
WELL OWNER NAME(S)		PHONE (OPTIONAL)	
OXY USA			
WELL OWNER MAILING ADDRESS		CITY	STATE / ZIP
P.O. BOX 1988		CARLSBAD	NM 88221

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	33	40	15.00	N
	LONGITUDE	103	18	43.00	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS

MILNESAND GO N ON 206 TURN R GO E FOR 1.5 MI TURN R AGAIN S FOR 2THS MILE. ROOSEVELT CO, NM

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	¼	¼	¼		☐ NORTH ☑ SOUTH	☑ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD1478	EDWARD BRYAN	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
2-25-09	2-25-09	114	150	

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT): N/A

DRILLING FLUID: ☑ AIR ☐ MUD ☐ ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
114	94	5	SCH 40 PVC .010 SCREEN	FJ	2	0.154	0.10
94	+43	5	SCH 40 PVC RISER	FJ	2	0.154	RISER

4. WATER BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	YIELD (GPM)
107	103	4	TAN WHITE FINE SAND	GPD
				.400

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: SUBMERSIBLE PUMP/ RECOVERY RATE

TOTAL ESTIMATED WELL YIELD (GPM): .400 GPD

FOR OSE INTERNAL USE

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

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

5. SEAL AND PUMP

TYPE OF PUMP: ☐ SUBMERSIBLE ☐ JET ☐ NO PUMP – WELL NOT EQUIPPED ☐ TURBINE ☐ CYLINDER ☐ OTHER – SPECIFY:

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	114	81	5	6 20/40 SAND		TOPLOAD
	81	2	5	16 BAGS OF 3/8 PLUG		TOPLOAD
	0	2	5	.5 BAGS OF CEMENT		TOPLOAD

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
107	110	5	BROWN FINE SAND - TINY GRAVEL PIECES	☐ YES ☑ NO
110	112	2	TAN SILTY CLAY - VERY FINE SAND	☐ YES ☑ NO
112	147	35	RED SILTY CLAY - SAND	☐ YES ☑ NO
147	150	3	TAN - GRAY FINE SAND - CLAY	☐ YES ☑ NO
TD	150			☐ YES ☑ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO

WELL TEST — METHOD: ☐ BAILER ☐ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY:

TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

ADDITIONAL STATEMENTS OR EXPLANATIONS:

2X2 PAD - 4X4 HIGH RISER - WELL CAVED IN AT 114 FT TO 150 FT

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THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

SIGNATURE OF DRILLER _____ DATE _____

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

Analytical Report 327145

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

Todd Lower San Andres # 8

12-MAR-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

12-MAR-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: **327145**
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 327145. 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. 327145 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

Sample Cross Reference 327145

Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-1	W	Mar-10-09 12:43	109.03 - 116.21 ft	327145-001

Certificate of Analysis Summary 327145

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA

Project Id: Todd Lower San Andres # 8
Contact: Logan Anderson
Project Location:

Date Received in Lab: Wed Mar-11-09 01:00 pm
Report Date: 12-MAR-09
Project Manager: Brent Barron, II

Analysis Requested							
	Lab Id:	327145-001					
	Field Id:	MW-1					
	Depth:	109.03-116.21 ft					
	Matrix:	WATER					
	Sampled:	Mar-10-09 12:43					
TDS by SM2540C	***Extracted:***						
	Analyzed:	Mar-11-09 15:30					
	Units/RL:	mg/L	RL				
Total dissolved solids		516	5.00				

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.

* Outside XENCO's scope of NELAC Accreditation.

Sample Duplicate Recovery

Project Name: Oxy USA

Work Order #: 327145

Lab Batch #: 752276 **Project ID:** Todd Lower San Andres # 8

Date Analyzed: 03/11/2009 **Date Prepared:** 03/11/2009 **Analyst:** LATCOR

QC- Sample ID: 327145-001 D **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

TDS by SM2540C	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	516	558	8	30	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

Environmental Lab of Texas

A Xenco Laboratories Company

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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
Fax No: 432-366-0884
Sampler Signature: [signature]
e-mail: la_elkeenv@yahoo.com

Project Name: Oxy USA
Project #:
Project Loc: Todd Lower San Andres #8
PO #:
Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 327145

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total #. of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	Matrix: DW=Drinking Water SL=Sludge, GW=Groundwater S=Soil/Solid, NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO_4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.	TDS			RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
01	MW-1	109.46	116.21'	3-10-09	12:43 P		1	X								GW												X			X	

Analyze For: TCLP: / TOTAL:

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	3-11-09	11:45A	[signature]	3-11-09	11:45A
[signature]	3-11-09	1:00			
			Received by ELOT: Andrea Lamm	3/11/09	1:00

Laboratory Comments:
- Sample Containers Intact? (Y) N
- VOCs Free of Headspace? Y N (NA)
- Labels on container(s) (Y) N
- Custody seals on container(s) (Y) N
- Custody seals on cooler(s) Y (N)
- Sample Hand Delivered (Y) N
- by Sampler/Client Rep. ? (Y) N
- by Courier? UPS DHL FedEx Lone Star
- 250 ml poly
- Temperature Upon Receipt: 10.0 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Env.

Date/ Time: 3.11.09 13.00

Lab ID #: 327145

Initials: GL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	10.0 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	(Not Present)	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont / Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	(Not Applicable)	
#20	VOC samples have zero headspace?	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

Laboratories

ACCREDITED IN ACCORDANCE WITH NELAC

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
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

Analytical Report 324728

for

Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

Todd Lower San Andres # 8

17-FEB-09

17-FEB-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: **324728**
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 324728. 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.

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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

Sample Cross Reference 324728

Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TP 1 @ 25'	S	Feb-10-09 12:25	25 ft	324728-001
TP 2 @ 70'	S	Feb-10-09 15:45	70 ft	324728-002
TP 3 @ 35'	S	Feb-10-09 13:19	35 ft	324728-003
TP 4 @ 25'	S	Feb-10-09 11:45	25 ft	324728-004
TP 5 @ 70'	S	Feb-10-09 11:05	70 ft	324728-005

Certificate of Analysis Summary 324728

Elke Environmental, Inc., Odessa, TX

Project Name: Oxy USA

Project Id: Todd Lower San Andres # 8
Contact: Logan Anderson
Project Location:

Date Received in Lab: Wed Feb-11-09 03:15 pm
Report Date: 17-FEB-09
Project Manager: Brent Barron, II

Analysis Requested																
	Lab Id:	324728-001		324728-002		324728-003		324728-004		324728-005						
	Field Id:	TP 1 @ 25'		TP 2 @ 70'		TP 3 @ 35'		TP 4 @ 25'		TP 5 @ 70'						
	Depth:	25 ft		70 ft		35 ft		25 ft		70 ft						
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL						
	Sampled:	Feb-10-09 12:25		Feb-10-09 15:45		Feb-10-09 13:19		Feb-10-09 11:45		Feb-10-09 11:05						
Anions by EPA 300	*Extracted:*															
	Analyzed:	Feb-14-09 14:17		Feb-14-09 14:17		Feb-14-09 14:17		Feb-14-09 14:17		Feb-14-09 14:17						
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL					
Chloride		42.3	5.10	40.3	5.06	37.3	5.16	58.3	5.09	35.1	5.09					
Percent Moisture	*Extracted:*															
	Analyzed:	Feb-11-09 17:00		Feb-11-09 17:00		Feb-11-09 17:00		Feb-11-09 17:00		Feb-11-09 17:00						
	Units/RL:	%	RL	%	RL	%	RL	%	RL	%	RL					
Percent Moisture		1.96	1.00	1.20	1.00	3.03	1.00	1.83	1.00	1.73	1.00					
TPH By SW8015 Mod	*Extracted:*	Feb-12-09 19:19		Feb-12-09 19:19		Feb-12-09 19:19		Feb-12-09 19:19		Feb-12-09 19:19						
	Analyzed:	Feb-13-09 09:51		Feb-13-09 10:16		Feb-13-09 10:40		Feb-13-09 11:04		Feb-13-09 11:28						
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL					
C6-C12 Gasoline Range Hydrocarbons		ND	15.3	ND	15.2	ND	15.5	ND	15.3	ND	15.3					
C12-C28 Diesel Range Hydrocarbons		22.8	15.3	78.0	15.2	ND	15.5	ND	15.3	15.8	15.3					
C28-C35 Oil Range Hydrocarbons		ND	15.3	ND	15.2	ND	15.5	ND	15.3	ND	15.3					
Total TPH		22.8	15.3	78	15.2	ND	15.5	ND	15.3	15.8	15.3					

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.

* Outside XENCO's scope of NELAC Accreditation.

Form 2 - Surrogate Recoveries

Project Name: Oxy USA

Work Orders : 324728,

Project ID: Todd Lower San Andres # 8

Lab Batch #: 749564 **Sample:** 324701-009 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	55.8	50.0	112	70-135	

Lab Batch #: 749564 **Sample:** 324701-009 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	123	100	123	70-135	
o-Terphenyl	54.7	50.0	109	70-135	

Lab Batch #: 749564 **Sample:** 324728-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.2	50.0	114	70-135	

Lab Batch #: 749564 **Sample:** 324728-002 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.0	50.0	114	70-135	

Lab Batch #: 749564 **Sample:** 324728-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.2	50.0	114	70-135	

** 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 : 324728,

Project ID: Todd Lower San Andres # 8

Lab Batch #: 749564 **Sample:** 324728-004 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	104	100	104	70-135	
o-Terphenyl	57.7	50.0	115	70-135	

Lab Batch #: 749564 **Sample:** 324728-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	106	100	106	70-135	
o-Terphenyl	58.8	50.0	118	70-135	

Lab Batch #: 749564 **Sample:** 524748-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	120	100	120	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 749564 **Sample:** 524748-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	56.3	50.0	113	70-135	

Lab Batch #: 749564 **Sample:** 524748-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg

TPH By SW8015 Mod Analytes	SURROGATE RECOVERY STUDY Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	119	100	119	70-135	
o-Terphenyl	51.5	50.0	103	70-135	

** 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 #: 324728 **Project ID:** Todd Lower San Andres # 8

Lab Batch #: 749692 **Sample:** 749692-1-BKS **Matrix:** Solid

Date Analyzed: 02/14/2009 **Date Prepared:** 02/14/2009 **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	10.9	109	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Oxy USA

Work Order #: 324728
Analyst: BHW
Lab Batch ID: 749564
Sample: 524748-1-BKS
Batch #: 1
Date Prepared: 02/12/2009
Project ID: Todd Lower San Andres # 8
Date Analyzed: 02/13/2009
Matrix: Solid
Units: mg/kg

TPH By SW8015 Mod	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	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
C6-C12 Gasoline Range Hydrocarbons	ND	1000	1150	115	1000	1160	116	1	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1000	1070	107	1000	1060	106	1	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 #: 324728
Lab Batch #: 749692
Date Analyzed: 02/14/2009
QC- Sample ID: 324701-061 S
Reporting Units: mg/kg

Date Prepared: 02/14/2009
Batch #: 1

Project ID: Todd Lower San Andres # 8
Analyst: LATCOR
Matrix: Soil

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	17300	4690	11500	0	80-120	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Oxy USA

Work Order # : 324728 **Project ID:** Todd Lower San Andres # 8

Lab Batch ID: 749564 **QC- Sample ID:** 324701-009 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/13/2009 **Date Prepared:** 02/12/2009 **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	1110	1250	113	1110	1230	111	2	70-135	35	
C12-C28 Diesel Range Hydrocarbons	ND	1110	1180	106	1110	1160	105	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 ApplicableN = See Narrative, EQL = Estimated Quantitation Limit

Sample Duplicate Recovery

Project Name: Oxy USA

Work Order #: 324728

Lab Batch #: 749692 **Project ID:** Todd Lower San Andres # 8

Date Analyzed: 02/14/2009 **Date Prepared:** 02/14/2009 **Analyst:** LATCOR

QC- Sample ID: 324701-061 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: mg/kg

Anions by EPA 300	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Chloride	17300	18200	5	20	

Lab Batch #: 749332

Date Analyzed: 02/11/2009 **Date Prepared:** 02/11/2009 **Analyst:** BEV

QC- Sample ID: 324687-010 D **Batch #:** 1 **Matrix:** Soil

Reporting Units: %

Percent Moisture	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Percent Moisture	8.59	7.24	17	20	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.

Environmental Lab of Texas

A Xenco Laboratories Company

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79765

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

Fax No: 432-366-0884

Sampler Signature: [signature]

e-mail: la_elkeenv@yahoo.com

Project Name: Oxy USA

Project #: Todd Lower San Andres #8

Project Loc: Todd Lower San Andres #8

PO #:

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

(lab use only)
ORDER #: 324728

LAB # (lab use only)	FIELD CODE	Beginning Depth	Ending Depth	Date Sampled	Time Sampled	Field Filtered	Total # of Containers	Ice	HNO_3	HCl	H_2SO_4	NaOH	$Na_2S_2O_3$	None	Other (Specify)	DW=Drinking Water SL=Sludge	GW=Groundwater S=Soil/Solid	NP=Non-Potable Specify Other	TPH: 418.1 8015M 8015B	TPH: TX 1005 TX 1006	Cations (Ca, Mg, Na, K)	Anions (Cl, SO_4, Alkalinity)	SAR / ESP / CEC	Metals: As Ag Ba Cd Cr Pb Hg Se	Volatiles	Semivolatiles	BTEX 8021B/5030 or BTEX 8260	RCI	N.O.R.M.				RUSH TAT (Pre-Schedule) 24, 48, 72 hrs	Standard TAT
								Preservation & # of Containers								Matrix			Analyze For: TCLP: / TOTAL:															
01	TP1 @ 25'		25'	2-10-09	12:25P		1	X									S		X			X												X
02	TP2 @ 70'		70'	2-10-09	3:45P		1	X									S		X			X												X
03	TP3 @ 35'		35'	2-10-09	1:19P		1	X									S		X			X												X
04	TP4 @ 25'		25'	2-10-09	11:45A		1	X									S		X			X												X
05	TP5 @ 70'		70'	2-11-09	11:05A		1	X									S		X			X												X

Special Instructions:

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	2-11-09	3:15P			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by ELOT:	Date	Time
			Andrea [signature]	2 11 09	15:15

Laboratory Comments:

Sample Containers Intact?	(Y)	N
VOCs Free of Headspace?	(Y)	N
Labels on container(s)	(Y)	N
Custody seals on container(s)	(Y)	N
Custody seals on cooler(s)	Y	(N)
Sample Hand Delivered	(Y)	N
by Sampler/Client Rep. ?	(Y)	N
by Courier? UPS DHL FedEx Lone Star		

4oz glass

Temperature Upon Receipt: 5.0 °C

Environmental Lab of Texas

Variance/ Corrective Action Report- Sample Log-In

Client: Elke Env.

Date/ Time: 2.11.09 15:15

Lab ID #: 324728

Initials: AL

Sample Receipt Checklist

					Client Initials
#1	Temperature of container/ cooler?	(Yes)	No	5.0 °C	
#2	Shipping container in good condition?	(Yes)	No		
#3	Custody Seals intact on shipping container/ cooler?	Yes	No	Not Present	
#4	Custody Seals intact on sample bottles/ container?	(Yes)	No	Not Present	
#5	Chain of Custody present?	(Yes)	No		
#6	Sample instructions complete of Chain of Custody?	(Yes)	No		
#7	Chain of Custody signed when relinquished/ received?	(Yes)	No		
#8	Chain of Custody agrees with sample label(s)?	(Yes)	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	(Yes)	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	(Yes)	No		
#11	Containers supplied by ELOT?	(Yes)	No		
#12	Samples in proper container/ bottle?	(Yes)	No	See Below	
#13	Samples properly preserved?	(Yes)	No	See Below	
#14	Sample bottles intact?	(Yes)	No		
#15	Preservations documented on Chain of Custody?	(Yes)	No		
#16	Containers documented on Chain of Custody?	(Yes)	No		
#17	Sufficient sample amount for indicated test(s)?	(Yes)	No	See Below	
#18	All samples received within sufficient hold time?	(Yes)	No	See Below	
#19	Subcontract of sample(s)?	Yes	No	Not Applicable	
#20	VOC samples have zero headspace?	(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