

kei

IRP-210  
10.25.05

## CLOSURE REPORT

TEXAS - NEW MEXICO PIPE LINE COMPANY  
TNM-55-95  
SECTION 3, TOWNSHIP 22 SOUTH, RANGE 36 EAST  
LEA COUNTY, NEW MEXICO





5309 Wurzbach, Suite 100  
San Antonio, Texas 78238  
(210) 680-3767  
(210) 680-3763 FAX

## CLOSURE REPORT

**TEXAS - NEW MEXICO PIPE LINE COMPANY  
TNM-55-95  
SECTION 3, TOWNSHIP 22 SOUTH, RANGE 36 EAST  
LEA COUNTY, NEW MEXICO**

PREPARED FOR:

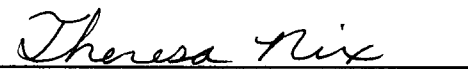
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
P. O. Box 1030  
Jal, New Mexico 88252


Mr. Tony Savoie

PREPARED BY:

**KEI**

  
\_\_\_\_\_  
Daryl Stacey  
Project Manager

  
\_\_\_\_\_  
Theresa Nix  
Project Manager

  
\_\_\_\_\_  
Pat Bullinger, P.E.

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## PURPOSE AND SCOPE

The Texas - New Mexico Pipe Line Company (TNMPL) alleged release site no. TNM-55-95 is located in Section 3, Township 22 South, Range 36 East as presented on FIG. 1. The objective of the site activities was to obtain closure based on New Mexico Oil Conservation Division (OCD) regulations. The following activities were performed to achieve this objective:

- determination of closure standards
- excavation and stockpiling of impacted soil
- characterization of removed impacted soil
- on-site blending and landfarming of impacted soil in the excavated area
- confirmation sampling in the excavation area

## CHRONOLOGY OF EVENTS

<u>09/27/95</u>	Release was discovered and reported to OCD. Approximately <u>134 barrels of crude</u> were released and <u>60 barrels were recovered</u> . Approximately <u>1500 square feet</u> of surface area was affected.
<b>09/28/95 through 10/11/95</b>	Allstate Services of Midland, Texas excavated the hydrocarbon impacted soils to an approximate depth of 15 to 18 feet below ground surface (bgs) and stockpiled the soils on plastic. Activities were stopped until the pipe could be cut out and removed for access to the soils under the pig trap.
<b>03/11/96 through 03/13/96</b>	Allstate resumed excavation activities under the pig trap. The stockpiled soils were blended with native soil from the surrounding area and sampled. The blended soils were used to backfill the excavation.
<b>07/26/96</b>	Three soil borings were advanced by KEI and samples were obtained from each boring.

## CLOSURE ACTIVITIES

### WATER WELL SURVEY

According to the Office of the State Engineer, New Mexico, no records for registered wells were available for Section 3, Township 22 South, Range 36 East. Six wells in the surrounding sections recorded water depths from 118 to 198 feet bgs. The water well records are presented in APPENDIX A.

### CLOSURE STANDARDS

The New Mexico OCD Guidelines for Remediation of Leaks, Spills, and Releases contains the standard criteria for remediation activities. A ranking analysis for the site was performed to determine appropriate soil remediation levels. The ranking analysis is as follows:

Depth to Ground Water	Greater Than 100 Feet	0 Points
Well Head Protection	Greater Than 1000 Feet to Water Source Greater Than 200 Feet to Private Water Source	0 Points
Surface Water Body	Greater Than 1000 Feet	0 Points
<b>Total Ranking Score</b>		<b>0 Points</b>

Based on the total ranking score, the closure objectives for this site for concentrations of benzene, BTEX, and TPH are summarized below.

CONSTITUENT	CLOSURE CONCENTRATIONS (mg/kg)
BENZENE	10
BTEX	50
TPH	5,000

#### EXCAVATION, BLENDING, AND BACKFILL

Impacted soils were excavated and stockpiled on plastic on-site by Allstate Services. Areas surrounding the pig trap and the leak area were excavated to depths varying from 15 to 18 feet bgs starting on September 28, 1995. Excavation activities were stopped on October 11, 1995, until the pipe could be removed for access to soils beneath the pig trap. On March 11, 1996, excavation activities were completed and the soils were subsequently blended with native soil from the surrounding area. The blended soil stockpile was sampled on March 12, 1996. The stockpile TPH concentration, after blending, was 1,070 ppm according to the Allstate Services report dated April 17, 1996. Approximately 2,870 cubic yards of blended soil was then used to backfill the excavation.

#### CONFIRMATION SAMPLING

Soil borings SB-1 through SB-3 were advanced on July 26, 1996, at selected locations in the previously excavated areas. The approximate locations of the soil borings are presented on FIG. 2. The borings were extended to depths ranging from 20 to 45 feet. Samples were collected on 5 foot intervals after the boring was drilled through the previously placed soils. A total of 7 soil samples were selected and submitted to Environmental Lab of Texas, Inc. for determination of TPH concentrations. TPH concentrations at the site ranged from below detection limits (ND) to 2,200 mg/kg. Analytical results from the soil samples are summarized in TABLE I. Soil laboratory reports and chain-of-custody documentation are presented as APPENDIX B. Logs indicating the typical subsurface soil profile, depths at which soil samples were obtained, head-space results, and analytical results are presented on FIGs. 3 and 4.

#### CLOSURE SUMMARY

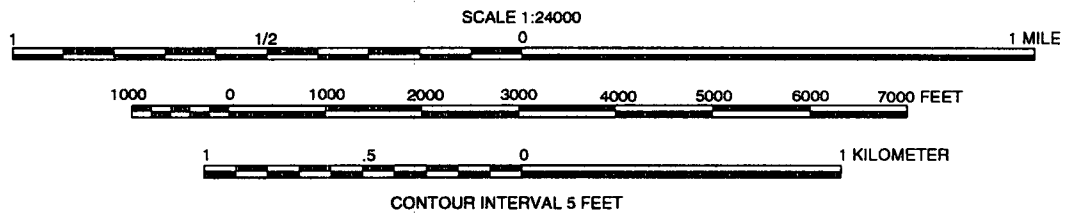
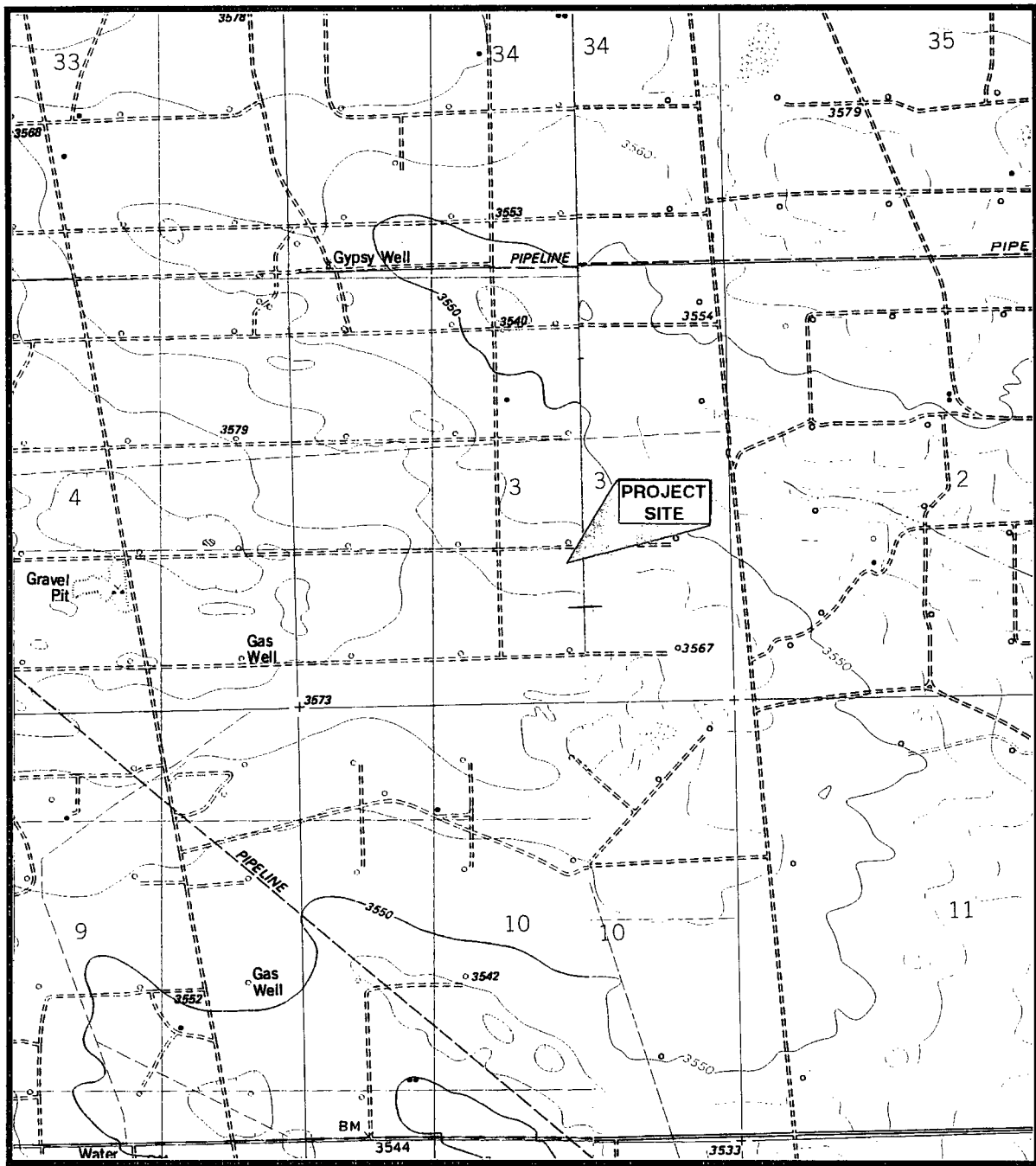
The following can be summarized from field and analytical results:

- Approximately <sup>3610'</sup>2,870 cubic yards of previously impacted soil were excavated, blended with native soils, and backfilled at the release site.

- Confirmation samples taken from soils beneath excavation indicated TPH concentrations below closure standards.

Based on the activities completed at the site and analytical results from selected soil samples, we request the site be closed under New Mexico Oil Conservation Division (OCD) regulations.

**OIL CENTER QUADRANGLE AND EUNICE QUADRANGLE  
NEW MEXICO  
PRINTED 1984**

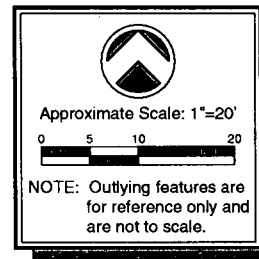


**SITE LOCATION MAP**

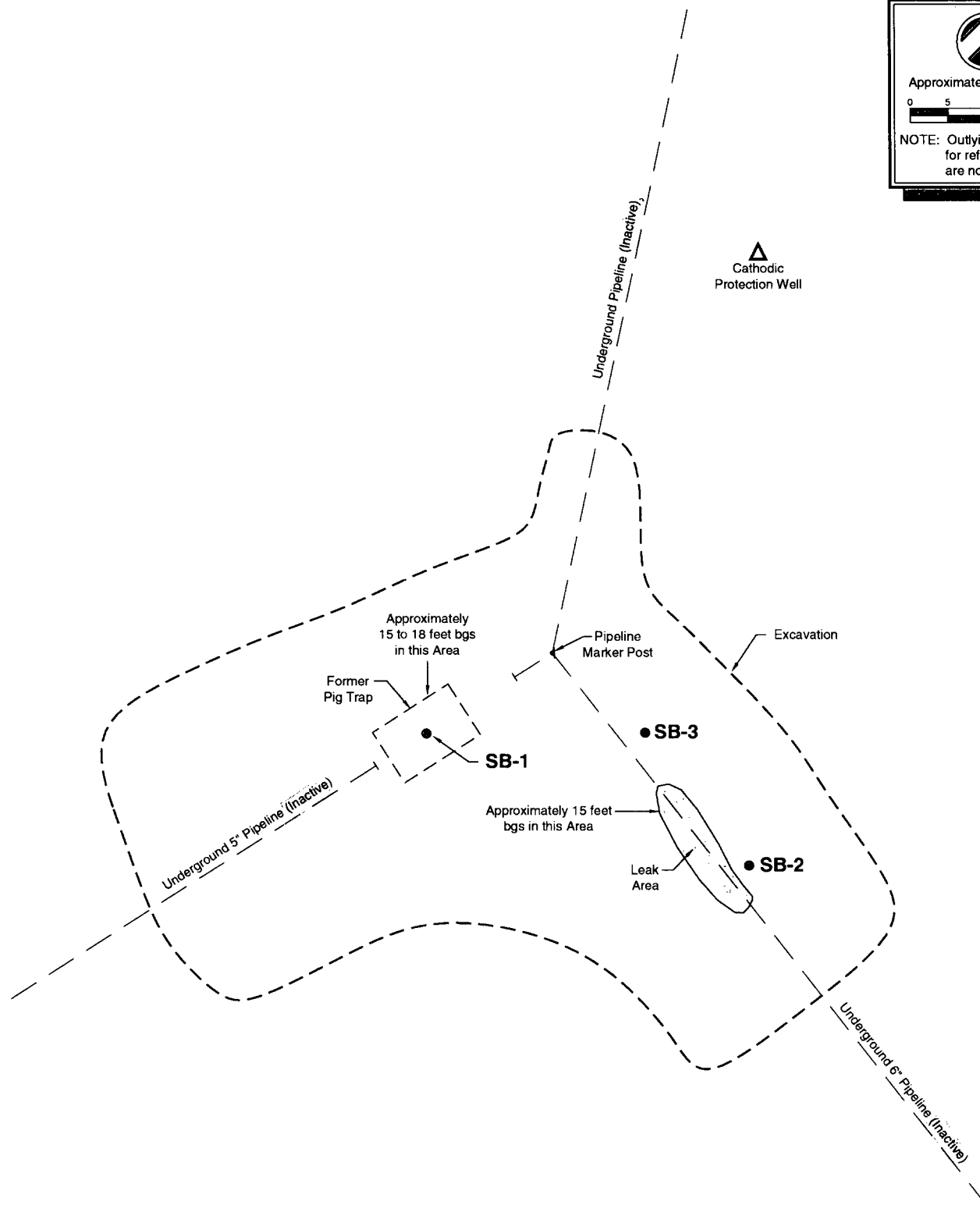
**TEXAS-NEW MEXICO PIPE LINE TNM-55-95 EUNICE, NEW MEXICO**

**610090**

**FIG 1**



△  
Cathodic  
Protection Well



06/19/97:RM (810090)



**SITE PLAN / SOIL BORING LOCATIONS**

TEXAS-NEW MEXICO PIPE LINE CO.

TNM 55-95

EUNICE, NEW MEXICO

610090

FIG 2



## LEGEND



Fill material.



Silt (ML) - slightly sandy, very fine grained, very dense, with calcareous nodules, light gray to buff, dry.



Disturbed Drive Sample. The symbol 20/12 indicates 20 blows of a 140 lb hammer falling 30 inches were required to drive the sampler 12 inches.

PID Head-space readings in ppm obtained with a photo-ionization detector.

ND Indicates the concentration was below method detection limits.



Indicates sample selected for laboratory analysis.

TPH = Total Petroleum Hydrocarbon Concentration (mg/kg).

## NOTES

1. The soil borings were drilled on July 26, 1996 using 7-1/2 inch diameter hollow stem augers.
2. The lines between material types indicated on the logs represent approximate boundaries. Actual transitions may be gradual.
3. The depths indicated are referenced from the ground surface.
4. Ground water was not encountered during the subsurface investigation.
5. The borings were backfilled with cement/bentonite grout.

06/19/97 RM (610090)

kei

### LEGEND AND NOTES

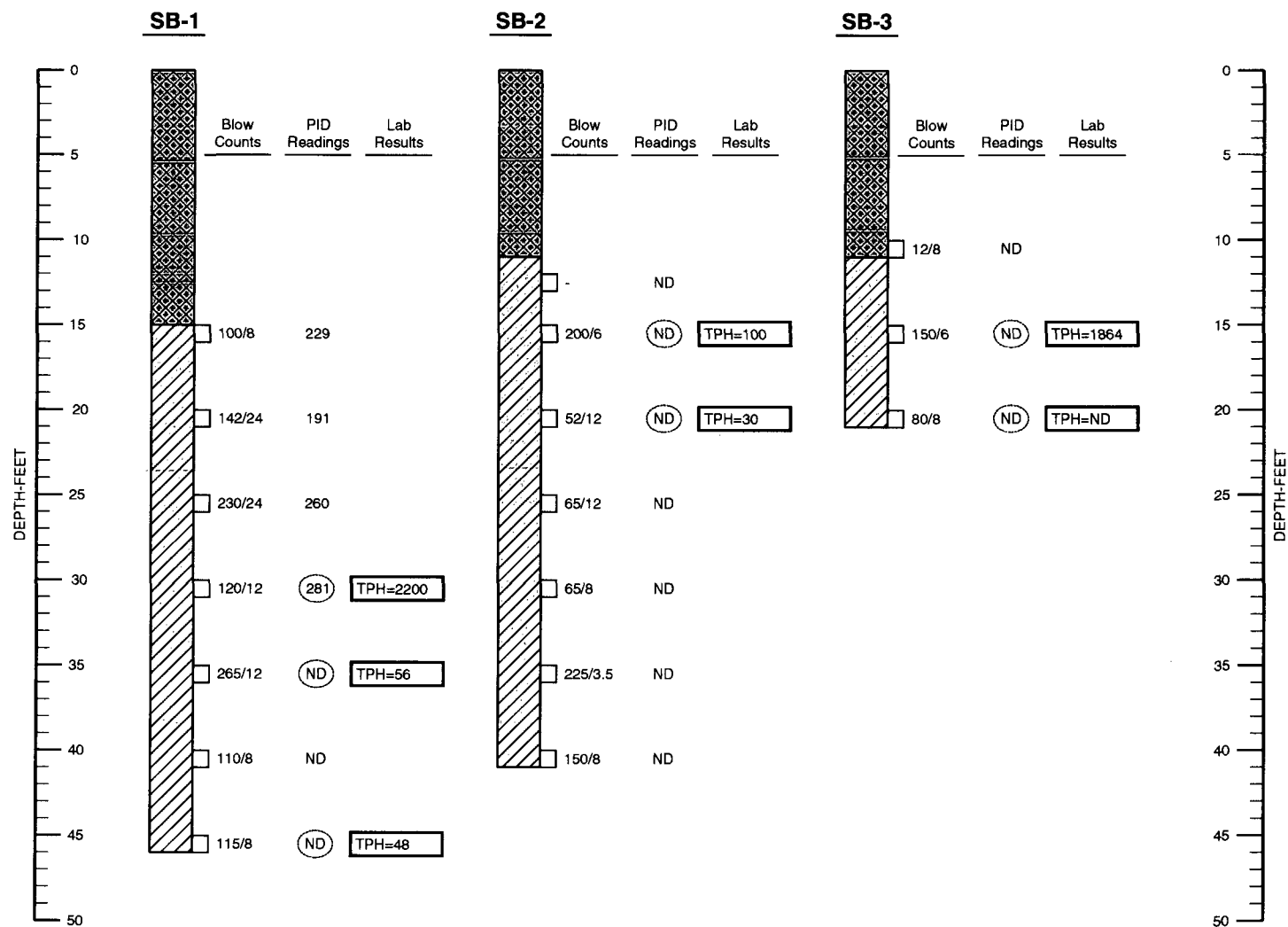
TEXAS-NEW MEXICO PIPE LINE CO.

TNM-55-95

EUNICE, NEW MEXICO

610090

FIG 3



## GENERAL NOTES

ND - Indicates constituent was not detected above the method detection or laboratory reporting limit.

Method detection/reporting limits (Samples analyzed by KEI):

TPH - 10 mg/kg

Laboratory test methods (Samples analyzed by KEI):

TPH - EPA Method 418.1

**TABLE I**  
**SUMMARY OF SOIL RESULTS - TPH**  
**TEXAS - NEW MEXICO PIPE LINE COMPANY**  
**TNM-95-55**  
**LEA COUNTY, NEW MEXICO**

SOIL BORING	SAMPLE DATE	DEPTH (feet)	TPH CONCENTRATION (mg/kg)
SB-1	07/26/96	30 - 31	2,200
	07/26/96	35 - 36	56
	07/26/96	45 - 46	48
SB-2	07/26/96	15 - 15.5	100
	07/26/96	20 - 21	30
SB-3	07/26/96	15 - 15.5	1,864
	07/26/96	20 - 21	ND
Initial Stockpile <sup>2</sup>	09/28/95	---	27,700
North Bottom Hole Stockpile <sup>2</sup>	10/06/95	---	8,430
Northeast Bottom Hole Stockpile <sup>2</sup>	10/10/95	---	21,400
West Bottom Hole Stockpile <sup>2</sup>	10/10/95	---	21,100
Final Stockpile (After Blending) <sup>2</sup>	03/12/96	---	1,070

**NOTES:**

1. Depths are referenced from the ground surface.
2. Samples collected and analyzed by Allstate Services according to April 17, 1996 report, lab reports not presented in APPENDIX B.

# Office of the State Engineer

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1900 W. Second St.  
Roswell, NM 88201  
(505) 622-6521 800-231-8933  
Fax: (505) 623-8559

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## FAX TRANSMISSION COVER SHEET

---

**Date:** June 5, 1998  
**To:** Daryl Stacey, Project Manager  
**Fax:** 210-680-3763  
**Re:** Well info  
**Sender:** Eric C. Milstead

---

YOU SHOULD RECEIVE 6 PAGE(S), INCLUDING THIS COVER SHEET. IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL (505) 622-6521 800-231-8933.

---

As per your request of June 5, I have tried to locate wells within the sections you specified during our phone call. Accompanying this letter, you will find the information one of the sections you were interested in at this time, T17S R35E 32 SE1/4 NW1/4. The rest of the information is of all the sections around the one you requested since we do not have that section available.

→ S 3, T 22 S, R 36 E

I hope this information is helpful in your endeavors. If you have any further questions, please call. Thank you for your request.

WATER  
DATE LEVEL MS

OCT 02, 1980 81.40 V

SITE ID: 324657103292801  
LOC: 17S.35E.31.43411  
DTID 11343  
ELEV: 3968.00  
USE: U  
DEPTH: 146  
GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
FEB 16, 1961	63.92	FEB 12, 1971	67.38	JAN 20, 1981	82.27	APR 04, 1986	91.89
MAR 17, 1966	65.53	MAR 04, 1976	71.12	JUN 17	83.25	JAN 15, 1991	95.01

HIGHEST 63.92 FEB 16, 1961  
LOWEST 95.01 JAN 15, 1991

SITE ID: 324740103282801  
LOC: 17S.35E.32.21142  
DTID 12856  
ELEV: 3965.00  
USE: H  
DEPTH:  
GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 04, 1976	69.36	JAN 20, 1981	72.31	APR 04, 1986	83.75	DEC 20, 1990	86.08 *

HIGHEST 69.36 MAR 04, 1976  
LOWEST 86.08 DEC 20, 1990

DATE: 03/04/97

PROVISIONAL GROUNDWATER DATA LEA COUNTY, NM.

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SITE ID: 324720103280101  
LOC: 17S.35E.33.13321  
DTID 13498  
ELEV: 3952.00  
USE: U  
DEPTH: 220  
GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS
JAN 21, 1981	61.18

710035

ELEV: 3592.00  
 USE: U  
 DEPTH: 242  
 SED. UNIT: 1210SL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 12, 1953	205.47	JAN 22, 1976	204.96	MAR 19, 1986	205.01		
MAR 19, 1968	205.79	MAY 03, 1977	204.92	APR 16, 1991	204.57		
DEC 10, 1970	205.30	MAR 04, 1981	204.92	MAR 07, 1996	204.62 SP		

HIGHEST 204.57 APR 16, 1991  
 LOWEST 205.79 MAR 19, 1968

SITE ID: 322531103153401  
 LOC: 215.36E.34.33341  
 OTID 13047  
 ELEV: 3559.00  
 USE: S  
 DEPTH:  
 SED. UNIT: 231CRNL

33	34	35	7215
4	3	2	7225
9	10	11	

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
DEC 10, 1970	142.16	MAR 04, 1981	182.99	APR 16, 1991	183.92		
JUN 30, 1976	164.25 R	MAR 19, 1986	186.40	MAR 07, 1996	198.78 SR		

HIGHEST 142.16 DEC 10, 1970  
 LOWEST 186.40 MAR 19, 1986

SITE ID: 323025103062601  
 LOC: 215.37E.01.242422  
 OTID 11474  
 ELEV: 3537.00  
 USE: S  
 DEPTH: 90  
 SED. UNIT: 110AVMB

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 08, 1961	61.48	MAR 09, 1966	73.01	DEC 16, 1970	63.81 R		
NOV 04, 1965	35.64	MAR 12, 1968	55.47 R	FEB 23, 1977	72.63		

HIGHEST 35.64 NOV 04, 1965  
 LOWEST 73.01 MAR 09, 1966

DATE: 03/04/97

PROVISIONAL GROUNDWATER DATA LEA COUNTY, NM.

PAGE1017

SITE ID: 323016103092001  
 LOC: 215.37E.03.31221  
 OTID 11475  
 ELEV: 3424.10

DATE WATER  
LEVEL MS  
APR 03, 1968 702.23

SITE ID: 322502103162401  
LOC: 225.36E.06.32111  
OTID 12775  
ELEV: 3585.00  
USE: S  
DEPTH: 220  
GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 21, 1976	180.40	MAR 07, 1986	180.24	FEB 14, 1996	179.53 S		
MAR 09, 1981	180.43	MAY 01, 1991	179.36				
HIGHEST 179.53 FEB 14, 1996		LOWEST 180.43 MAR 09, 1981					

SITE ID: 322501103175601  
LOC: 225.36E.06.41200  
OTID 11914  
ELEV: 3574.00  
USE: S  
DEPTH: 174  
GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
MAR 19, 1968	170.47 R	JAN 21, 1976	171.25	MAR 07, 1986	171.02		
DEC 03, 1970	171.44	MAR 09, 1981	171.03	MAY 01, 1991	171.04		
HIGHEST 171.02 MAR 07, 1986		LOWEST 171.44 DEC 03, 1970					

DATE: 03/04/97

PROVISIONAL GROUNDWATER DATA LEA COUNTY, NM.

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SITE ID: 322356103161803  
LOC: 225.36E.09.341221  
OTID 12776  
ELEV: 3552.00  
USE: U  
DEPTH:  
GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
JAN 21, 1976	171.52	MAR 07, 1986	171.64	MAY 01, 1991	171.75 *



HIGHEST 171.52 JAN 21, 1976  
 LOWEST 171.75 MAY 01, 1991

SITE ID: 322356103161801  
 LOC: 22S.36E.09.341223  
 OTID 11915  
 ELEV: 3552.00  
 USE: S  
 DEPTH:  
 GEO. UNIT: 1210GLL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 19, 1965	171.26	MAR 19, 1966	171.37	DEC 03, 1970	172.27 P X

HIGHEST 171.26 NOV 19, 1965  
 LOWEST 171.37 MAR 19, 1966

SITE ID: 322356103161802  
 LOC: 22S.36E.09.341223A  
 OTID 12699  
 ELEV: 3552.00  
 USE: U  
 DEPTH:  
 GEO. UNIT: 1210GLL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS
DEC 03, 1970	178.05 S X

DATE: 03/04/97

PROVISIONAL GROUNDWATER DATA LEA COUNTY, NM.

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SITE ID: 322423103134701  
 LOC: 22S.36E.11.22344  
 OTID 11916  
 ELEV: 3510.40  
 USE: U  
 DEPTH:  
 GEO. UNIT: 1210GLL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 12, 1953	113.86	NOV 04, 1965	124.32	MAR 19, 1966	124.30	DEC 03, 1970	125.42

HIGHEST 113.86 NOV 12, 1953  
 LOWEST 124.32 NOV 04, 1965

SITE ID: 322409103133501  
 LOC: 22S.36E.12.31112  
 OTID 11917

ELEV: 3498.00  
 USE: U  
 DEPTH:  
 GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 02, 1965	78.36	DEC 04, 1970	77.00	MAR 18, 1981	77.30	MAY 01, 1991	78.16
JUN 10, 1968	76.88	DEC 16, 1976	77.10	MAR 21, 1986	77.67	FEB 16, 1996	78.29 ST
HIGHEST 76.88 JUN 10, 1968							
LOWEST 78.36 NOV 02, 1965							

SITE ID: 322439103133501  
 LOC: 22S.36E.01.333322  
 OTID 12774  
 ELEV: 3492.00  
 USE: U  
 DEPTH: 150  
 GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS
NOV 12, 1953	111.24

SITE ID: 322443103134001  
 LOC: 22S.36E.02.442441  
 OTID 11912  
 ELEV: 3495.40  
 USE: S  
 DEPTH:  
 GEO. UNIT: 12106LL

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

DATE	WATER LEVEL MS	DATE	WATER LEVEL MS	DATE	WATER LEVEL MS
NOV 04, 1965	115.43	DEC 03, 1970	116.69 R	JAN 20, 1976	118.48 *
HIGHEST 115.43 NOV 04, 1965					
LOWEST 118.48 JAN 20, 1976					

IDATE: 03/04/97

PROVISIONAL GROUNDWATER DATA LEA COUNTY, NM.

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SITE ID: 322526103154401  
 LOC: 22S.36E.04.222144  
 OTID 11913  
 ELEV: 3560.00  
 USE: U  
 DEPTH: 1370  
 GEO. UNIT: 313SADR

Apr 1 3, 1968 702.23

## WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

# ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"


KEI CONSULTANTS, INC.  
MR. MIKE HAWTHORNE  
5309 WURZBACH ROAD, SUITE 100  
SAN ANTONIO, TEXAS 78238  
FAX: 210-680-3763

RECEIVING DATE: 07/30/96  
SAMPLE TYPE: SOIL  
PROJECT #: 610090  
PROJECT NAME: TNMPL/ EUNICE  
PROJECT LOCATION: EUNICE

ANALYSIS DATE: 07/30/96  
SAMPLING DATE: 07/26/96  
SAMPLE CONDITION: INTACT/ICED

ELT#	FIELD CODE	TPH (mg/kg)
8195	SB-1 30-31'	2,200
8196	SB-1 35-36'	56
8197	SB-1 45-46'	48
8198	SB-2 15-15.5'	100
8199	SB-2 20-21'	30
8200	SB-3 15-15.5'	1,864
8201	SB-3 20-21'	<10
QUALITY CONTROL		703
TRUE VALUE		702
% PRECISION		100

Methods: EPA 418.1

  
Michael R. Fowler

7-31-96  
Date

JOB NUMBER 610090  
 PURCHASE ORDER NUMBER 610090-1-0  
 SITE NAME TNMP2 / Eunice  
 PROJECT 610090  
 SAMPLED BY BKS

**K•E•I**

CONSULTANTS  
INCORPORATED

5309 Wurzbach Road, Suite 100  
San Antonio, Texas 78238

CHAIN OF CUSTODY NO: 10065  
 PROJECT ENGINEER: PBH  
 CONTACT: MIKE HATHORNE  
 LABORATORY: ELOT

ANALYSIS REQUIRED

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	MATRIX	COMPOSITE OR GRAB	NO. OF CONTAINERS	TPH MIS.1				REMARKS: PRESERVATIONS ETC...
8195	7/26/96	0910	SB-1 30-31'	SOIL	GRAB	1	X				
8196	7/26/96	0930	SB-1 35-36'				X				
8197		1010	SB-1 45-46'				X				
8198		1110	SB-2 15-15.5'				X				
8199		1120	SB-2 20-21'				X				
8200		1540	SB-3 15-15.5'				X				
8201		1550	SB-3 20-21'				X				
8202		0820	SB-1 15-16'								ARCHIVE
8203	✓	0840	SB-1 20-22'	✓	✓	✓					ARCHIVE

Relinquished By: (Signature)

Date

Time

Received By: (Signature)

Date Shipped: 7/29/96

Shipped By: \_\_\_\_\_

Relinquished By: (Signature)

7/29/96 1110

Received By: (Signature)

Shipment Number: \_\_\_\_\_

Relinquished By: (Signature)

Received By: (Signature)

Laboratory Receivers Initials: PT

Relinquished By: (Signature)

Received By: (Signature)

Remarks: PLEASE FAX RESULTS ASAP  
ADD'L ANALYTICAL may be  
REQD.

Relinquished By: (Signature)

Received By: (Signature)

JOB NUMBER 610090  
 PURCHASE ORDER NUMBER 610090-1-0  
 SITE NAME TNMP/L EUNICE  
 PROJECT 610090  
 SAMPLED BY BKS



CHAIN OF CUSTODY NO: 10065  
 PROJECT ENGINEER: PBH  
 CONTACT: MIKE HAWTHORNE  
 LABORATORY: ELOT

5309 Wurzbach Road, Suite 100  
 San Antonio, Texas 78238

ANALYSIS REQUIRED

SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	MATRIX	COMPOSITE OR GRAB	NO. OF CONTAINERS					REMARKS: PRESERVATIONS ETC...
8204	7/26/96	0855	SB-1 26-27'	Soil	GRAB	1					
8205		0950	SB-1 40-41'								
8206		1135	SB-2 25-26'								
8207		1150	SB-2 30-31'								
8208		1215	SB-2 35-35.5								
8209		1235	SB-2 40-41'								
8210		1525	SB-3 10-11								

Relinquished By: (Signature) <i>[Signature]</i>	Date 7/27/96	Time 1900	Received By: (Signature)	Date Shipped: 7/29/96	Shipped By:
Relinquished By: (Signature)	7/30/96	1110	Received By: (Signature) <i>Roland K. Jurek</i>	Shipment Number:	
Relinquished By: (Signature)			Received By: (Signature)	Laboratory Receivers Initials: <i>AS</i>	
Relinquished By: (Signature)			Received By: (Signature)	Remarks: Pending 1st Round of ANALYTICAL	
Relinquished By: (Signature)			Received By: (Signature)		

## **QA/QC PROCEDURES**

Samples of subsurface soils obtained by KEI were obtained by hydraulically pushing a 3-3/4 inch ID (7-1/2-inch OD) hollow-stem auger. Representative soil samples were divided into 2 separate portions using clean, disposable gloves and clean sampling tools. One portion of the soil sample was placed in a disposable sample bag. The bag was sealed and labeled for head-space analysis using a photoionization detector (PID) calibrated to a 100 ppm isobutylene standard. Each sample was allowed to volatilize for approximately 30 minutes at ambient temperature prior to conducting the analysis.

The other portion of the soil samples collected were placed in a sterile glass container equipped with a Teflon-lined lid furnished by the analytical laboratory. The container was filled to capacity with soil to limit the amount of head-space present. Each container was labeled and placed on ice in an insulated cooler. The cooler was sealed for shipment to Environmental Lab of Texas, Inc. in Odessa, Texas. Proper chain-of-custody documentation was maintained throughout the sampling process.

Soil samples were analyzed for TPH in accordance with EPA Method 418.1 within 14 days following the collection date.

## **LABORATORY PROTOCOL**

The laboratory was responsible for proper QA/QC procedures. These procedures are either transmitted with the laboratory reports or are on file at the laboratory.