



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

Governor  
Betty Rivera  
Cabinet Secretary

Lori Wrotenberry  
Director  
Oil Conservation Division

July 19, 2002

EMNRD  
7/19/02

Mr. Frank Hernandez  
EOTT Energy Pipeline, LP  
PO Box 1660  
Midland, TX 79703

[Frank.Hernandez@eott.com](mailto:Frank.Hernandez@eott.com)

Re: Closure Approval, Pearl Valley Road Site  
Site Reference UL-L Sec-4 T-19S R-35E  
Spill Date: March 30, 2000  
Closure Request Dated: June 5, 2002

Dear Mr. Hernandez,

The Final Closure Document is hereby approved. According to the information provided, no further action is required at this time.

Please be advised that OCD approval of this plan does not relieve EOTT Energy Pipeline, LP liability should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. Additionally, OCD approval does not relieve EOTT Energy Pipeline, LP of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you have any questions or need assistance please feel free to call or e-mail me at (505) 393-6161, x111 or email [ljohnson@state.nm.us](mailto:ljohnson@state.nm.us)

Sincerely,

Larry Johnson - Environmental Engineer

Cc: Roger Anderson - Environmental Bureau Chief  
Chris Williams - District I Supervisor  
Bill Olson - Hydrologist  
Paul Sheeley-Environmental Engineer



ENVIRONMENTAL PLUS, INC. *Micro-Blaze* *Micro-Blaze Out™*

STATE APPROVED LAND FARM AND ENVIRONMENTAL SERVICES

June 5, 2002

Mr. Larry Johnson  
Energy, Minerals, and Natural Resources Department  
New Mexico Oil Conservation Division  
1625 North French Dr.  
Hobbs, New Mexico 88240

Subject: EOTT "Pearl Valley Road" Final C-141 and Closure Documentation  
EOTT Site Reference: #TNM-LF-2000-29

Dear Mr. Johnson:

Environmental Plus, Inc. (EPI), on behalf of EOTT Energy Pipeline, LP (EOTT) submits for your consideration and approval the "Final C-141 and Closure Documentation for the "Pearl Valley Road"; EOTT Reference: #TNM-LF-2000-29. This report documents the vertical and horizontal extents of hydrocarbon contamination at the site and the removal, on-site remediation and replacement of soil contaminated above the NMOCD remedial guidelines consistent with the NMOCD approved Site Specific Remediation Plan submitted in September-2001, and the "E.O.T.T. General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July 2000." EPI, on behalf of EOTT, therefore requests that the NMOCD consider the information provided within this documentation and require "no further action" at this site.

If there are any questions please call Mr. Ben Miller or myself at EPI's offices, or at 505.390.0288 or 505.390.7864 respectively. Mr. Frank Hernandez of EOTT Energy Pipeline, LP can be contacted at 915.638.3799.

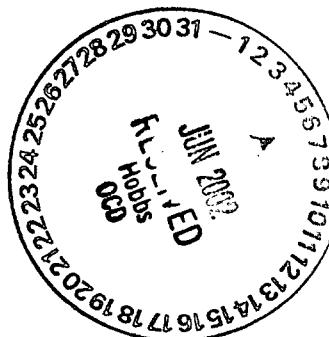
All official correspondence should be addressed to:

Mr. Frank Hernandez  
EOTT Energy Pipeline, LP  
P.O. Box 1660  
Midland, Texas 79703

Sincerely,

Pat McCasland  
EPI Technical Services Manager

cc: Frank Hernandez, EOTT Energy Pipeline, LP (w/enclosure)  
Cutty Cunningham, Enron Transportation Services (w/enclosure)  
Sherry Miller, EPI President  
Ben Miller, EPI Vice President and General Manager  
File



# EOTT ENERGY PIPELINE, LP

*1RP 79  
10/7/03*

## SITE INVESTIGATION, REMEDIATION, AND FINAL C-141 CLOSURE DOCUMENTATION

PEARL VALLEY ROAD SITE  
EOTT REF: #TNM-LF-2000-29  
*UL-L NW<sup>1/4</sup> OF THE SW<sup>1/4</sup> OF SECTION 4 T19S R35E*  
~20 MILES WEST OF HOBBS

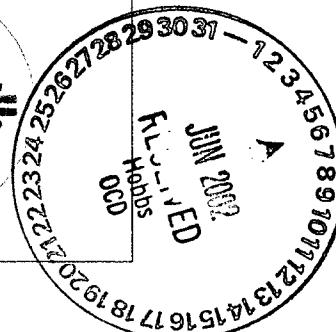
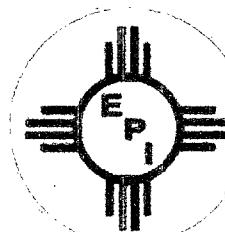
LEA COUNTY, NEW MEXICO  
LATITUDE: 32°41'12"N      LONGITUDE: 103°28'12"W

JUNE 05, 2002

PREPARED BY:

*Environmental Plus, Inc.*

2100 Avenue O  
P.O. Box 1558  
Eunice, NM 88231  
Phone: (505)394-3481  
FAX: (505)394-2601



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## Executive Summary

Environmental Plus, Inc. (EPI) was notified by EOTT Energy Corporation (EOTT) in early August-2001 regarding the completion of a remediation project at EOTT's "Pearl Valley Road" 4-inch gathering site. EOTT's Incident Report (03-30-00) and Environmental Impact Report (07-26-00) indicate that the spill occurred on 03-30-00 with the release of ~20 bbl of sweet crude oil. No recovery amount is indicated. The leak was due to internal/external corrosion. Interim repairs were made on the 4-inch line by clamping, with eventual replacement of the line.

The initial site characterization and remedial work at the site was done by Allstate Services, Midland, TX during the period April-2000 to September-2000. EOTT's "Pearl Valley Road" site is located 7/10 of a mile south of NM-529 on CR46 (Pearl Valley Road). The spill-affected area is on property owned by the State of New Mexico and leased to the Caudle Ranch.

At the time of EPI's assumption of the project, the site consisted of an approximate 8-ft excavation in the immediate area of the Point of Release (POR) and a 1 to 2-ft excavation along an approximate 300-ft long spill flow path extending to the south from the POR. Excavated spoils materials had been placed immediately east of the POR area of the site.

EPI re-evaluated the vertical extent of contamination at the site on Aug-07-01 by taking composite soil samples from the lower extents of the POR excavation and the flow path excavation. Results of these analyses indicated that BTEX and Benzene were below detectable levels; however, TPH was as high as 3870 ppm at the POR and approximately 2780 ppm along the flow path. The POR was excavated an additional 2-ft (down to 10-ft), and the flow path was further excavated 1 to 2-ft. Both areas were sampled again on Aug-21-01, with results indicating TPH levels below 1000 ppm within the POR area and a composite TPH level of 1530 ppm along the flow path area. An additional 6 to 8-inches of material was removed from the flow path area to ensure a <1000 ppm TPH level in this area (confirmed by VOC values of <100 ppm).

On-site blending of the spoils materials was accomplished during the period Sept-01 to Jan-02. Adequate attenuation of the spoils material was confirmed with a composite sample of the blended material on Jan-23-02. BTEX constituents were basically undetectable and TPH was measured at ~340 ppm.

The excavated areas were backfilled with the attenuated spoils materials, and the area was contoured and reseeded.

## 1.0 Introduction

This report addresses the site investigation and remediation of the EOTT Energy Pipeline "Pearl Valley Road" 4-inch gathering remediation site. Environmental Plus, Inc. (EPI), Eunice, New Mexico was not involved with preliminary site investigation and/or initial remedial activities at the site. EPI was contracted in early August-2001 by EOTT to re-evaluate the vertical contamination extent at the site, further excavate the site if necessary, and backfill the excavation with blended spoils materials. The excavated spoils material was blended on-site with clean soil to achieve attenuated CoC levels that met or exceeded NMOCD remedial standards.

## 2.0 Background

The site is associated with the EOTT Energy Pipeline – Pearl Valley Road 4" crude oil gathering pipeline servicing the Nadel-Gussman tank battery north of the release site. This site is located in Unit Letter L, in the NW $\frac{1}{4}$  of the SW $\frac{1}{4}$  of Section 4 T19S R35E, approximately 0.7 miles south of the intersection of County Road 46 (Pearl Valley Road) and NM-529 (this intersection is 5-miles west of the intersection of NM-529 and US62-180). The site is approximately 15 miles west of Hobbs, Lea County New Mexico at

Latitude 32°41'12"N and Longitude 103°28'12"W. The property is owned by the State of New Mexico. A topographical map of the site and a detailed site map are included in Attachment I.

The crude oil release occurred on September 8, 1999 with an estimated 15 barrels released, and 8 barrels recovered. The leak was the result of pipe corrosion. The pipe was initially clamped and eventually replaced by EOTT.

## **3.0 Site Description**

### ***3.1 Geological Description***

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico," A. Nicholson and A. Clebsch, 1961, describes the near surface geology of southern Lea County as an intergrade of the Quaternary Alluvium (QA) sediments, i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche and generally overlain by sandy soil. The release site is located at the northern extent of the Laguna Valley physiographic subdivision, described by Nicholson & Clebsch as an area "covered almost entirely by dune sand which is stable or semi-stable over most of the area, but which locally drifts. The surface is very irregular and has no drainage features except at the edges of several playas. The sand is generally underlain by recent alluvium but in several places the sand forms topographic highs where it is underlain by a caliche surface. The thickness of the sand cover ranges from a few inches to a probable maximum of 20-feet.

### ***3.2 Ecological Description***

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of hummocky sand hills covered with Harvard Shin Oak (*Querqus harvardi*) interspersed with Honey Mesquite (*Prosopis glandulosa*) along with typical desert grasses and weeds. Mammals represented, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and the Mule Deer. Reptiles, Amphibians, and Birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

### ***3.3 Area Ground Water***

The unconfined ground water aquifer at this site is estimated to be 70-80'bgs. The site is located in the northern extent of the Laguna Valley physiographic area several hundred feet south of the Mescalero Ridge feature. The Mescalero Ridge is the distinctive divider between the High Plains area to the north and the Laguna Valley area to the south. Recorded depth to ground water in these two areas differs dramatically. Typically, depth to ground water on the elevated High Plains area is in the range 20-40'bgs, whereas, depth to ground water in the Laguna Valley area is generally in the range 80-300'bgs. The pertinent section of the "Ground Water Map of Southern Lea County", an adjunct to "United States Geological Survey (USGS) Ground Water Report 6, 1961, A. Nicholson and A. Clebsch" is included in Attachment I. Ground water gradient in this area is generally to the southeast.

### ***3.4 Area Water Wells***

All recorded wells are greater than 1000 horizontal feet from the site.

### ***3.5 Area Surface Water Features***

No surface water bodies exist within 1000 horizontal feet of the site.

## 4.0 NMOCD Site Ranking

Documentation provided by EOTT to EPI regarding contaminant delineation and remedial work done at this site prior to EPI's involvement with the project, and EPI's subsequent re-evaluation of the vertical extent of contamination at the site, indicate that the chemical parameters of the soil and ground water were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the New Mexico Oil Conservation Division (NMOCD) approved "**General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July 2000**" and the NMOCD guidelines published in the following documents:

- ◆ **Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)**
- ◆ **Unlined Surface Impoundment Closure Guidelines (February 1993)**

Acceptable thresholds for **contaminants/constituents of concern** (CoCs), i.e., TPH<sup>8015m</sup>, Benzene, and the mass sum of Benzene, Toluene, Ethyl Benzene, and total Xylene (BTEX), was determined based on the NMOCD Ranking Criteria as follows:

- ◆ Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water.
- ◆ Wellhead Protection Area, i.e., distance from fresh water supply wells.
- ◆ Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.

Based on the proximity of the site to protectable area water wells, surface water bodies, and depth to ground water from the lower most contamination, the NMOCD ranking score for the site is 10 points with the soil remedial goals highlighted in the Site Ranking Matrix presented below.

1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water
Depth to GW <50 feet: <b>20 points</b>	If <1000' from water source, or, <200' from private domestic water source: <b>20 points</b>	<200 horizontal feet: <b>20 points</b>
Depth to GW 50 to 99 feet: <b>10 points</b>		200-1000 horizontal feet: <b>10 points</b>
Depth to GW >100 feet: <b>0 points</b>	If >1000' from water source, or, >200' from private domestic water source: <b>0 points</b>	>1000 horizontal feet: <b>0 points</b>
<i>Ground Water Score=10</i>	<i>Wellhead Protection Area Score= 0</i>	<i>Surface Water Score= 0</i>
<i>Site Rank (1+2+3) = 10 + 0 + 0 = 10 points (for soil 0-35'bgs)</i>		

### Total Site Ranking Score and Acceptable Remedial Goal Concentrations

Parameter	20+ (soil 20 - 70' bgs)	10 (soil 0 - 20'bgs)	0
Benzene <sup>1</sup>	10 ppm	<b>10 ppm</b>	10 ppm
BTEX <sup>1</sup>	50 ppm	<b>50 ppm</b>	50 ppm
TPH	100 ppm	<b>1000 ppm</b>	5000 ppm

<sup>1</sup>100 ppm field VOC headspace measurement may be substituted for lab analysis

## **5.0 Subsurface Soil Investigation**

Subsurface soil analysis was accomplished with VOC analysis of bottom-hole, side-wall and flow path areas of the project utilizing Photo-Ionization Detection technology. Composite soil samples taken from the bottom-hole and side-wall sections of the POR excavation area and the generalized flow path area were submitted for laboratory analysis for TPH and BTEX.

Laboratory analytical reports and a summary table of all EPI analytical results are provided in Attachment II. Laboratory analytical reports for soil samples submitted by Allstate Services are condensed into tabular format in Attachment II, and are provided as background information only. Due to the discrepancy between EPI's soil analyses and Allstate's analyses, only copies of EPI's laboratory reports are included in this report. Copies of Allstate Services' laboratory reports are available to NMOCD or EOTT personnel upon request.

## **6.0 Ground Water Investigation**

Ground water depth is conservatively estimated to be 70-80' bgs at the site. The site was excavated to a maximum depth of 10-feet, and was backfilled with blended and attenuated backfill material. Final CoC levels of the blended backfill material were measured at: TPH – 343 ppm; Benzene - 0.025 ppm; BTEX - 0.155 ppm. There will be no need for further ground water investigation.

## **7.0 Remediation**

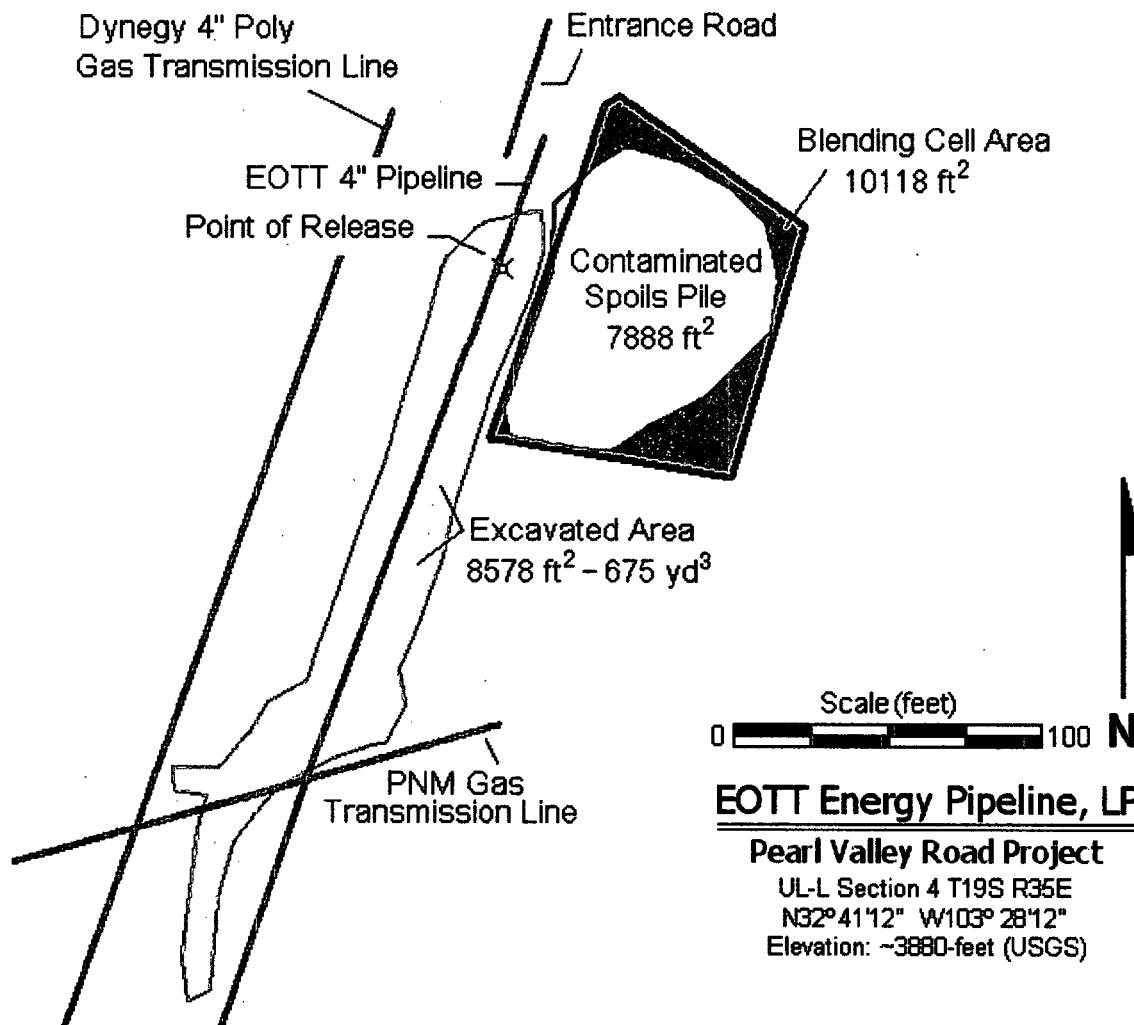
Remediation of the site consisted of additional excavation of the area immediate to the point of release (POR), and of the generalized area of the spill flow path to the south of the POR. Excavated areas were sampled to confirm adequate removal of contaminated soils. All contaminated spoils materials were blended on-site to achieve CoC attenuation levels consistent with NMOCD remedial goals. The site was backfilled, contoured and re-seeded.

## **8.0 Closure Justification**

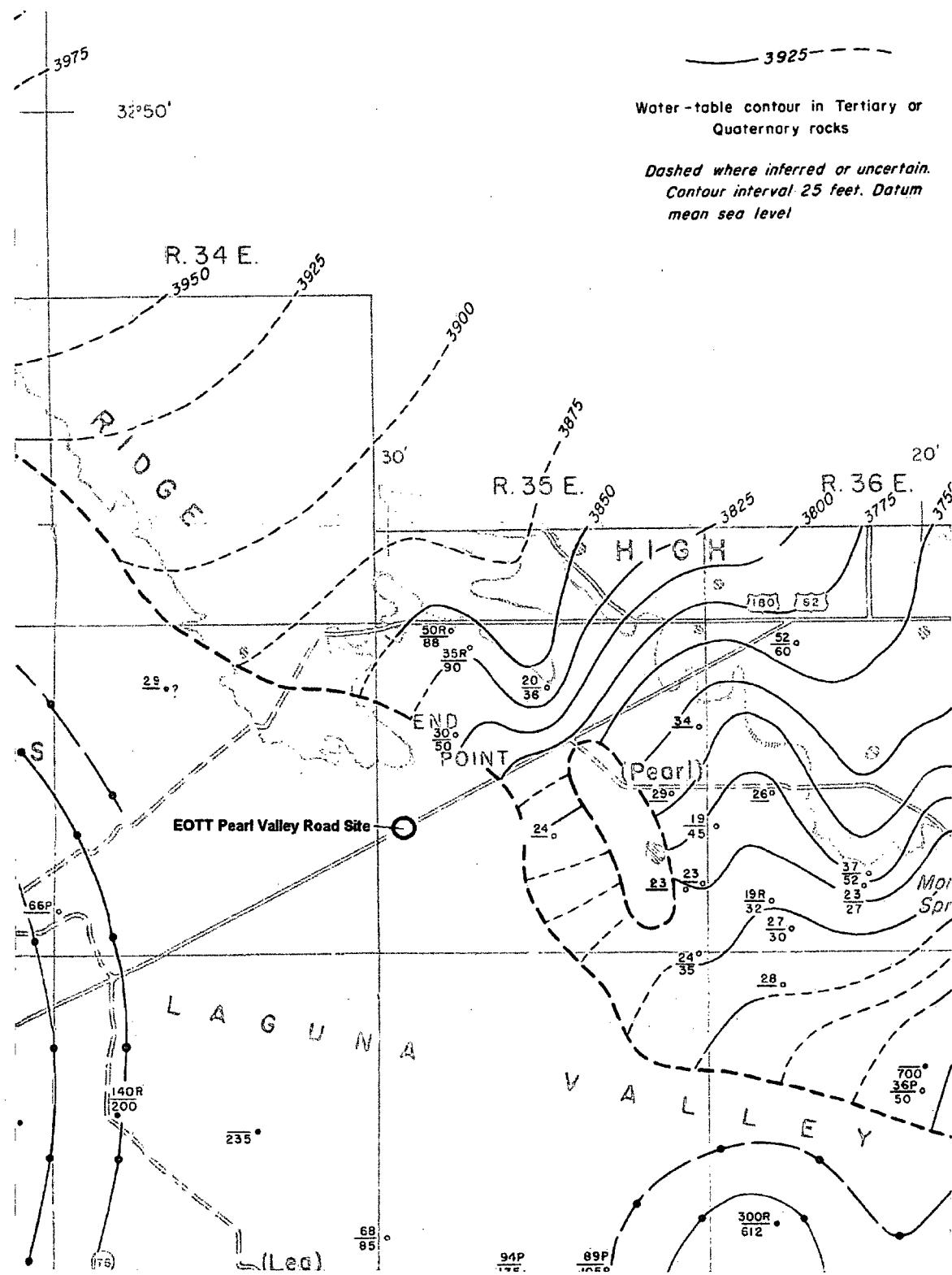
This report documents successful implementation of the Remediation Plan approved by NMOCD and is consistent with the NMOCD approved "E.O.T.T. General Work Plan for Remediation of E.O.T.T. Pipeline Spills, Leaks and Releases in New Mexico, July - 2000". Soil contaminated above acceptable CoC remedial concentrations was excavated and blended on-site to achieve CoC attenuation levels adequate to enable the use of the spoils as backfill material. The excavation was backfilled with said materials, properly contoured and reseeded with natural grasses. Based on the data presented in this report, Environmental Plus, Inc., on behalf of E.O.T.T. Energy Pipeline, requests that the NMOCD require "no further action" at this site.

**Attachment I: Site and Topographic Maps**

**Site Map: with site features (GPS Demarcation)**



## Nicholson & Clebsch Ground Water Map of Lea County (1961)



**Attachment II: Laboratory Analytical Reports and Summaries**

## Tabular Summary of Analytical Data (Allstate Environmental & EPI)

E.O.T.T. Energy Pipeline

### Soil Contamination Data Summary - Allstate Environmental (4/17/00 to 6/14/00)

Site ID	Date	Interval	SAMPLE ID	GRO mg/Kg	DRO mg/Kg	TPH <sup>1</sup> mg/Kg	BTEX <sup>2</sup> mg/Kg	Benzene <sup>3</sup> mg/Kg	Toluene mg/Kg	Ethyl Benzene	m,p-Xylene mg/Kg	o-Xylene mg/Kg
Background	4/17/00	1-ft	Background 100' NW	10	10	20	0.820	0.100	0.379	0.100	0.141	0.100
Flow Path - B	4/17/00	3-ft	B1-3'	10	22	32	0.890	0.100	0.325	0.100	0.201	0.164
Flow Path - C	4/17/00	2-ft	C1-2'	10	120	130	1.234	0.100	0.348	0.140	0.479	0.167
Flow Path - D	4/17/00	8"-10"	D1-8"	10	10	20	0.857	0.100	0.239	0.100	0.301	0.117
Flow Path - E	4/17/00	8"-10"	E1	349	1730	2079	15.090	0.100	1.690	2.800	7.370	3.130
Flow Path - F	4/17/00	8"-10"	F1	10	56	68	0.706	0.100	0.288	0.100	0.118	0.100
Leak Origin	4/17/00	8"-10"	A1- 8"-10"	20461	33743	54204	1248.040	51.940	379.300	196.100	418.500	202.200
Leak Origin	4/17/00	3-ft	A1-3'	18182	27421	45803	938.280	52.980	314.400	121.900	331.900	117.500
Leak Origin	4/17/00	7-ft	A1-7'	74	705	779	2.511	0.100	0.983	0.197	0.876	0.355
Leak Origin	4/19/00	8-ft	A1A-8'	241	2080	2301	7.970	0.100	1.330	1.020	3.900	1.620
Flow Path - C	4/19/00	3-ft	C1A-3'	10	1355	1365	1.128	0.100	0.235	0.100	0.460	0.213
Flow Path - E	4/19/00	2-ft	E1A-2'	10	228	238	0.607	0.100	0.153	0.100	0.154	0.100
Perimeter	4/19/00	1-ft	Per 1E	10	10	20	0.991	0.100	0.375	0.100	0.316	0.100
Perimeter	4/19/00	1-ft	Per 1W	10	14	24	0.591	0.100	0.145	0.100	0.146	0.100
Perimeter	4/19/00	1-ft	Per 2E	10	10	20	0.831	0.100	0.271	0.100	0.260	0.100
Perimeter	4/19/00	1-ft	Per 2W	10	10	20	0.543	0.100	0.100	0.100	0.143	0.100
Perimeter	4/19/00	1-ft	Per 3E	10	10	20	0.624	0.100	0.115	0.100	0.206	0.103
Perimeter	4/19/00	1-ft	Per 3W	10	10	20	0.554	0.100	0.105	0.100	0.149	0.100
Perimeter	4/19/00	1-ft	Per 4S	10	10	20	0.500	0.100	0.100	0.100	0.100	0.100
Flow Path - A	6/14/00	2-ft	Sec A-1	10	52	62	14.160	0.100	1.830	2.010	7.060	3.160
Flow Path - B	6/14/00	2-ft	Sec B-1	879	3470	4349	25.810	0.100	3.930	3.890	12.800	5.090
Flow Path - C	6/14/00	2-ft	Sec C-1	822	12559	13381	8.728	0.100	0.608	1.220	4.080	2.720
Flow Path - D	6/14/00	2-ft	Sec D-1	49	406	455	1.470	0.100	0.136	0.100	0.709	0.425
Leak Origin	6/14/00	8.5-ft	POO-1 BH	10	34	44	0.563	0.100	0.163	0.100	0.100	0.100
Leak Origin	6/14/00	8-ft	POO-1 EW	10	60	70	0.500	0.100	0.100	0.100	0.100	0.100
Leak Origin	6/14/00	8-ft	POO-1 NW	10	69	79	0.644	0.100	0.132	0.100	0.212	0.100
Leak Origin	6/14/00	8-ft	POO-1 SW	62	58	120	2.152	0.100	0.154	0.224	1.190	0.484
Leak Origin	6/14/00	8-ft	POO-1 WW	10	52	62	0.514	0.100	0.114	0.100	0.100	0.100

<sup>1</sup> TPH=GRO + DRO

<sup>2</sup> BTEX=Sum of Benzene, Toluene, Ethyl Benzene, Xylenes (50 ppm limit)

<sup>3</sup> Benzene allowable limit = 10 ppm

Red values are below instrument detection levels and are calculated as de-minimus values

**BOLD** values are above NMOCD allowable limits based on site matrix

**Soil Contamination Data Summary - Allstate Environmental (6/21/00 to 9/19/00)**

Site ID	Date	Interval	SAMPLE ID	GRO mg/Kg	DRO mg/Kg	TPH <sup>1</sup> mg/Kg	BTEX <sup>2</sup> mg/Kg	Benzene <sup>3</sup> mg/Kg	Toluene mg/Kg	Ethyl Benzene	m,p-Xylene mg/Kg	o-Xylene mg/Kg
Flow Path - B	6/21/00	2-ft	B2	10	2349	2359	0.500	0.100	0.100	0.100	0.100	0.100
Flow Path - C	6/21/00	2-ft	C2	10	14	24	0.500	0.100	0.100	0.100	0.100	0.100
Leak Origin	6/21/00	8.5-ft	POO-02 BH	10	64	74	0.500	0.100	0.100	0.100	0.100	0.100
Leak Origin	6/21/00	8-ft	POO-02 EW	10	10	20	0.500	0.100	0.100	0.100	0.100	0.100
Leak Origin	6/21/00	8-ft	POO-02 NW	10	10	20	0.500	0.100	0.100	0.100	0.100	0.100
Leak Origin	6/21/00	8-ft	POO-02 SW	10	10	20	0.500	0.100	0.100	0.100	0.100	0.100
Leak Origin	6/21/00	8-ft	POO-02 WV	10	10	20	0.500	0.100	0.100	0.100	0.100	0.100
Spoils Pile	6/21/00	Composite	PIN	802	5756	6558	29.470	0.100	5.430	1.440	11.900	10.600
Spoils Pile	6/21/00	Composite	PIS	406	3737	4143	18.037	0.100	2.840	0.897	7.100	7.100
Flow Path - B	6/28/00	3-ft	B3	10	849	859						
Spoils Pile	7/7/00	Composite	PNB	418	2889	3407						
Spoils Pile	7/7/00	Composite	PSB	350	2593	2943						
Spoils Pile	8/21/00	Composite	Soil Pile Comp S	52	1910	1962	1.200	0.025	0.214	0.123	0.462	0.376
Spoils Pile	8/21/00	Composite	Soil Pile Comp N	82	2187	2289	0.899	0.025	0.144	0.078	0.281	0.371
Spoils Pile	9/19/00	East	Soil Pile East	81	1192	1273	2.816	0.025	0.025	0.268	0.858	1.640
Spoils Pile	9/19/00	West	Soil Pile West	173	3100	3273	3.191	0.025	0.025	0.281	1.380	1.480

<sup>1</sup> TPH=GRO + DRO<sup>2</sup> BTEX=sum of Benzene, Toluene, Ethyl Benzene, Xylenes (50 ppm limit)<sup>3</sup> Benzene allowable limit = 10 ppm

Red values are below instrument detection levels and are calculated as de-minimus values

BOLD values are above NMOCD allowable limits based on site matrix

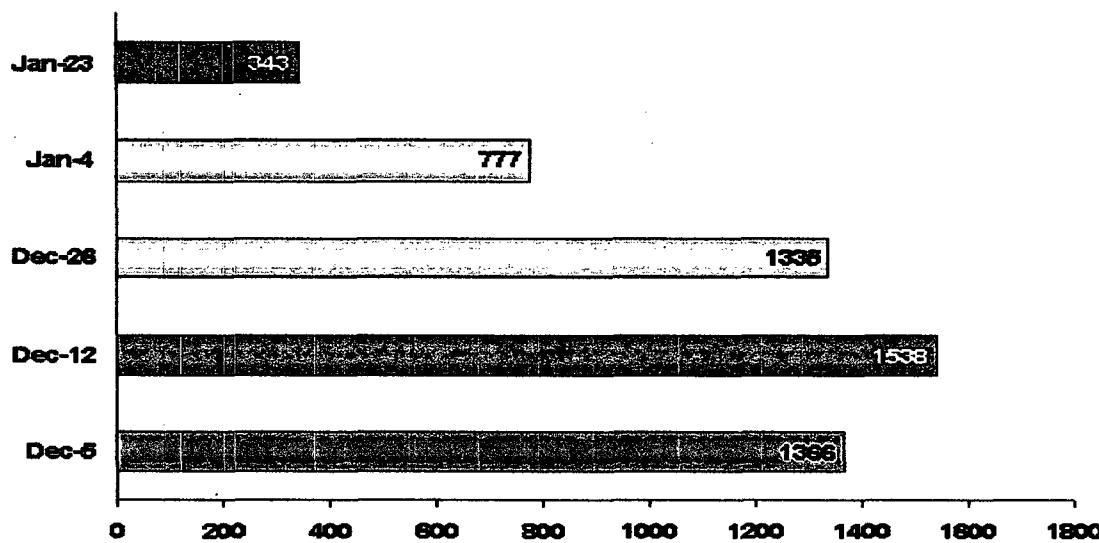
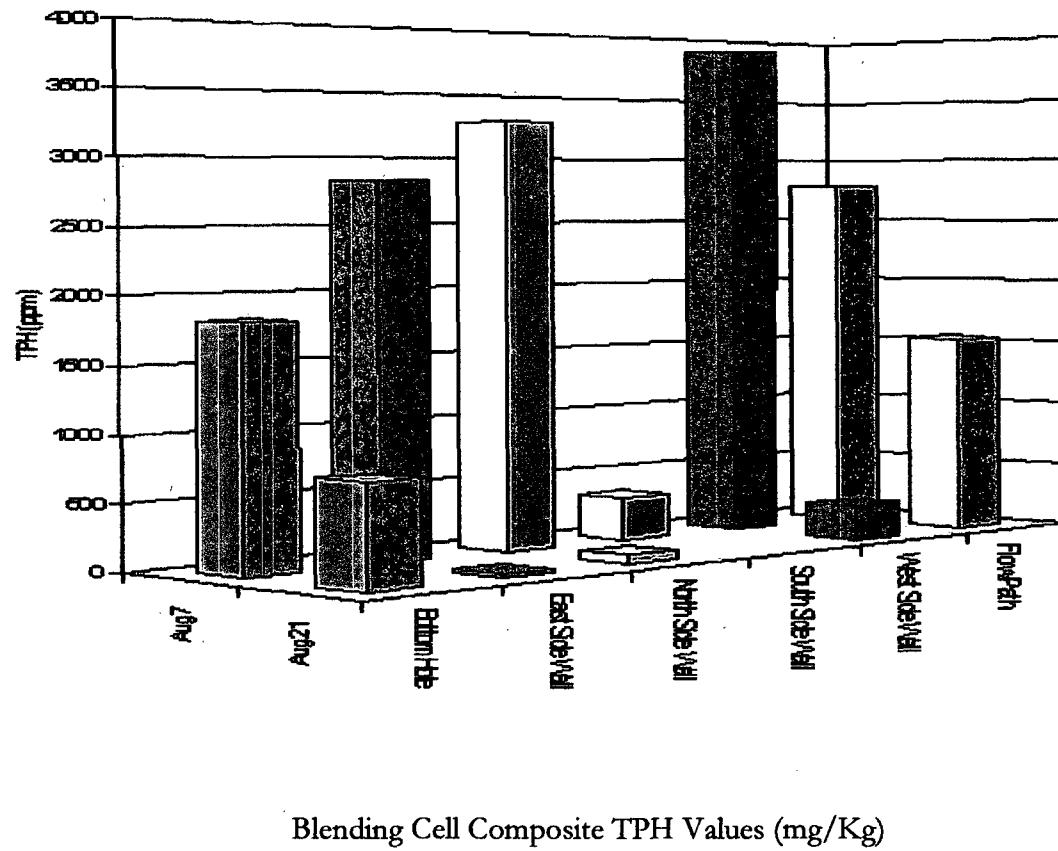
EOTT Energy Pipeline, LP - Pearl Valley Road Site												
Soil Contamination Data Summary - Environmental Plus, Inc. (8/7/01 to 1/23/02)												
Site ID	Date	Interval	SAMPLE ID	GRO mg/Kg	DRO mg/Kg	TPH <sup>1</sup> mg/Kg	BTEX <sup>2</sup> mg/Kg	Benzene <sup>3</sup> mg/Kg	Toluene mg/Kg	Ethyl Benzene	m,p-Xylene mg/Kg	o-Xylene mg/Kg
Leak Origin	8/7/01	8.5-ft	PVR8701BHC	10	1810	1820	0.125	0.025	0.025	0.025	0.025	0.025
Leak Origin	8/7/01	8-ft	PVR8701ESWC	50	2780	2830	0.125	0.025	0.025	0.025	0.025	0.025
Leak Origin	8/7/01	8-ft	PVR8701NSWC	50	3220	3270	0.125	0.025	0.025	0.025	0.025	0.025
Leak Origin	8/7/01	8-ft	PVR8701SSWC	10	327	337	0.125	0.025	0.025	0.025	0.025	0.025
Leak Origin	8/7/01	8-ft	PVR8701WSWC	50	3820	3870	0.125	0.025	0.025	0.025	0.025	0.025
Flow Path	8/7/01	Composite	PVR8701FPC	50	2730	2780	0.125	0.025	0.025	0.025	0.025	0.025
Spoils Pile	8/7/01	Composite	PVR8701SPC	50	3280	3330	0.125	0.025	0.025	0.025	0.025	0.025
Leak Origin	8/21/01	10-ft	PVR82101BHC	48	708	756	0.125	0.025	0.025	0.025	0.025	0.025
Leak Origin	8/21/01	10-ft	PVR82101WSWC	10	249	259	0.125	0.025	0.025	0.025	0.025	0.025
Leak Origin	8/21/01	10-ft	PVR82101ESC	10	10	20	0.125	0.025	0.025	0.025	0.025	0.025
Leak Origin	8/21/01	10-ft	PVR82101NSWC	10	55	65	0.125	0.025	0.025	0.025	0.025	0.025
Flow Path	8/21/01	Composite	PVR82101FPC	10	1830	1840	0.125	0.025	0.025	0.025	0.025	0.025
Blending Cell	12/5/01	Composite	SEPV120501NEC	50	865	915	0.138	0.025	0.028	0.025	0.037	0.025
Blending Cell	12/5/01	Composite	SEPV120501SEC	50	1380	1430	0.125	0.025	0.025	0.025	0.025	0.025
Blending Cell	12/5/01	Composite	SEPV120501NWC	50	1800	1850	0.125	0.025	0.025	0.025	0.025	0.025
Blending Cell	12/5/01	Composite	SEPV120501SWC	50	1220	1270	0.138	0.025	0.025	0.025	0.036	0.025
Blending Cell	12/15/01	Composite	SEPV121501INE	50	1390	1440	0.204	0.025	0.047	0.057	0.050	0.025
Blending Cell	12/15/01	Composite	SEPV121501SE	50	1400	1450	0.143	0.025	0.033	0.032	0.028	0.025
Blending Cell	12/15/01	Composite	SEPV121501NW	50	1470	1520	0.126	0.025	0.026	0.025	0.025	0.025
Blending Cell	12/15/01	Composite	SEPV121501SW	50	1690	1740	0.125	0.025	0.025	0.025	0.025	0.025
Blending Cell	12/26/01	Composite	SEPV122601NEQ	50	1210	1260	0.190	0.025	0.034	0.025	0.081	0.025
Blending Cell	12/26/01	Composite	SEPV122601SEQ	50	1280	1330	0.136	0.025	0.036	0.025	0.025	0.025
Blending Cell	12/26/01	Composite	SEPV122601NWQ	50	1360	1410	0.158	0.025	0.043	0.025	0.040	0.025
Blending Cell	12/26/01	Composite	SEPV122601SWQ	50	1290	1340	0.130	0.025	0.030	0.025	0.025	0.025
Blending Cell	1/4/02	Composite	SEPV1402NEQ	10	547	557	0.125	0.025	0.025	0.025	0.025	0.025
Blending Cell	1/4/02	Composite	SEPV1402SEQ	10	633	643	0.125	0.025	0.025	0.025	0.025	0.025
Blending Cell	1/4/02	Composite	SEPV1402NWQ	10	1120	1130	0.125	0.025	0.025	0.025	0.025	0.025
Blending Cell	1/4/02	Composite	SEPV1402SWQ	10	768	778	0.125	0.025	0.025	0.025	0.025	0.025
Blending Cell	1/23/02	Composite	SEPV12302BCC	10	333	343	0.155	0.025	0.025	0.025	0.055	0.025

<sup>1</sup> TPH=GRO + DRO<sup>2</sup> BTEX=sum of Benzene, Toluene, Ethyl Benzene, Xylenes (50 ppm limit)<sup>3</sup> Benzene allowable limit = 10 ppm

Red values are below instrument detection levels and are calculated as de-minimus values

BOLD values are above NMOCD allowable limits based on site matrix

### Chart - 8/7 & 8/21/01 TPH Analyses of Excavation and Flow Path



**Lab Analyses and Chain-of-Custody Forms**  
**(EPI submittals: August-2001 thru January-2002)**

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENRON TRANSPORTATION SERVICES  
 ATTN: MR. FRANK HERNANDEZ  
 5805 EAST HIGHWAY 80  
 MIDLAND, TEXAS 79701  
 FAX: 682-2781  
 FAX: 505-392-2946  
 FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
 Sample Condition: Intact/ Iced/ -2.0 deg C  
 Project #: TNM-LF-2000-29  
 Project Name: Pearl Valley Road  
 Project Location: SW1/4 Sec 4 T19S R35E

Sampling Date: 08/07/01  
 Receiving Date: 08/08/01  
 Analysis Date: 08/08/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0101299-01	PVR8701BHC	<10	1810
0101299-02	PVR8701ESWC	<50	2780
0101299-03	PVR8701WSWC	<50	3820
0101299-04	PVR8701NSWC	<50	3220
0101299-05	PVR8701SSWC	<10	327
0101299-06	PVR8701SPC	<50	3280
0101299-07	PVR8701FPC	<50	2730

QUALITY CONTROL	488	534
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	98	107
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	327
SPIKE	549	880
SPIKE DUP	503	846
% EXTRACTION ACCURACY	106	109
BLANK	<10	<10
RPD	9	4

Methods: EPA SW 846-8015M GRO/DRO

Roland K. Tuttle  
 Roland K. Tuttle

8-10-01  
 Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENRON TRANSPORTATION SERVICES  
 ATTN: MR. FRANK HERNANDEZ  
 5805 EAST HIGHWAY 80  
 MIDLAND, TEXAS 79701  
 FAX: 682-2781  
 FAX: 505-392-2946  
 FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
 Sample Condition: Intact/ Iced/ -2.0 deg C  
 Project #: TNM-LF-2000-29  
 Project Name: Pearl Valley Road  
 Project Location: SW 1/4 Sec 4 T19S R35E

Sampling Date: 08/07/01  
 Receiving Date: 08/08/01  
 Analysis Date: 08/08/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	<i>o</i> -XYLENE mg/kg
0101299-01	PVR8701BHC	<0.025	<0.025	<0.025	<0.025	<0.025
0101299-02	PVR8701ESWC	<0.025	<0.025	<0.025	<0.025	<0.025
0101299-03	PVR8701WSWC	<0.025	<0.025	<0.025	<0.025	<0.025
0101299-04	PVR8701NSWC	<0.025	<0.025	<0.025	<0.025	<0.025
0101299-05	PVR8701SSWC	<0.025	<0.025	<0.025	<0.025	<0.025
0101299-06	PVR8701SPC	<0.025	<0.025	<0.025	<0.025	<0.025
0101299-07	PVR8701FPC	<0.025	<0.025	<0.025	<0.025	<0.025

QUALITY CONTROL	0.089	0.089	0.092	0.176	0.091
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% INSTRUMENT ACCURACY	89	89	92	88	91
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.025	<0.025	<0.025	0.026	<0.025
SPIKE	0.088	0.089	0.090	0.174	0.090
SPIKE DUP	0.085	0.087	0.088	0.170	0.087
% EXTRACTION ACCURACY	88	89	90	87	90
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	3	2	2	2	3

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle  
 Raland K. Tuttle

8-10-01  
 Date

# **Environmental Lab of Texas, Inc.**

**2800 West I-20 East  
Midland, Texas 79703**

**Phone: 915-563-1800**  
**Fax: 915-563-1713**

**CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST**

Project Manager: FRANK FERNANDEZ  
Company Name ENRON TRANSPORTATION SERVICES / EORT  
Company Address: 5805 East Highway 80  
City/State/Zip: Midland, TEXAS 79701  
Telephone No: 915-638-3799 Fax No: 915-392-2946  
Sampler Signature: Bob McCall

Project Name: Pearl Valley Road  
Project #: TMN-LF-2021-29  
Project Loc: SW 1/4 Sec 4 T19S R35E  
PO #:

**Special Instructions:** C of C requested

FOX Results to Project Manager + P.M. McCasland (E.P.I.)

#### **SOURCE DOCUMENTS**

#### **Testimony Upon Reconviction**

#### **LAW & CIVIC SOVEREIGNTY**

Relinquished by: Roger Boone Date 8-8 Time 10:49 Received by: Roger Boone Date 8-8

Date 8-3 Time 10:4

Relinquished by: [REDACTED] Date: [REDACTED] Time: [REDACTED] Received by ELOT: [REDACTED] Date: [REDACTED]

Date \_\_\_\_\_ Time \_\_\_\_\_

# ENVIRONMENTAL LAB OF INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY  
ATTN: MR. WAYNE BRUNETTE  
P.O. BOX 1660  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat McCasland)

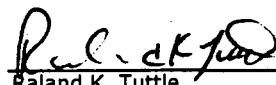
Sample Type: Soil  
Sample Condition: Intact/ Iced/ 4.0 deg C  
Project #: LF-2000-29  
Project Name: Pearl Valley Road  
Project Location: None Given

Sampling Date: 08/21/01  
Receiving Date: 08/23/01  
Analysis Date: 08/23/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0101403-01	PVR82101FPC	<10	1530
0101403-02	PVR82101BHC	48	708
0101403-03	PVR82101WSWC	<10	249
0101403-04	PVR82101ESWC	<10	<10
0101403-05	PVR82101NSWC	<10	55

QUALITY CONTROL		
TRUE VALUE	518	551
% INSTRUMENT ACCURACY	500	500
SPIKED AMOUNT	104	110
ORIGINAL SAMPLE	476	476
SPIKE	<10	<10
SPIKE DUP	518	472
% EXTRACTION ACCURACY	538	493
BLANK	109	99
RPD	<10	<10
	4	4

Methods: SW 846-8015M

  
Roland K. Tuttle

8-24-01.  
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY  
 ATTN: MR. WAYNE BRUNETTE  
 P.O. BOX 1660  
 MIDLAND, TEXAS 79701  
 FAX: 684-3456  
 FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
 Sample Condition: Intact/ Iced/ 4.0 C  
 Project #: LF-2000-29  
 Project Name: Pearl Valley Road  
 Project Location: None Given

Sampling Date: 08/21/01  
 Receiving Date: 08/23/01  
 Analysis Date: 08/23/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0101403-01	PVR82101FPC	<0.025	<0.025	<0.025	<0.025	<0.025
0101403-02	PVR82101BHC	<0.025	<0.025	<0.025	<0.025	<0.025
0101403-03	PVR82101WSWC	<0.025	<0.025	<0.025	<0.025	<0.025
0101403-04	PVR82101ESWC	<0.025	<0.025	<0.025	<0.025	<0.025
0101403-05	PVR82101NSWC	<0.025	<0.025	<0.025	<0.025	<0.025
QUALITY CONTROL		0.089	0.089	0.090	0.177	0.088
TRUE VALUE		0.100	0.100	0.100	0.200	0.100
% INSTRUMENT ACCURACY		89	89	90	89	88
SPIKE AMOUNT		0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE		<0.025	<0.025	<0.025	<0.025	<0.025
SPIKE		0.108	0.108	0.109	0.213	0.108
SPIKE DUP		0.105	0.106	0.107	0.209	0.107
% EXTRACTION ACCURACY		105	106	107	105	107
BLANK		<0.025	<0.025	<0.025	<0.025	<0.025
RPD		3	2	2	2	1

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle  
 Raland K. Tuttle

8-24-01  
 Date



# **ENVIRONMENTAL LAB OF , INC.**

**"Don't Treat Your Soil Like Dirt!"**

EOTT  
ATTN: FRANK HERNANDEZ  
5805 E. HIGHWAY 80  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
Sample Condition: Intact/Iced/ -1.0 deg C  
Project Name: Pearl Valley  
Project #: None Given  
Project Location: None Given  
PO#: LF-2000-29

Sampling Date: 12/05/01  
Receiving Date: 12/07/01  
Analysis Date: 12/13/01

Methods: EPA SW 846-8015M GRO/DRQ

Celey D. Keene  
Celey D. Keene  
Raland K. Tuttle

12/14/05

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT  
 ATTN: FRANK HERNANDEZ  
 5805 E. HIGHWAY 80  
 MIDLAND, TEXAS 79701  
 FAX: 684-3456  
 FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
 Sample Condition: Intact/ Iced/ -1.0 deg C  
 Project Name: Pearl Valley  
 Project #: None Given  
 Project Location: None Given  
 PO#: LF-2000-29

Sampling Date: 12/05/01  
 Receiving Date: 12/07/01  
 Analysis Date: 12/10/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	<i>o</i> -XYLENE mg/kg	TPH mg/kg
0102179-01	SEPV120501NEC	<0.025	0.026	<0.025	0.037	<0.025	3660
0102179-02	SEPV120501SEC	<0.025	<0.025	<0.025	<0.025	<0.025	4690
0102179-03	SEPV120501NWC	<0.025	<0.025	<0.025	<0.025	<0.025	7170
0102179-04	SEPV120501SWC	<0.025	0.025	<0.025	0.036	<0.025	4050

QUALITY CONTROL	0.102	0.105	0.111	0.230	0.115	490
TRUE VALUE	0.100	0.100	0.100	0.200	0.100	509
% IA	102	105	111	115	115	96
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100	255
ORIGINAL SAMPLE	<0.025	<0.025	<0.025	<0.025	<0.025	29
SPIKE	0.104	0.112	0.112	0.232	0.112	283
SPIKE DUP	0.104	0.112	0.112	0.230	0.113	279
%EA	104	112	112	115	113	100
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025	<10
RPD	0.00	0.00	0.00	0.86	0.89	1.42

METHODS: EPA SW 846-8021B ,5030, EPA 418.1

Raland K. Tuttle  
 Celey D. Keene  
 Raland K. Tuttle

12-13-01  
 Date

## Project Manager

Frank Hernandez

### Company Name

EOTI

**Company Address**

**Project Name:**

# Pearl Valley

Project

## Project 1

PC

LF-2000-29

**City/State/Zip**

Fax No

### 2. Finger Signature

Roger Boone

LAB # (lab use only)	FIELD CODE
0102179-01	SEPV120501NEC
02	SEPV120501SEC
03	SEPV120501 NWC
04	SEPV120501 SWC

**Special instructions**

~~FAX TO PHILCASTLAND EPI SOS 394-2601~~

Sample Containers Intact?  
Temperature Upon Receipt  
Laboratory Comments:

Y

#### **Belgium Test**

Roger Boone

Date | Time  
12-07 | 1:00

Received by  
Mark C

12-07 1:0

Rec -1°C

卷之三

*Matt* *C.*

Recorded by ELOF

\*Add 801SM as per Pat 12-13-01 @ 1100  
Needs By 12/14 AM

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT  
ATTN: FRANK HERNANDEZ  
5805 E. HIGHWAY 80  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
Sample Condition: Intact/ Iced/ -1 deg C  
Project Name: Pearl Valley  
Project #: None Given  
Project Location: None Given  
PO#: LF-2000-29

Sampling Date: 12/15/01  
Receiving Date: 12/17/01  
Analysis Date: 12/17/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0102232-01	SEPV121501NE	<50	1390
0102232-02	SEPV121501SE	<50	1400
0102232-03	SEPV121501NW	<50	1470
0102232-04	SEPV121501SW	<50	1690

QUALITY CONTROL	518	537
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	104	107
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	441	489
SPIKE DUP	484	552
% EXTRACTION ACCURACY	93	103
BLANK	<10	<10
RPD	9.3	12.1

Methods: EPA SW 846-8015M GRO/DRO

  
Raland K. Tuttle

12-18-01  
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT  
 ATTN: FRANK HERNANDEZ  
 5805 E. HIGHWAY 80  
 MIDLAND, TEXAS 79701  
 FAX: 684-3456  
 FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
 Sample Condition: Intact/ Iced/ -1 deg C  
 Project Name: Pearl Valley  
 Project #: None Given  
 Project Location: None Given  
 PO#: LF-2000-29

Sampling Date: 12/15/01  
 Receiving Date: 12/17/01  
 Analysis Date: 12/17/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0102232-01	SEPV121501NE	<0.025	0.047	0.057	0.050	<0.025
0102232-02	SEPV121501SE	<0.025	0.033	0.032	0.028	<0.025
C102232-03	SEPV121501NW	<0.025	0.026	<0.025	<0.025	<0.025
0102232-04	SEPV121501SW	<0.025	<0.025	<0.025	<0.025	<0.025

QUALITY CONTROL	0.090	0.096	0.101	0.214	0.104
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% IA	90	96	101	107	104
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.025	0.034	0.031	0.027	<0.025
SPIKE	0.068	0.076	0.080	0.172	0.081
SPIKE DUP	0.086	0.094	0.101	0.215	0.103
%EA	86	93	100	107	103
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	2.25	1.05	2.00	2.84	9.00

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle  
 Raland K. Tuttle

12-18-01  
 Date

## **Environmental Database Team, Inc.**

12600 West I-20 East  
Odessa Texas 79763

**Phone:** 915-563-1800  
**Fax:** 915-563-1713

Project Manager: FRANK HERNANDEZ

**Company Name:** EOTT ENERGY PIPELINE

**Company Address:** 5805 E. HIGHWAY 80

**City/State/Zip:** MIDLAND TX 79701

Telephone No: 915-556-0190

Sampler Signature: Roger Brown

Project Name: Pearl Valley

**Project #:** \_\_\_\_\_

**Project Loc:** \_\_\_\_\_

PO#: LF - 2000 - 29

## **Special Instructions**

**FAX RESULTS TO PAT MCCASLAND ASAP**

RUSH

Sample Containers Int: Y N  
Temperature Upon Request -1C  
Laboratory Comments:

Relinquished: Bonnie Date 12-12

Time Received by \_\_\_\_\_ Date \_\_\_\_\_

For more information about the study, please contact Dr. Michael J. Kupferschmidt at (415) 502-2555 or via email at [kupferschmidt@ucsf.edu](mailto:kupferschmidt@ucsf.edu).

Relinquished	Date
Mate C.	12-17

Time	Received by:	Date
1:40	DAB	12-17-

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY PIPELINE  
ATTN: FRANK HERNANDEZ  
5805 E. HWY. 80  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
Sample Condition: Intact/ Iced/ -0.5 deg C  
Project Name: Pearl Valley  
Project #: None Given  
Project Location: None Given  
PO#: LF-2000-29

Sampling Date: 12/26/01  
Receiving Date: 12/27/01  
Analysis Date: 12/27/01

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0102291-01	SEPV122601NWQ	<50	1360
0102291-02	SEPV122601NEQ	<50	1210
0102291-03	SEPV122601SEQ	<50	1280
0102291-04	SEPV122601SWQ	<50	1290

QUALITY CONTROL	463	454
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	93	91
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	<10
SPIKE	477	526
SPIKE DUP	459	521
% EXTRACTION ACCURACY	100	110
BLANK	<10	<10
RPD	3.85	0.96

Methods: SW 846-8015M

Raland K. Tuttle  
Celey D. Keene  
Raland K. Tuttle

12-29-01

Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY PIPELINE  
 ATTN: FRANK HERNANDEZ  
 5805 E. HWY. 80  
 MIDLAND, TEXAS 79701  
 FAX: 684-3456  
 FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
 Sample Condition: Intact/ Iced/ -0.5 deg C  
 Project Name: Pearl Valley  
 Project #: None Given  
 Project Location: None Given  
 PO#: LF-2000-29

Sampling Date: 12/26/01  
 Receiving Date: 12/27/01  
 Analysis Date: 12/27/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	<i>o</i> -XYLENE mg/kg
0102291-01	SEPV122601NWQ	<0.025	0.043	<0.025	0.040	<0.025
0102291-02	SEPV122601NEQ	<0.025	0.034	<0.025	0.081	<0.025

QUALITY CONTROL	0.106	0.112	0.113	0.228	0.11
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% IA	106	112	113	114	110
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.025	<0.025	<0.025	<0.025	<0.025
SPIKE	0.115	0.115	0.111	0.230	0.114
SPIKE DUP	0.109	0.108	0.108	0.222	0.106
%EA	109	108	108	111	106
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	5.36	6.28	2.74	3.54	7.27

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle  
 Celey D. Keene  
 Raland K. Tuttle

12-31-01  
 Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

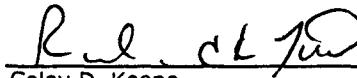
EOTT ENERGY PIPELINE  
ATTN: FRANK HERNANDEZ  
5805 E. HWY. 80  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
Sample Condition: Intact/ Iced/ -0.5 deg C  
Project Name: Pearl Valley  
Project #: None Given  
Project Location: None Given  
PO#: LF-2000-29

Sampling Date: 12/26/01  
Receiving Date: 12/27/01  
Analysis Date: 12/28/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0102291-03	SEPV122601SEQ	<0.025	0.036	<0.025	<0.025	<0.025
QUALITY CONTROL		0.109	0.115	0.109	0.228	0.114
TRUE VALUE		0.100	0.100	0.100	0.200	0.100
% IA		109	115	109	114	114
SPIKED AMOUNT		0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE		<0.025	0.047	<0.025	0.094	<0.025
SPIKE		0.108	0.112	0.112	0.235	0.112
SPIKE DUP		0.114	0.116	0.115	0.233	0.111
%EA		114	114	115	114	111
BLANK		<0.025	<0.025	<0.025	<0.025	<0.025
RPD		5.40	3.57	2.64	1.74	0.90

METHODS: EPA SW 846-8021B ,5030

  
Celey D. Keene  
Raland K. Tuttle

12-31-01  
Date

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY PIPELINE  
ATTN: FRANK HERNANDEZ  
5805 E. HWY. 80  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
Sample Condition: Intact/ Iced/ -0.5 deg C  
Project Name: Pearl Valley  
Project #: None Given  
Project Location: None Given  
PO#: LF-2000-29

Sampling Date: 12/26/01  
Receiving Date: 12/27/01  
Analysis Date: 12/31/01

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0102291-04	SEPV122601SWQ	<0.025	0.030	<0.025	<0.025	<0.025

QUALITY CONTROL	0.112	0.112	0.114	0.231	0.112
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% IA	112	112	114	115	112
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.025	0.050	0.038	0.099	<0.025
SPIKE	0.109	0.100	0.115	0.232	0.113
SPIKE DUP	0.110	0.115	0.121	0.246	0.117
%EA	109	108	114	114	113
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	0.00	0.00	5.13	5.96	3.48

METHODS: EPA SW 846-8021B ,5030

R. Keene  
Celey D. Keene  
Raland K. Tuttle

12-31-01  
Date

**Environmental Lab of Texas, Inc.**

12600 West I-20 East  
Odessa Texas 79763

**Phone:** 915-563-1800  
**Fax:** 915-563-1713

Project Manager: FRANK HERNANDEZ

**Company Name:** EOTT ENERGY PIPELINE

**Company Address:** 5805 E. HIGHWAY 80

City/State/Zip: MIDLAND TX 79701

Telephone No: 915-556-0190

Sampler Signature: Chuck Notes

Project Name: Pearl Valley

**Project #:** \_\_\_\_\_

**Project Loc:** \_\_\_\_\_

PO#: LF-2000-29

**Special Instructions**

**FAX RESULTS TO PAT MCCASLAND**

Relinquished:	Date	Time	Received by:
Cherry Hill	12-27	7:00	Brennan

Relinquished: <i>Ben Miller</i>	Date 12-27	Time 10:20 AM	Received by: <i>Jeanne McNamee</i>
------------------------------------	---------------	------------------	---------------------------------------

Sample Containers Int'l Y N  
Temperature Upon Request -0.5 °C  
Laboratory Comments:

Temperature Upon Request -0.5 °C

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY PIPELINE  
ATTN: FRANK HERNANDEZ  
5805 E. HIGHWAY 80  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat McCasland)

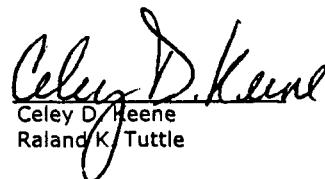
Sample Type: Soil  
Sample Condition: Intact/ Iced/ -1.5 deg C  
Project Name: EOTT Pearl Valley  
Project #: None Given  
Project Location: None Given  
PO#: LF 2000-29

Sampling Date: 01/04/02  
Receiving Date: 01/07/02  
Analysis Date: 01/08/02

ELT #	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0202350-01	SEPV1402SEQ	<10	633
0202350-02	SEPV1402SWQ	<10	768
0202350-03	SEPV1402NWQ	<10	1120
0202350-04	SEPV1402NEQ	<10	547

QUALITY CONTROL	553	527
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	111	105
SPIKED AMOUNT	476	476
ORIGINAL SAMPLE	<10	150
SPIKE	566	540
SPIKE DUP	549	605
% EXTRACTION ACCURACY	115	96
BLANK	<10	<10
RPD	3.05	10.8

Methods: SW 846-8015M

  
Celey D. Keene  
Raland K. Tuttle

  
Date  
01/11/02

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY PIPELINE  
ATTN: FRANK HERNANDEZ  
5805 E. HWY. 80  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat Mc Casland)

Sample Type: Soil  
Sample Condition: Intact/ Iced/ -1.5 deg C  
Project Name: EOTT Pearl Valley  
Project #: None Given  
Project Location: None Given  
PO#: LF 2000-29

Sampling Date: 01/04/02  
Receiving Date: 01/07/02  
Analysis Date: 01/09/02

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
0202350-01	SEPV1402SEQ	<0.025	<0.025	<0.025	<0.025	<0.025
0202350-02	SEPV1402SWQ	<0.025	<0.025	<0.025	<0.025	<0.025
0202350-03	SEPV1402NWQ	<0.025	<0.025	<0.025	<0.025	<0.025
0202350-04	SEPV1402NEQ	<0.025	<0.025	<0.025	<0.025	<0.025

QUALITY CONTROL	0.110	0.108	0.102	0.218	0.104
TRUE VALUE	0.100	0.100	0.100	0.200	0.100
% IA	110	108	102	109	104
SPIKED AMOUNT	0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE	<0.025	<0.025	<0.025	<0.025	<0.025
SPIKE	0.112	0.114	0.111	0.224	0.109
SPIKE DUP	0.114	0.107	0.109	0.222	0.110
%EA	112	114	111	112	109
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025
RPD	1.77	6.33	1.82	0.90	0.91

METHODS: EPA SW 846-8021B ,5030

Cefey D. Keene  
Raland K. Tuttle

01/11/02  
Date

12600 West I-20 East  
Odessa Texas 79763

Phone: 915-563-1800  
Fax: 915-563-1713

Project Manager: FRANK HERNANDEZ

Company Name: EOTT ENERGY PIPELINE

Company Address: 5805 E. HIGHWAY 80

City/State/Zip: MIDLAND TX 79701

Telephone No: 915-556-0190

Sampler Signature: Roger Boose

Project Name: EOTT Pearl Valley

Project #: PO#1F2000-29

Project Loc:

Sample ID	Description	Date Sampled	Time Sampled	No. of Containers	ICE	HNO	HCl	NaOH	HSO	None	Other (Specify)	Analyze For							RUSH TAT	Standard TAT
												TCLP	TOTAL	TDS/CL/USAR/EC	TPH 418.1	TPH TX 1005/1006	TPH 8015M/GRODRD	Metals	Volatiles	Semivolatiles
0235001	SEPV1402 SEQ	1-4-02	3:40	1	X														X	
02	SEPV1402 SWQ	1-4-02	3:50	1	X														X	
03	SEPV1402 NWQ	1-4-02	3:55	1	X														X	
04	SEPV1402 NEQ	1-4-02	3:55	1	X														X	

Special Instructions

FAX RESULTS TO PAT MCCASLAND ASAP

Sample Containers Intact N

Temperature Upon Request

Laboratory Comments: -1.5°C

Relinquished: <i>Roger Boose</i>	Date 1-7-02	Time 7:04	Received by: <i>Bradley Klein</i>	Date 1-7-02	Time 7:06		
Relinquished: <i>Mate Gyr</i>	Date 1-7-02	Time 15:22	Received by: <i>Jane McMurry</i>	Date 1-7-2	Time 1522		

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY PIPELINE  
ATTN: FRANK HERNANDEZ  
5805 E. HIGHWAY 80  
MIDLAND, TEXAS 79701  
FAX: 684-3456  
FAX: 505-394-2601 (Pat McCasland)

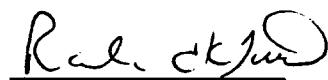
Sample Type: Soil  
Sample Condition: Intact/ Iced/ -3.5 deg C  
Project Name: Pearl Valley  
Project #: LF 2000-29  
Project Location: None Given  
PO#: Blending Cell Composite

Sampling Date: 01/23/02  
Receiving Date: 01/24/02  
Analysis Date: 01/24/02

ELT#	FIELD CODE	GRO C6-C10 mg/kg	DRO >C10-C28 mg/kg
0202464-01	SEPV12302BCC	<10	333

QUALITY CONTROL	531	542
TRUE VALUE	500	500
% INSTRUMENT ACCURACY	106	108
SPIKED AMOUNT	500	500
ORIGINAL SAMPLE	<10	<10
SPIKE	512	526
SPIKE DUP	490	524
% EXTRACTION ACCURACY	102	105
BLANK	<10	<10
RPD	4.39	0.38

Methods: SW 846-8015M

  
Celey D. Keene  
Raland K. Tuttle

Date

1-25-02

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

EOTT ENERGY PIPELINE  
 ATTN: FRANK HERNANDEZ  
 5805 E. HIGHWAY 80  
 MIDLAND, TEXAS 79701  
 FAX: 684-3456  
 FAX: 505-394-2601 (Pat McCasland)

Sample Type: Soil  
 Sample Condition: Intact/ Iced/ -3.5 deg. C  
 Project Name: Pearl Valley  
 Project #: LF 2000-29  
 Project Location: None Given  
 PO#: Blending Cell Composite

Sampling Date: 01/23/02  
 Receiving Date: 01/24/02  
 Analysis Date: 01/24/02

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	<i>o</i> -XYLENE mg/kg
0202464-01	SEPV12302BCC	<0.025	<0.025	<0.025	0.055	<0.025
QUALITY CONTROL		0.112	0.110	0.101	0.214	0.097
TRUE VALUE		0.100	0.100	0.100	0.200	0.100
% IA		112	110	101	107	97
SPIKED AMOUNT		0.100	0.100	0.100	0.200	0.100
ORIGINAL SAMPLE		<0.025	<0.025	<0.025	0.041	0.035
SPIKE		0.111	0.113	0.108	0.228	0.106
SPIKE DUP		0.112	0.114	0.109	0.229	0.106
%EA		111	113	108	113	105
BLANK		<0.025	<0.025	<0.025	<0.025	<0.025
RPD		0.90	0.88	0.92	0.44	0.00

METHODS: EPA SW 846-8021B ,5030

Raland K. Tuttle

Celey D. Keene  
 Raland K. Tuttle

1-25-02  
 Date

**Project Manager: FRANK HERNANDEZ**

**Company Name:** EOTT ENERGY PIPELINE

**Company Address: 5805 E. HIGHWAY 80**

**City/State/Zip:** MIDLAND TX 79701

**Telephone No:** 915-556-0190

Sampler Signature: Roger Boone

Project Name: Pearl Valley

Project #: LF-2000-2

Project Lo

PO#: Blending Cell Composite

**Special Instructions**

**FAX RESULTS TO PAT MCCASLAND ASAP**

Sample Containers Int'l N

Temperature Upon Request

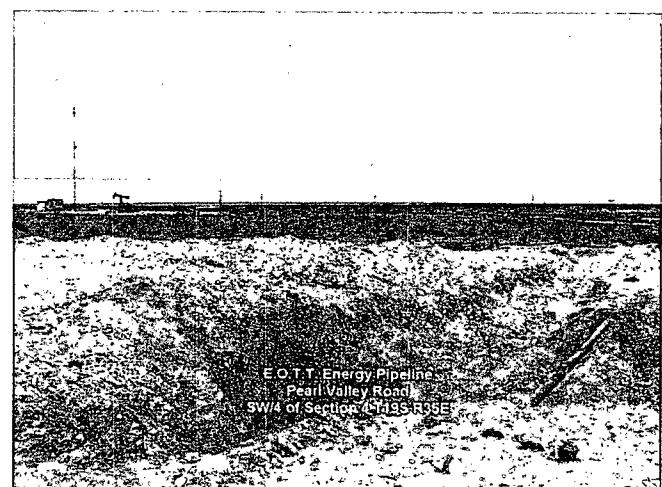
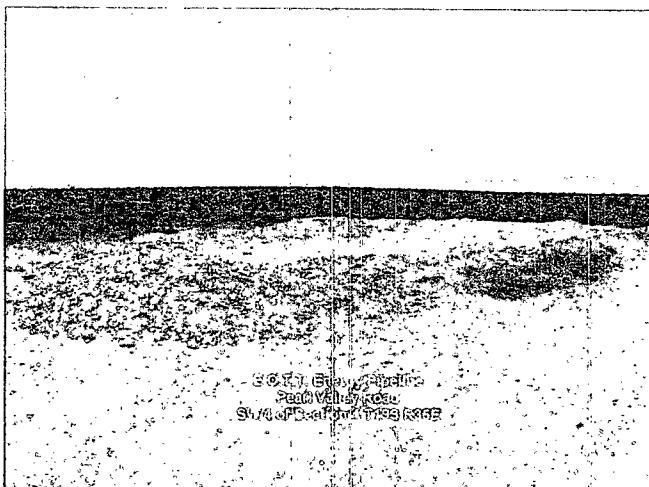
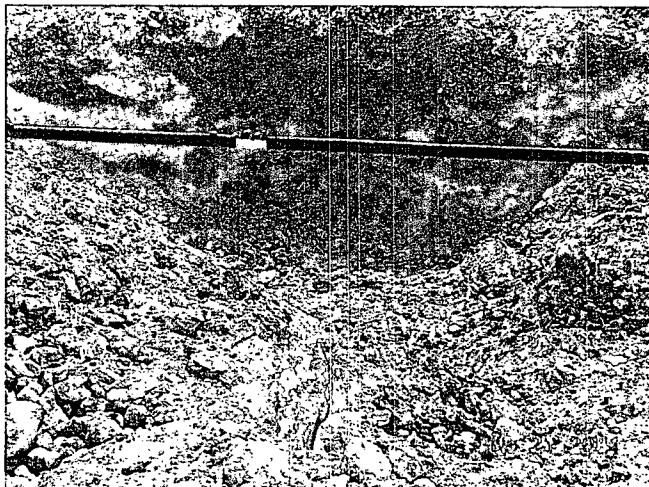
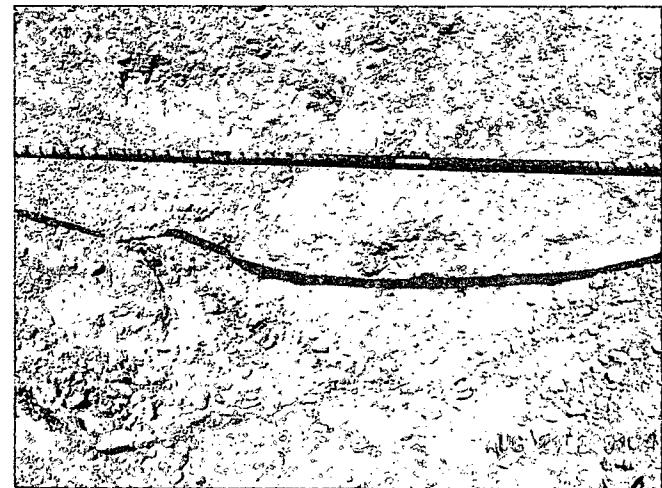
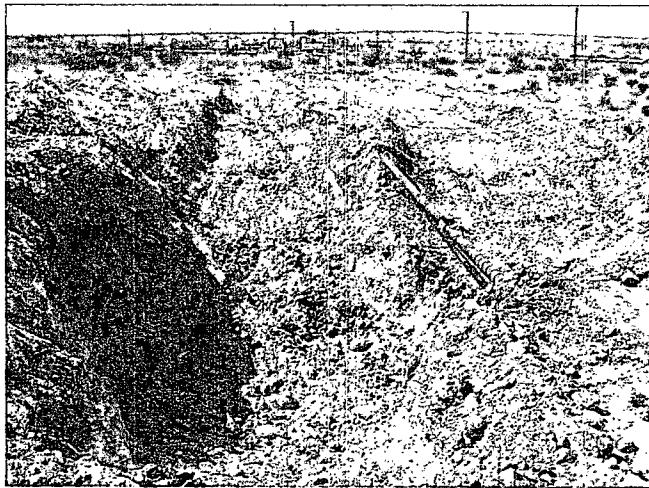
**Laboratory Comments:**

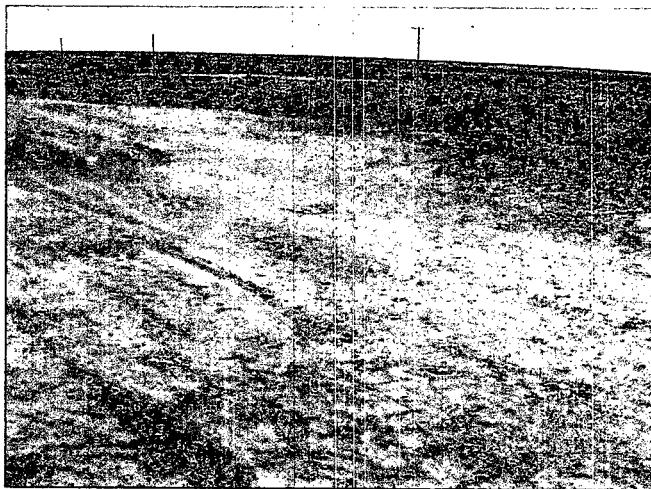
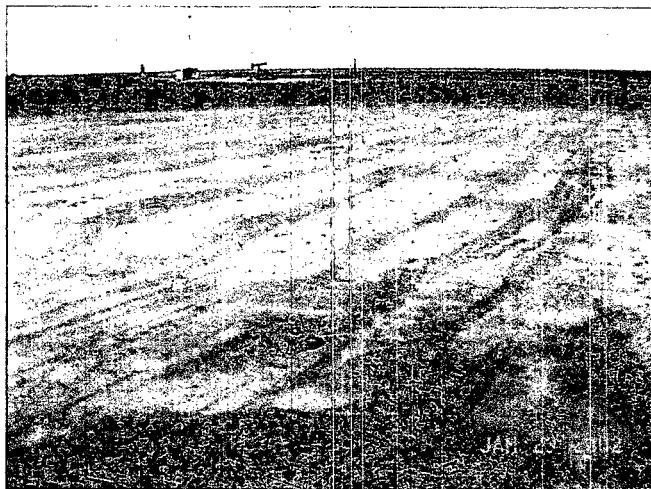
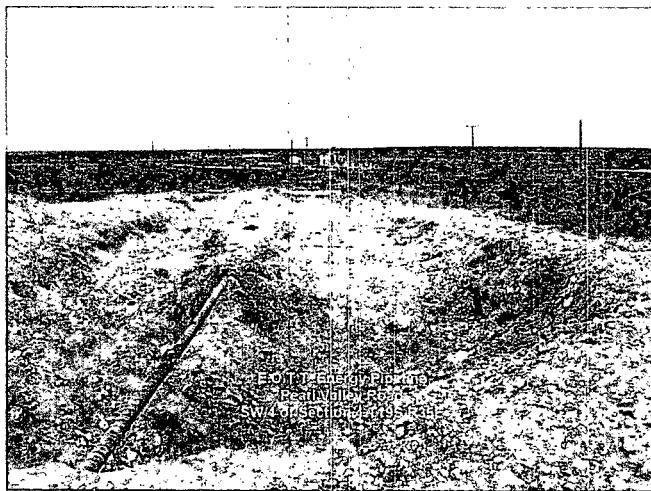
nts: -3.5°C

Relinquished: <u>Roger Boone</u>	Date 1-24-02	Time 0700am	Received by: <u>Ben Mether</u>
Relinquished: <u>Ben Mether</u>	Date 1-24-02	Time 10:00am	Received by: <u>Alay Kleen</u>

Date	Time
1-24-02	7:00AM
Date	Time
1/24/02	11:00

### Attachment III: Photographs





**Attachment IV: Regulatory and Summary Forms**

<b>Site Information and Metrics</b>					
SITE: Pearl Valley Road Site	Assigned Site Reference #: TNM-LF-2000-29				
Company: EOTT					
Company Street Address: 5805 E. Highway 80, Midland, Texas 79701					
Company Mailing Address: P.O. Box 1660					
Company City, State, Zip: Midland, Texas 79702					
Company Representative: Frank Hernandez					
Company Representative Telephone: 915.638.3799					
Company Telephone: 915.684.3451 Fax: 915.687.2713					
Fluid volume released (bbls) = 20 (0 recovered)					
>25 bbls : Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)					
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)					
Leak, Spill, or Pit (LSP) Name: Pearl Valley Road Site					
Source of contamination: Pipe Corrosion					
Land Owner, i.e., BLM, ST, Fee, Other: New Mexico State Land Office (Leased to Caudle Ranch)					
LSP Dimensions: affected area = ~318' NS x 40' EW (Linear Flow Path south from POR)					
LSP Area = ~8580 ft <sup>2</sup>					
Location of Reference Point (RP): Intersection of CR46 (Pearl Valley Road) and site access road					
Location distance and direction from RP: SE ~340-ft					
Latitude: 32° 41' 12N					
Longitude: 103° 28' 12W					
Elevation above mean sea level: ~ 3875' amsl					
Feet from South Section Line					
Feet from West Section Line					
Location- Unit or 1/4 = UL-L (or) SW 1/4 of NW 1/4 of SW 1/4					
Location- Section = 4					
Location- Township = T19S					
Location- Range = R35E					
Surface water body within 1000 ' radius of site: None					
Surface water body within 1000 ' radius of site					
Domestic water wells within 1000' radius of site: None					
Domestic water wells within 1000' radius of site					
Agricultural water wells within 1000' radius of site: None					
Agricultural water wells within 1000' radius of site					
Public water supply wells within 1000' radius of site: None					
Public water supply wells within 1000' radius of site					
Depth from land surface to ground water (DG): ~70-80-feet					
Depth of contamination (DC): 10-feet					
Depth to ground water (DG - DC = DtGW) 60-70-feet					
1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water Body			
If Depth to GW <50 feet: 20 points	If <1000' from water source, or; <200' from private domestic water source: 20 points	<200 horizontal feet: 20 points			
If Depth to GW 50 to 99 feet: 10 points		200-100 horizontal feet: 10 points			
If Depth to GW >100 feet: 0 points	If >1000' from water source, or; >200' from private domestic water source: 0 points	>1000 horizontal feet: 0 points			
Ground water Score = 10	Wellhead Protection Area Score= 0	Surface Water Score= 0			
Site Rank (1+2+3) = 10+0+0 = 10 points					
<b>Total Site Ranking Score and Acceptable Concentrations</b>					
Parameter	20 or >	10-19	0-9		
Benzene <sup>1</sup>	10 ppm	10 ppm	10 ppm		
BTEX <sup>1</sup>	50 ppm	50 ppm	50 ppm		
TPH	100 ppm	1000 ppm	5000 ppm		
'100 ppm field VOC headspace measurement may be substituted for lab analysis					

**Right of Entry Permit**

**NEW MEXICO STATE LAND OFFICE**  
**Ray B. Powell, Commissioner of Public Lands**  
**New Mexico State Land Office Building**  
**P.O. Box 1148, Santa Fe, NM 87504-1148**

**RIGHT OF ENTRY PERMIT**  
**CONTRACT NO. 602**

**1. RIGHT OF ENTRY PERMIT**

This permit is hereby issued under the authority established by Section 19-1-2 NMSA (1985). Therefore, and in consideration of and subject to the terms, covenants, conditions, agreements, obligations and reservations contained in the permit and all other existing rights, the Commissioner of Public Lands, New Mexico State Land Office, State of New Mexico, hereinafter called "COMMISSIONER," grants to EOTT Energy Pipeline c/o Environmental Plus, Inc. of Po Box 1558, Eunice, NM 88231 hereinafter called "PERMITTEE," authorized use of a specific tract(s) of state trust land described in this permit.

**2. TERM AND LAND DESCRIPTION**

Right of entry is granted for a term of 6 months November 9, 2001 to January 9, 2002 to the following state lands: SW4 of Section 04, Township 19 South, Range 35 East.

**3. FEE.**

\$500.00 (Five Hundred Dollars)

**4. PERMITTED USE**

Permitted use is for the purpose of: Excavate soil for remediation purposes, i.e., mechanically shred/aerateblend and possibly treat with MicroBlaze spill control to reduce vapor emissions and promote biological attenuation of the crude oil. The granting of this permit does not allow access across private lands.

**5. IMPROVEMENTS**

No improvements shall be placed on the premises without the prior written consent of the Commissioner.

**6. RESERVATIONS**

Commissioner reserves the right to execute permits on the land granted by this permit for mining purposes and for the extraction of oil, gas, salt, geothermal resources, and other mineral deposits therefrom and the right to go upon, explore for, mine, remove and sell same. Commissioner further reserves the right to sell or dispose of natural surface products of said lands and to grant such other right-of-way and easements as provided for by law.

**7. COMPLIANCE WITH LAWS**

Permittee shall at its own expense comply fully with and be subject to all regulations, rules, ordinances, and requirements of the Commissioner including, but not limited to the Cultural Properties Act, NMSA 1978 as amended. It is illegal for any person or his agent to appropriate, excavate, injure, or destroy any historic, or prehistoric ruin or monument, or any object of historical, archaeological, architectural, or scientific value situated on lands owned or controlled by the State Land Office without a valid permit issued by the Cultural Properties Review Committee and approved by the Commissioner of Public Lands.

## **8. HOLD HARMLESS**

Permittee shall have, save, and hold harmless, indemnify and defend Commissioner and the State of New Mexico, and their agent or agents, in their official and individual capacities, of and from any and all liability claims, losses, or damages arising out of or alleged to arise out of or indirectly connected with the operations of Permittee under this permit off or on the Commissioner' premises or arising out of the presence on the Commissioner's premises of any agent, contractor or subcontractor of Permittee.

## **9. AMENDMENT**

This permit shall not be altered, changed or amended except by an instrument in writing executed by Commissioner and Permittee.

## **10. WITHDRAWAL**

Commissioner reserves the right to withdraw any or all of the land authorized for use under this permit. If applicable, Permittee shall vacate the acreage specified within 30 days after receipt of written notification of withdrawal from the Commissioner.

## **11. CANCELLATION**

The violation by Permittee of any of the terms, conditions or covenants of this permit or the nonpayment by Permittee of the fees due under this permit shall at the option of the Commissioner be considered a default and shall cause the cancellation of this permit 30 days after Permittee has been sent written notice of such.

## **12. PRESERVE AND PROTECT**

The Permittee agrees to preserve and protect the natural environmental conditions of the land encompassed in this permit, and to take those reclamation or corrective actions that are accepted soil and water conservation practices and that are deemed necessary by the Commissioner to protect the land from pollution, erosion, or other environmental degradation.

## **13. RECLAMATION**

The Permittee agrees to reclaim those areas that may be damaged by activities conducted thereon.

#### **14. SPECIAL INSTRUCTIONS AND OR RESTRICTIONS**

1. No off road traffic allowed
2. No wood collection or tree cutting allowed.
3. Disturbing, dislodging, damaging, defacing, destroying or removing historical archaeological, paleontological or cultural sites or artifacts is prohibited.
4. Disturbing, dislodging, damaging, defacing, destroying any improvement, fixture, item, object or thing placed or located in, under or upon the land is prohibited.
5. Entries to lands are limited to those State Lands with public access.
6. Any other activities not listed are not allowed unless prior written approval from the Commissioner of Public Lands is granted.

WITNESS the hands and seals of PERMITTEE and COMMISSIONER on the day and year first above written.

  
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**PERMITTEE**

Telephone: 505.344.3481

#### **ACKNOWLEDGMENT**

STATE OF NEW MEXICO )  
COUNTY OF Lea )  
                        )

The foregoing instrument was acknowledged before me this 19<sup>th</sup> day of  
November, 2001.

My Commission Expires: Aug 21, 2004

  
Linda Carol Cope  
NOTARY PUBLIC

  
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**COMMISSIONER OF PUBLIC LANDS**