

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
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

RECEIVED

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

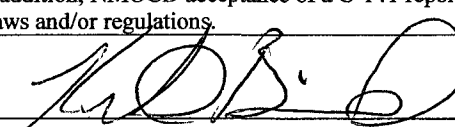

Name of Company – OXY USA	Contact – Kelton Beaird
Address – P O Box 1988 / 102 South Main St Carlsbad, NM	Telephone No. – 575-887-8337
Facility Name – Todd Lower San Andres #358	Facility Type – Flowline
Surface Owner – State	Mineral Owner – State
Lease No. – 30-041-10472	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
H	35	7S	35E	1980'	FNL	660'	FEL	Roosevelt

Latitude 33° 40' 20.29" W Longitude 103° 18' 47.08" W

NATURE OF RELEASE

Type of Release – Produced Water/Crude Oil	Volume of Release – 200/60 bbls	Volume Recovered – 25 bbls
Source of Release – Flowline	Date and Hour of Occurrence –	Date and Hour of Discovery –
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Eric Nelson – NM State Land Office	
By Whom? – Rick Kerby	Date and Hour –	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	
If a Watercourse was Impacted, Describe Fully.*		
Describe Cause of Problem and Remedial Action Taken.* Spill from flowline ran in the pasture. 25 bbls was vacuumed up and line was repaired. Groundwater in the area is 109.03' using a monitor well that was set at the site. A vertical and horizontal delineation was completed to NMOCD Standards.		
Describe Area Affected and Cleanup Action Taken.* The impacted soil was excavated to 4' bgs and hauled to Gandy Marley Disposal. At the 4' depth a 4 oz. Geotextile liner was installed, then a 20 mil poly liner then another layer of 4 oz. Geotextile liner. Clean native soil was then backfilled into the excavation and contoured to the surrounding area. The site was seeded with BLM Seed Mixture #2.		
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: 	OIL CONSERVATION DIVISION	
Printed Name: Kelton Beaird	Approved by District Supervisor  ENVIRONMENTAL ENGINEER	
Title: HES Specialist	Approval Date: 05/19/09	Expiration Date:
E-mail Address: kelton_beaird@oxy.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date 5-4-09	Phone: 575-887-8337	RP# 094-2152

* Attach Additional Sheets If Necessary

Closure Report

Prepared for
Oxy USA

RECEIVED

MAY 18 2009

HOBBSOCD

Todd Lower San Andres #8 Flowline Leak Roosevelt County, NM

1RP-09-4-2152

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
Phone (432) 366-0043 Fax (432) 366-0884

May 4, 2009

RECEIVED

MAY 18 2009

HOBBSOCO

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

Re: Closure Report for Oxy USA – Todd Lower San Andres #8 Leak
UL 'H' Sec. 35 T7S R35E Roosevelt County
1RP-09-4-2152

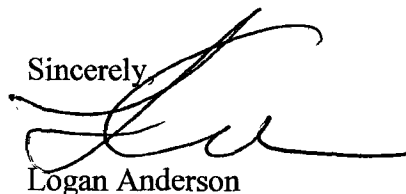
Mr. Larry Johnson,

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 to low for any foreseeable future use and proposes the following remediation plan.

As per the approved workplan 4' of impacted soil was excavated and hauled to Gandy Marley Disposal. A 20 mil poly liner was installed at 4' bgs with 4 oz geo-textile liner above and below the poly liner. Clean native soil was backfilled and contoured to the surrounding area. The site was seeded with BLM Seed Mixture #2. Enclosed is the final report of the remediation project. If you have any questions about the enclosed report please contact me at the office.

Sincerely,



Logan Anderson

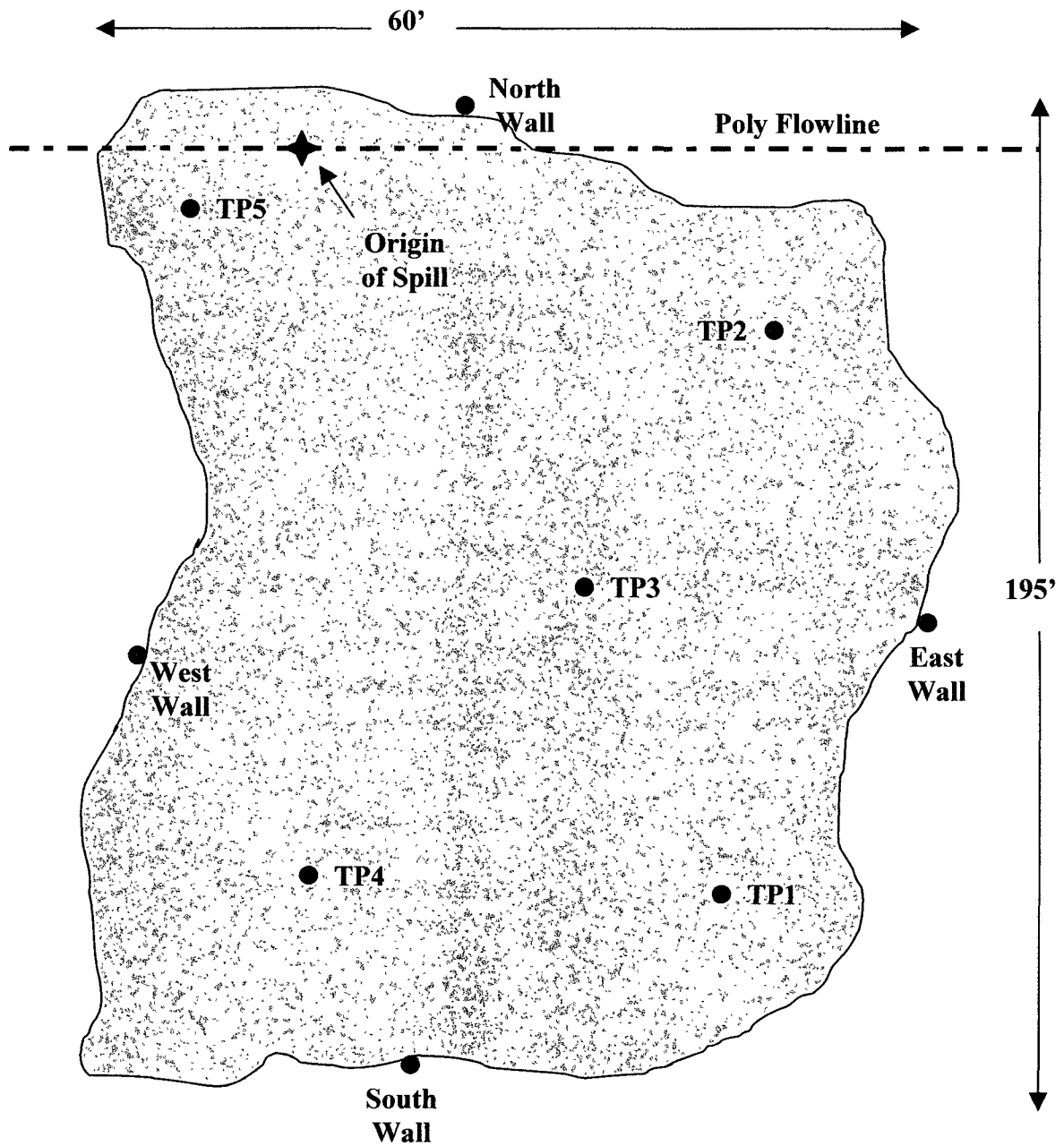
Oxy USA

Todd Lower San Andres #8 Flowline Leak

UL 'H' Sec. 35 T7S R35E

Roosevelt County, NM

Plat Map



Elke Environmental, Inc.

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	CI / 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 _____

Elke Environmental, Inc.

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	CI / 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 _____

Elke Environmental, Inc.

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	CI / 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 _____

Elke Environmental, Inc.

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
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 _____

Elke Environmental, Inc.

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	CI / 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 _____



WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

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1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) TODD LOWER SAN ANDRES #8 MW-1				PAGE 1 OF 2				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 33		MINUTES 40		SECONDS 15.00 N		* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED WGS 84					
		LONGITUDE 103		18		43.00 W								
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) 1/4		(10 ACRE) 1/4		(40 ACRE) 1/4		(160 ACRE) 1/4		SECTION		TOWNSHIP <input type="checkbox"/> NORTH <input checked="" type="checkbox"/> SOUTH		RANGE <input checked="" 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 2-25-09		DRILLING ENDED 2-25-09		DEPTH OF COMPLETED WELL (FT) 114		BORE HOLE DEPTH (FT) 150		DEPTH WATER FIRST ENCOUNTERED (FT)					
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" 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)		BORE HOLE DIA. (IN)		CASING MATERIAL		CONNECTION TYPE (CASING)		INSIDE DIA. CASING (IN)		CASING WALL THICKNESS (IN)		SLOT SIZE (IN)	
	FROM TO		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)		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

5. SEAL AND PUMP	TYPE OF PUMP: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:						
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
		FROM	TO				
		114	81				
	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)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
	FROM	TO			
	0	1	1	TAN FINE SAND - CALICHE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	1	3	2	REDDISH TAN FINE SAND - CALICHE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	3	9	6	CALICHE - TAN FINE SAND - SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	9	11	2	CALICHE SANDSTONE - TAN SAND	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	11	26	15	CALICHE - TAN SANDSTONE - TAN FINE SAND	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	26	33	7	TAN FINE SAND - SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	33	39	6	TAN FINE SAND	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	39	47	8	TAN FINE SAND - GRAVEL	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	47	51	4	TAN FINE SAND - SANDSTONE (CMT)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	51	64	13	TAN FINE SAND SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	64	76	12	TAN FINE - VERY FINE SAND - SANDSTONE	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	76	79	3	DARK TAN FNE SAND - WITH TAN CLAY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	79	89	10	TAN SILTY CLAY TAN VERY FINE SAND	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	89	93	4	DARK GRAY CLAY	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	93	96	53	GOLD SILT CLAY- CLAY - WITH VERY FINE SAND	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
	96	103	7	TAN VERY FINE SAND	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
103	107	4	TAN WHITE FINE SAND (BEIGE)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL					

7. TEST & ADDITIONAL INFO	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input checked="" type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> 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

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1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) TODD LOWER SAN ANDRES #8 MW-1				PAGE 2 OF 2				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		MINUTES		SECONDS		* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84							
LATITUDE			33		40		15.00 N									
		LONGITUDE		103		18		43.00 W								
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) $\frac{1}{4}$		(10 ACRE) $\frac{1}{4}$		(40 ACRE) $\frac{1}{4}$		(160 ACRE) $\frac{1}{4}$		SECTION		TOWNSHIP <input type="checkbox"/> NORTH <input checked="" type="checkbox"/> SOUTH		RANGE <input checked="" 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 2-25-09		DRILLING ENDED 2-25-09		DEPTH OF COMPLETED WELL (FT) 114		BORE HOLE DEPTH (FT) 150		DEPTH WATER FIRST ENCOUNTERED (FT)							
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" 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)		BORE HOLE DIA. (IN)		CASING MATERIAL		CONNECTION TYPE (CASING)		INSIDE DIA. CASING (IN)		CASING WALL THICKNESS (IN)		SLOT SIZE (IN)			
	FROM	TO														
	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)		THICKNESS (FT)		FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)							YIELD (GPM)				
	FROM	TO														
	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: <input type="checkbox"/> SUBMERSIBLE <input type="checkbox"/> JET <input type="checkbox"/> NO PUMP - WELL NOT EQUIPPED <input type="checkbox"/> TURBINE <input type="checkbox"/> CYLINDER <input type="checkbox"/> OTHER - SPECIFY:								
	ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT)		BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT		
		FROM	TO						
		114	81						
		81	2						
	0	2				5	6 20/40 SAND		TOPLOAD
						5	16 BAGS OF 3/8 PLUG		TOPLOAD
						5	.5 BAGS OF CEMENT		TOPLOAD

6. GEOLOGIC LOG OF WELL	DEPTH (FT)		THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?	
	FROM	TO				
	107	110	5	BROWN FINE SAND - TINY GRAVEL PIECES	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	110	112	2	TAN SILTY CLAY - VERY FINE SAND	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	112	147	35	RED SILTY CLAY - SAND	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	147	150	3	TAN - GRAY FINE SAND - CLAY	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
	TD	150			<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO
					<input type="checkbox"/> YES	<input type="checkbox"/> NO

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

7. TEST & ADDITIONAL INFO	WELL TEST	METHOD: <input type="checkbox"/> BAILER <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> 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 USE INTERNAL USE

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

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION	PAGE 2 OF 2	

Elke Environmental, Inc.

P.O. Box 14167 Odessa, TX 79768

Monitor Well Report Form

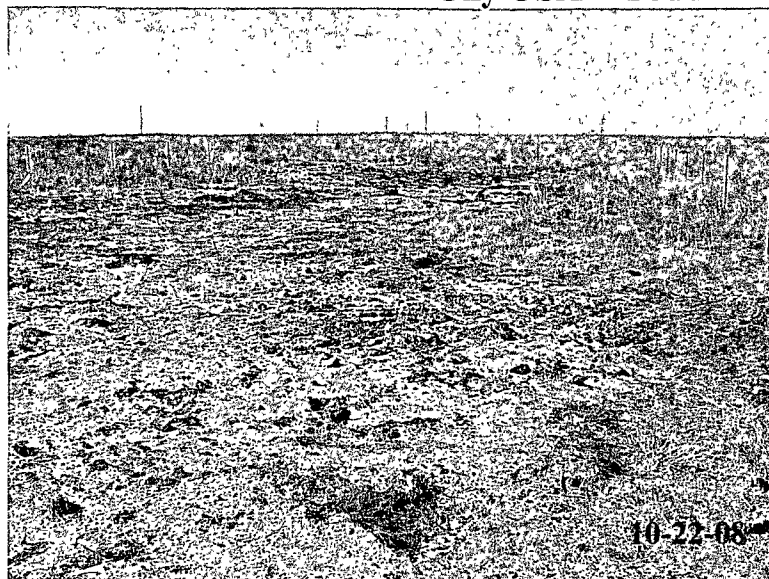
Client Oxy USA Date 3-10-2009

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.

Oxy USA – Todd Lower San Andres #8 Flowline



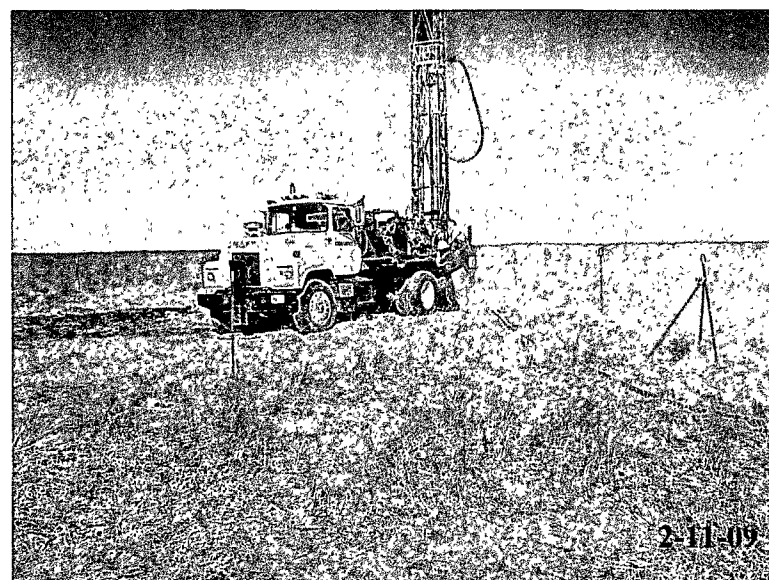
Spill before remediation of impacted soil.



Spill before remediation of impacted soil.

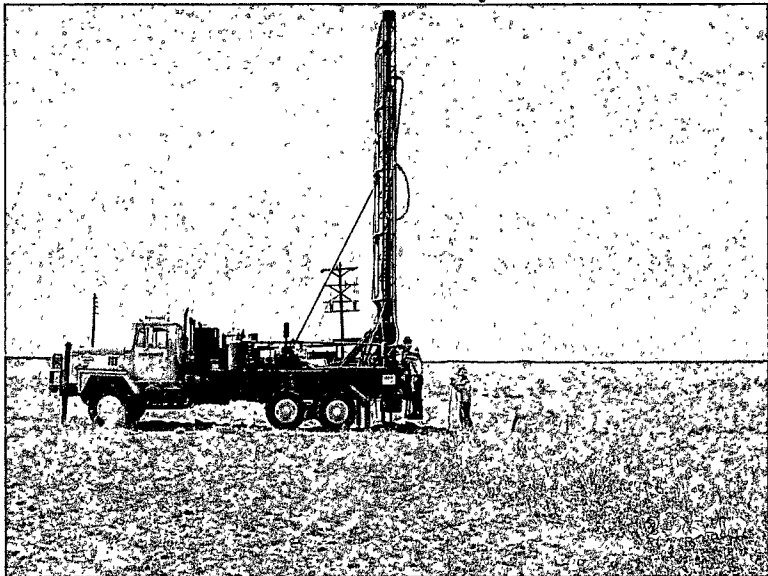


Delineation trench of impacted soil.

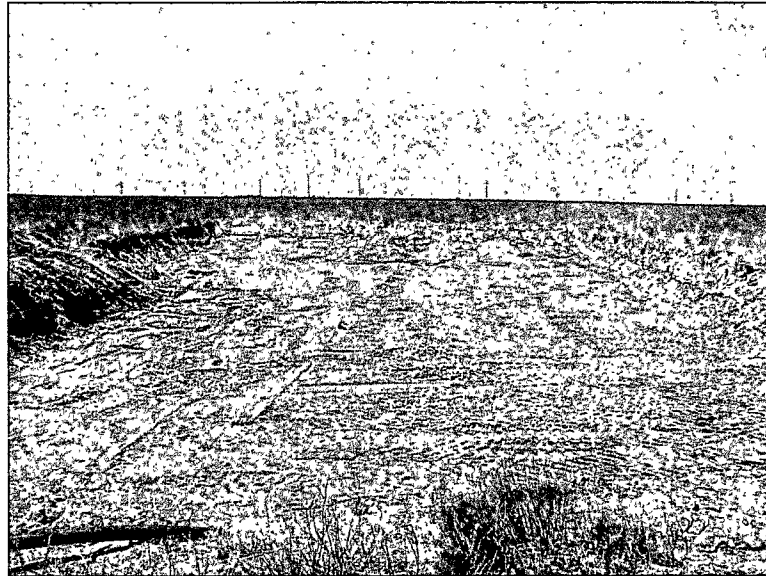


Vertical delineation of impacted soil using air rotary rig.

Oxy USA – Todd Lower San Andres #8 Flowline



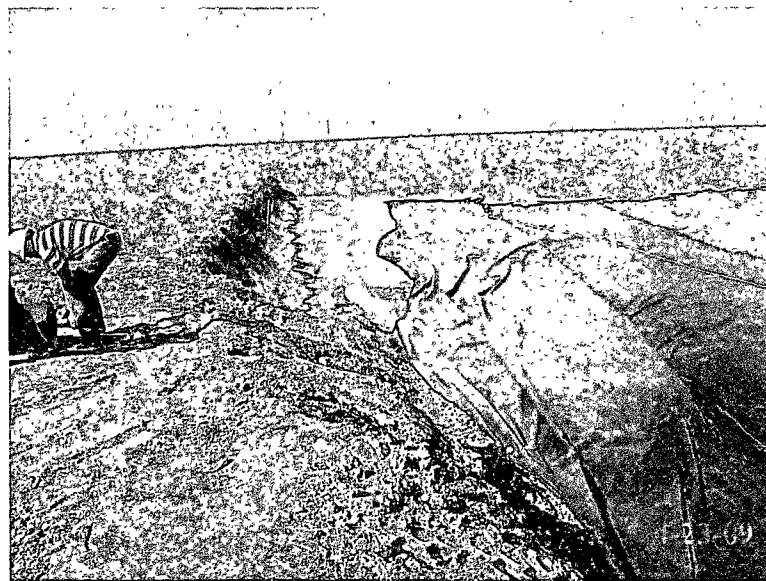
Setting monitor well to determine groundwater depth.



After excavation of 4' of impacted soil.



Loading impacted soil to be hauled to disposal.



Installation of 1st Geotextile liner below poly liner.

Oxy USA – Todd Lower San Andres #8 Flowline Leak



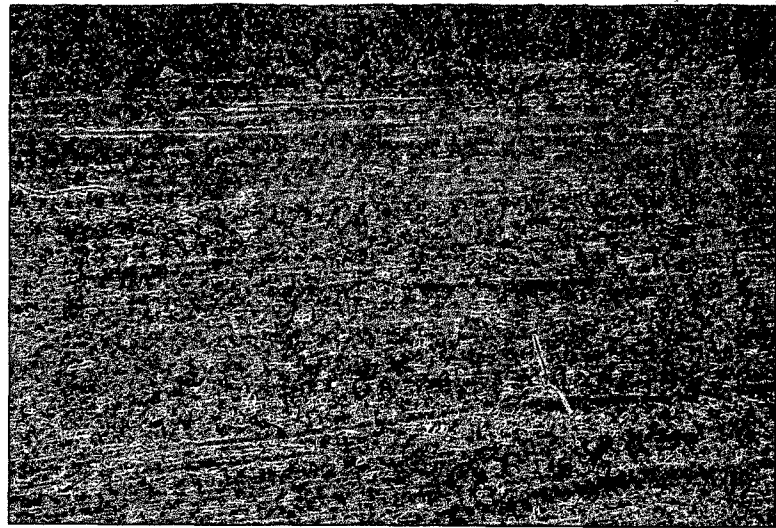
Installation of 20 mil poly liner.



Installation of 2nd Geotextile liner above the poly liner.



Site after backfill of clean native soil, contouring to the surrounding area and seeding with BLM Seed Mixture #2.



Analytical Report 327145

for

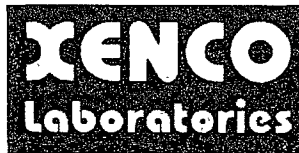
Elke Environmental, Inc.

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

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Sample Cross Reference 327145



Elke Environmental, Inc., Odessa, TX

Oxy USA

Sample Id

MW-1

Matrix

W

Date Collected

Mar-10-09 12:43

Sample Depth

109.03 - 116.21 ft

Lab Sample Id

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					
TDS by SM2540C	Sampled:	Mar-10-09 12:43					
	Extracted:						
	Analyzed:	Mar-11-09 15:30					
Total dissolved solids	Units/RL:	mg/L RL					
		516 5.00					

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.

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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.

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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



Sample Duplicate Recovery



Project Name: Oxy USA

Work Order #: 327145

Lab Batch #: 752276

Date Analyzed: 03/11/2009

QC- Sample ID: 327145-001 D

Reporting Units: mg/L

Project ID: Todd Lower San Andres # 8

Analyst: LATCOR

Date Prepared: 03/11/2009

Batch #: 1

Matrix: Water

SAMPLE / SAMPLE DUPLICATE RECOVERY					
TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
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

Project Name: Oxy USA

Company Name Elke Environmental

Project #:

Company Address. P O Box 14187

Project Loc: Todd Laver Sea Andres #8

City/State/Zip: Odessa, TX 79768

PO#:

Telephone No: 432-368-0043

Fax No: 432-366-0884

Report Format: ☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

e-mail: la_ekeenv@yahoo.com

[illegible]

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

Client: Eike Env.
Date/ Time: 3-11-09 13:00
Lab ID #: 327145
Initials: GL

Sample Receipt Checklist

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

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 324728

for

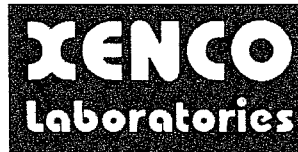
Elke Environmental, Inc.

Project Manager: Logan Anderson

Oxy USA

Todd Lower San Andres # 8

17-FEB-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
Norcross(Atlanta), GA E87429**

South Carolina certification numbers:

Norcross(Atlanta), GA 98015

North Carolina certification numbers:

Norcross(Atlanta), GA 483

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Midland - Corpus Christi - Atlanta**



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.

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. 324728 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 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:	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	
	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:	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	
	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	

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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.
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 - 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.

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

Certified and approved by numerous States and Agencies.

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(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 : 324728,

Project ID: Todd Lower San Andres # 8

Lab Batch #: 749564

Sample: 324701-009 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod Analytes	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

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod Analytes	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

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	57.2	50.0	114	70-135	

Lab Batch #: 749564

Sample: 324728-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

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	57.0	50.0	114	70-135	

Lab Batch #: 749564

Sample: 324728-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

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	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

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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

SURROGATE RECOVERY STUDY					
TPH By SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
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

Date Prepared: 02/12/2009

Project ID: Todd Lower San Andres # 8

Date Analyzed: 02/13/2009

Lab Batch ID: 749564

Sample: 524748-1-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	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

Project ID: Todd Lower San Andres # 8

Date Analyzed: 02/14/2009

Date Prepared: 02/14/2009

Analyst: LATCOR

QC- Sample ID: 324701-061 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	17300	4690	11500	0	80-120	X

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



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

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	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 Applicable
N = See Narrative, EQL = Estimated Quantitation Limit



Sample Duplicate Recovery



Project Name: Oxy USA

Work Order #: 324728

Lab Batch #: 749692

Date Analyzed: 02/14/2009

QC- Sample ID: 324701-061 D

Reporting Units: mg/kg

Project ID: Todd Lower San Andres # 8

Analyst: LATCOR

Date Prepared: 02/14/2009

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	17300	18200	5	20	

Lab Batch #: 749332

Date Analyzed: 02/11/2009

QC- Sample ID: 324687-010 D

Reporting Units: %

Date Prepared: 02/11/2009

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	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

12000 West I-20 East
Odessa, Texas 79768Phone: 432-583-1800
Fax: 432-583-1713Project Manager: Logan AndersonCompany Name: Elke EnvironmentalCompany Address: P.O. Box 14167City/State/Zip: Odessa, TX 79768Telephone No: 432-388-0043Sampler Signature: [Signature]Fax No: 432-388-0884e-mail: la_elkeenr@yahoo.comProject Name: Oxy USAProject #: Todd Lower San Andres #8Project Loc: Todd Lower San Andres #8

POB: _____

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 # of Containers	Preservation & # of Containers										Analysis For:										RUSH TAT Processing in 48 Hrs	Standard TAT
							Is	MPA	HCl	H ₂ O ₂	NaOH	Na ₂ S ₂ O ₈	None	Other (Specify)	Discontinuing Item: Reasoning	Other: Container: Indication	TPH: 4011	TPH: 4012	TPH: 4013	TPH: 4014	TPH: 4015	TPH: 4016	TPH: 4017	TPH: 4018	TPH: 4019	TPH: 4020		
01	TP1 @ 25'	25'	2-10-09	12:25P		1	X										X										X	
02	TP2 @ 70'	70'	2-10-09	3:45P		1	X										X										X	
03	TP3 @ 25'	35'	2-10-09	1:19P		1	X										X										X	
04	TP4 @ 25'	25'	2-10-09	11:45A		1	X										X										X	
05	TP5 @ 70'	70'	2-11-09	11:05A		1	X										X										X	

Special Instructions:

Relinquished by: [Signature]

Relinquished by: _____

Relinquished by: _____

Date: 2-11-09

Date: _____

Date: _____

Time: 3:15P

Time: _____

Time: _____

Received by: _____

Received by: _____

Received by: Anderson Lane

Date: _____

Date: 2-11-09

Date: _____

Time: _____

Time: 1:15

Time: _____

Laboratory Comments:

Sample Containers Intact?

VOCs Free of Headspaces?

Labels on container(s)

Custody seals on container(s)

Custody seals on cooler(s)

Sample Hand Delivered

by Sampler/Client Rep.?

by Courier? UPSTemperature Upon Receipt: 5.0 °C

<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N
<input checked="" type="checkbox"/>	N

DHL FedEx Lone Star

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

Client: EIK Env.
Date/ Time: 2-11-07 15:15
Lab ID #: 324728
Initials: CL

Sample Receipt Checklist

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