

CLOSURE REPORT

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CLOSURE REPORT

**TEXAS - NEW MEXICO PIPE LINE COMPANY
MONUMENT SITES 3, 3A, 3B, AND 3C
LEA COUNTY, NEW MEXICO**



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CLOSURE REPORT

**TEXAS - NEW MEXICO PIPE LINE COMPANY
MONUMENT SITES 3, 3A, 3B, AND 3C
LEA COUNTY, NEW MEXICO**

PREPARED FOR:

TEXAS - NEW MEXICO PIPE LINE COMPANY

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KEI

A handwritten signature in cursive script, reading 'Theresa Nix', is written over a horizontal line.

Theresa Nix
Project Manager

A handwritten signature in cursive script, reading 'J. Michael Hawthorne', is written over a horizontal line.

J. Michael Hawthorne, P.G., REM
Senior Geologist

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EXECUTIVE SUMMARY

The Texas - New Mexico Pipe Line Company (TNMPL) alleged release sites 3, 3A, 3B, and 3C are located approximately 2.5 miles west of Monument in Lea County, New Mexico. The sites are specifically located in Section 36, Township 19 South, Range 36 East. A site location map is presented as FIG. 1. The site is owned by Mr. Jimmy Cooper. The layout of all four sites is presented on FIG. 2 and specific site details are presented on FIG. 3 through FIG. 6. This report summarizes closure activities performed at the project site from February through April of 1997.

Field activities performed included the following:

- collection of soil samples from the initial excavation to determine hydrocarbon concentration levels;
- excavation and stockpiling of additional soils which exceeded closure levels;
- collection of confirmation samples in the excavated area;
- characterization of stockpiled soils;
- transportation and off-site landfarming of stockpiled soils; and
- backfilling the excavation with clean soils.

The following conclusions are based on the field and laboratory data presented in this report:

- The closure standards at the site were determined to be as follows:

CONSTITUENT	CLOSURE CONCENTRATIONS (mg/kg)
BENZENE	10
BTEX	50
TPH	100 + Background Concentration

- Approximately 164 cubic yards of impacted soil was excavated, stockpiled, and landfarmed off-site from Monument Site 3.
- Approximately 490 cubic yards of impacted soil was excavated, stockpiled, and landfarmed off-site from Monument Site 3A.
- Approximately 906 cubic yards of impacted soil was excavated, stockpiled, and landfarmed off-site from Monument Site 3B.
- Approximately 1,295 cubic yards of impacted soil was excavated, stockpiled, and landfarmed off-site from Monument Site 3C.
- Confirmation soil samples at the sites indicated TPH, benzene, and BTEX concentrations were below closure standards.

Based on the general attainment of closure levels and the absence of significant vertical migration of hydrocarbon at each site as demonstrated by soil boring results, we recommend all four sites be closed under the New Mexico Oil Conservation Division (OCD) regulations.

PURPOSE AND SCOPE

The objective of the site closure activities was to obtain closure for the site based on OCD regulations. The following activities were performed to achieve this objective:

- determination of closure standards;
- removal of impacted soil;
- characterization of removed impacted soil;
- confirmation sampling in the excavated areas;
- transportation and off-site landfarming of impacted soil; and
- backfilling with clean soil in the excavated areas.

BACKGROUND INFORMATION

Apparent hydrocarbon impact to soils was identified at the subject site. The following response activities were subsequently performed.

- clean overburden soils including topsoil were removed and stockpiled on-site;
- impacted soils were excavated, stockpiled, and some soils were landfarmed off-site;
- one exploratory soil boring was advanced at Monument Site 3;
- one exploratory soil boring was advanced at Monument Site 3A;
- one exploratory soil boring was advanced at Monument Site 3B;
- two exploratory soil borings were advanced at Monument Site 3C; and
- soil samples were collected from native soils during soil boring advancement.

CLOSURE ACTIVITIES

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:

CRITERIA	APPLICABLE STANDARD	POINTS
Depth to Ground Water	Less Than 50 Feet	20 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
Total Ranking Score		20 Points

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	100 + Background Concentration

SOIL REMOVAL

Monument Site 3

Impacted soils were removed from the bottom and sidewalls of the existing excavation on February 28, 1997. These soils included sediments which had washed into the excavation. An estimated 164 cubic yards were removed from the existing excavation and stockpiled on-site for characterization prior to off-site landfarming.

Monument Site 3A

Impacted soils were removed from the bottom and sidewalls of the existing excavation from March 3 through April 7, 1997. These soils included sediments which had washed into the excavation. An estimated 490 cubic yards were removed from the existing excavation and stockpiled on-site for characterization prior to off-site landfarming.

Monument Site 3B

Impacted soils were removed from the bottom and sidewalls of the existing excavation from March 3, 1997 through March 24, 1997. These soils included sediments which had washed into the excavation. An estimated 906 cubic yards were removed from the existing excavation and stockpiled on-site for characterization prior to off-site landfarming.

Monument Site 3C

Impacted soils were removed from the bottom and sidewalls of the existing excavation from March 3, 1997 through March 5, 1997. These soils included sediments which had washed into the excavation. An estimated 1,295 cubic yards were removed from the existing excavation and stockpiled on-site for characterization prior to off-site landfarming.

SOIL CHARACTERIZATION

Monument Site 3

The soil stockpiles were characterized by collecting two composite soil samples for determination of TPH. Laboratory results indicated TPH concentrations of 409 mg/kg and 11,200 mg/kg. Laboratory reports are presented in Appendix A.

Monument Site 3A

The soil stockpiles were characterized by collecting two composite soil samples for determination of TPH. Laboratory results indicated TPH concentrations of 200 mg/kg and 3,640 mg/kg. Laboratory reports are presented in Appendix A.

Monument Site 3B

The soil stockpiles were characterized by collecting two composite soil samples for determination of TPH. Laboratory results indicated TPH concentrations of 2,872 mg/kg and 25,120 mg/kg. Laboratory reports are presented in Appendix A.

Monument Site 3C

The soil stockpiles were characterized by collecting two composite soil samples for determination of TPH. Laboratory results indicated TPH concentrations of 409 mg/kg and 44,830 mg/kg. Laboratory reports are presented in Appendix A.

CONFIRMATION SAMPLING

Monument Site 3

Composite soil samples were collected from the excavation bottom and excavation sidewall and submitted for determination of TPH concentrations. Based on the laboratory results of the sidewall soil sample, additional soils were excavated and the sidewall resampled. The sample locations are presented on FIG. 3.

Laboratory results of the final composite soil samples indicated the following:

SAMPLE LOCATION	MAX. TPH	MAX. BTEX	MAX. BENZENE
Final Soil Sidewall (mg/kg)	20.0	ND	ND
Soil Bottom (mg/kg)	79.0	ND	ND

Previous soil samples collected during the advancement of exploratory soil boring B3-1 were submitted for determination of BTEX and TPH concentrations. All soil samples indicated BTEX concentrations below laboratory detection limits. Regardless, excavation bottom and sidewall confirmation samples were also submitted for determination of BTEX concentrations.

Soil laboratory results are summarized on TABLE I and graphically presented on FIG. 3.

Monument Site 3A

Composite soil samples were collected from the excavation bottom and excavation sidewall and submitted for determination of TPH concentrations. Based on the laboratory results of the sidewall soil sample, additional soils were excavated and the sidewall and excavation bottom resampled. The sample locations are presented on FIG. 4.

Laboratory results of the final composite soil samples indicated the following:

SAMPLE LOCATION	MAX. TPH	MAX. BTEX	MAX. BENZENE
Final Soil Sidewall (mg/kg)	208*	0.135	0.135
Soil Bottom (mg/kg)	48	0.144	0.144

*Background level was 56 mg/kg. Site closure level was 156 mg/kg.

Previous soil samples collected during the advancement of exploratory soil boring B3A-1 were submitted for determination of BTEX and TPH concentrations. One soil sample indicated a detectable BTEX concentration of 0.708. Therefore, excavation bottom and sidewall samples were also submitted for determination of BTEX concentrations.

Soil laboratory results are summarized on TABLE I and graphically presented on FIG. 4.

Monument Site 3B

Composite soil samples were collected from the excavation bottom and excavation sidewall and submitted for determination of TPH concentrations. Based on the laboratory results of the sidewall soil sample, additional soils were excavated and the sidewall resampled. The sample locations are presented on FIG. 5.

Laboratory results of the final composite soil samples indicated the following:

SAMPLE LOCATION	MAX. TPH	MAX. BTEX	MAX. BENZENE
Final Soil Sidewall (mg/kg)	130*	N/A	N/A
Soil Bottom (mg/kg)	20	N/A	N/A

*Background level was 24 mg/kg. Closure level was 124 mg/kg.

Previous soil samples collected during the advancement of exploratory soil boring B3B-1 were submitted for determination of BTEX and TPH concentrations. All soil samples indicated BTEX concentrations below laboratory detection limits. Therefore, excavation bottom and sidewall samples were not submitted for determination of BTEX concentrations.

Soil laboratory results are summarized on TABLE I and graphically presented on FIG. 5.

Monument Site 3C

Composite soil samples were collected from the excavation bottom and excavation sidewall and submitted for determination of TPH concentrations. Based on the laboratory results of the sidewall soil sample, additional soils were excavated and the sidewall resampled. The sample locations are presented on FIG. 6.

Laboratory results of the final composite soil samples indicated the following:

SAMPLE LOCATION	MAX. TPH	MAX. BTEX	MAX. BENZENE
Final Soil Sidewall (mg/kg)	100	ND	ND
Soil Bottom (mg/kg)	75.5	ND	ND

Previous soil samples collected during the advancement of exploratory soil borings B3C-1 and B3C-2 were submitted for determination of BTEX and TPH concentrations. All soil samples indicated BTEX concentrations below laboratory detection limits. Regardless, excavation bottom and sidewall confirmation samples were also submitted for determination of BTEX concentrations.

Soil laboratory results are summarized on TABLE I and graphically presented on FIG. 6.

SOIL DISPOSAL

Authorization to transport and landfarm the impacted soils off-site was obtained from OCD. The impacted soils were transported to C&C Landfarm Incorporated located approximately two miles south of Monument, New Mexico. Disposal documentation is presented in APPENDIX B.

BACKFILL AND RESTORATION

Monument Site 3

Approximately 182 cubic yards of clean fill material was purchased from the landowner and placed in the excavation. The remaining non-impacted stockpiled soils from the initial release excavation activities were used to complete the backfilling operations. The area was graded and reseeded following backfilling.

Monument Site 3A

Approximately 542 cubic yards of clean fill material was purchased from the landowner and placed in the excavation. The remaining non-impacted stockpiled soils from the initial release excavation activities were used to complete the backfilling operations. The area was graded and reseeded following backfilling.

Monument Site 3B

Approximately 1,004 cubic yards of clean fill material was purchased from the landowner and placed in the excavation. The remaining non-impacted stockpiled soils from the initial release excavation activities were used to complete the backfilling operations. The area was graded and reseeded following backfilling.

Monument Site 3C

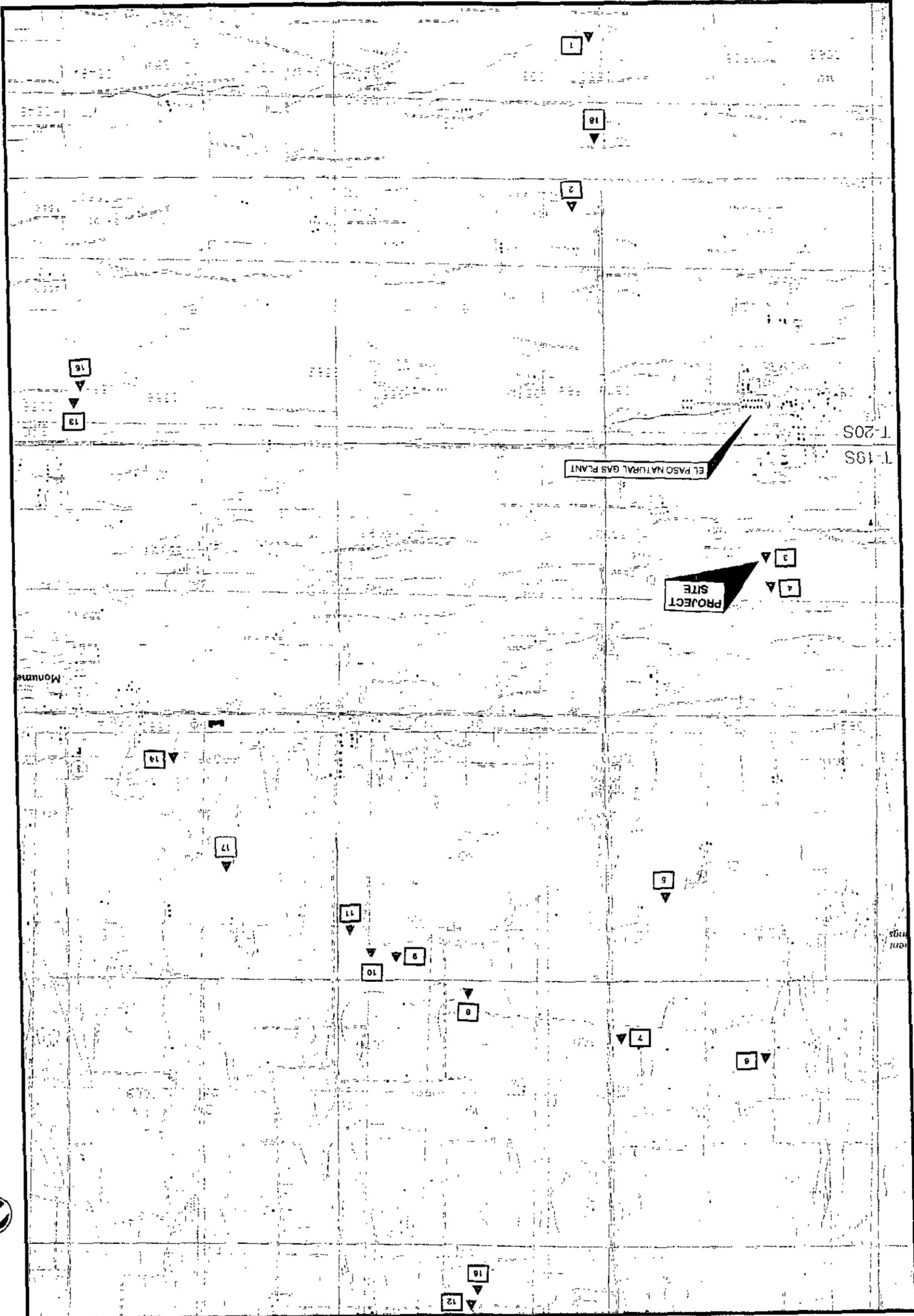
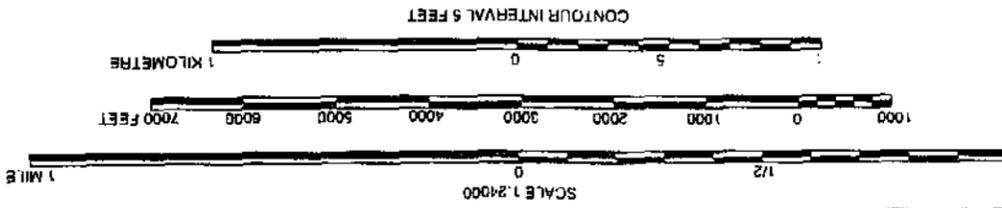
Approximately 1,434 cubic yards of clean fill material was purchased from the landowner and placed in the excavation. The remaining non-impacted stockpiled soils from the initial release excavation activities were used to complete the backfilling operations. The area was graded and reseeded following backfilling.

QA/QC PROCEDURES

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 or XENCO Laboratories in San Antonio, Texas for determination of TPH concentrations using EPA Method 418.1. Selected soil samples from Monument Site 3A were submitted for determination of BTEX concentrations using EPA Method SW846-8020, 5030. Proper chain-of-custody documentation was maintained throughout the sampling process.



SITE LOCATION MAP



75-00000-01-001-000



Approximate Scale: 1"=20'

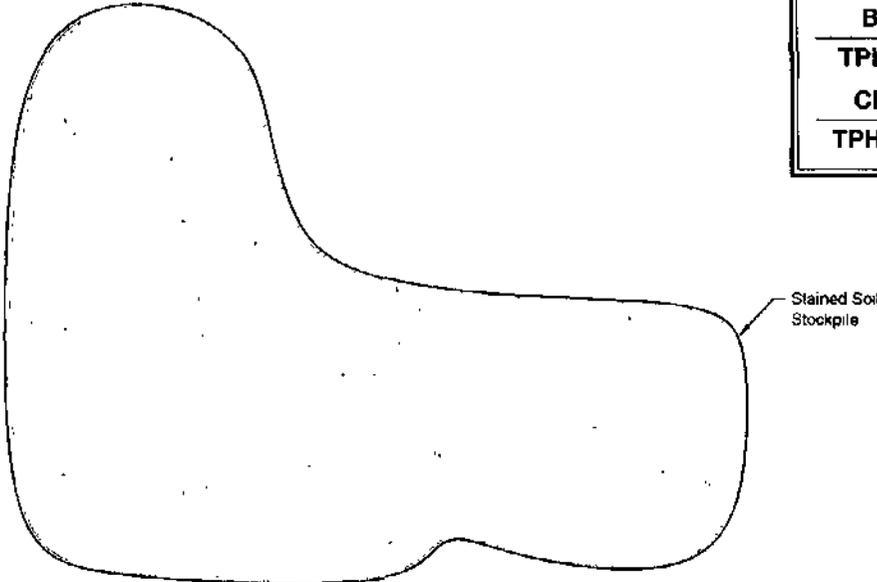


NOTE: Adjacent properties are not to scale.

LEGEND

- Exploratory Boring advanced by KEI on March 5 and 6, 1997.
 - Excavation
 - Surface Stain
 - Stockpile
- TPH= Total Petroleum Hydrocarbon Concentration (mg/kg)

Background
TPH=56.0 mg/kg
Closure Level
TPH=156.0 mg/kg



Pipeline Release Point → *Surface Stain*

Composite Side Wall TPH=20.0 mg/kg
B3-1
Composite Bottom TPH=79.0 mg/kg

Excavation

Cut and Capped

TNMPL Pipeline

DIRT ROAD

1"=20' RM G-10057F2

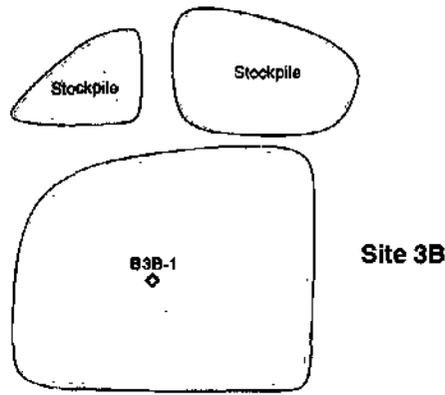


SITE DETAILS		
TEXAS - NEW MEXICO PIPE LINE CO.	MONUMENT SITE NO. 3	LEA COUNTY, NEW MEXICO

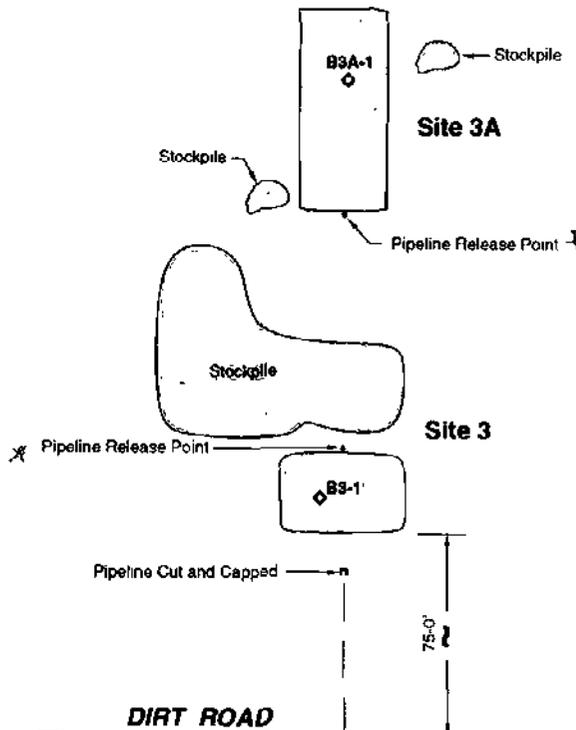
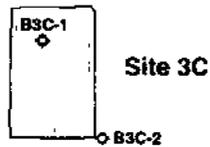
610057
FIG 3

Approximate Scale: 1"=60'

NOTE: Adjacent properties are not to scale.



EASEMENT



LEGEND

- ◆ Exploratory Boring advanced by KEI on March 5 and 6, 1997 (Site 3).
- ◆ Exploratory Boring advanced by KEI on April 2, 1997 (Site 3A).
- ◆ Exploratory Boring advanced by KEI on March 5, 1997 (Site 3C).
- ◆ Exploratory Boring advanced by KEI on March 6, 1997 (Site 3B)
- Excavation
- Surface Stain
- Stockpile

IPH= Total Petroleum Hydrocarbon Concentration (mg/kg)

11/20/97 PM G:\01575 REI

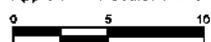


SITE LAYOUT - SITES 3, 3A, 3B AND 3C

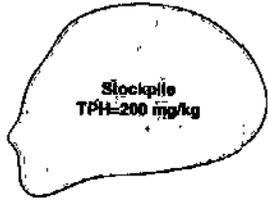
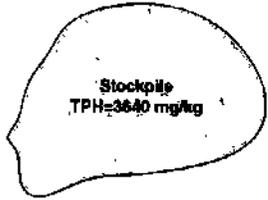
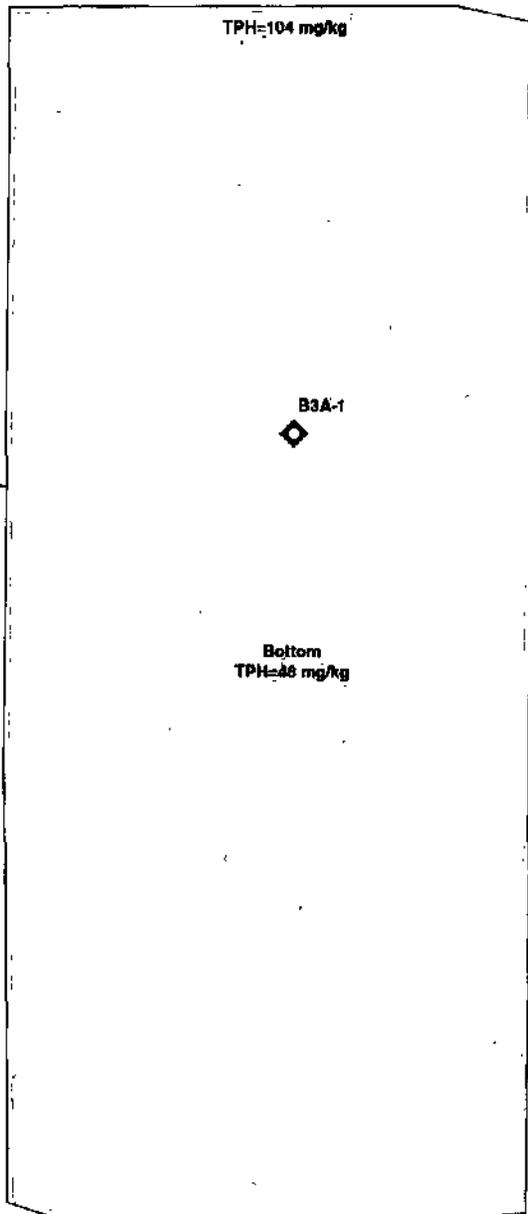
TEXAS - NEW MEXICO PIPE LINE CO. LEA COUNTY, NEW MEXICO

610057

FIG 2


 Approximate Scale: 1"=10'

 NOTE: Adjacent properties are not to scale

Background
 TPH=56 mg/kg
Closure Level
 TPH=156 mg/kg



TPH=20 mg/kg

TPH=130 mg/kg

B3AT-1



LEGEND

-  Exploratory Boring advanced by KEI on March 5 or April 2, 1997.
-  Excavation
-  Surface Stain
-  Stockpile

TPH= Total Petroleum Hydrocarbon Concentration (mg/kg).
 ND= Not Detectable

11/20/97-RV G (61006-PC)



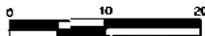
SITE DETAILS

TEXAS - NEW MEXICO PIPE LINE CO. MONUMENT SITE NO. 3A LEA COUNTY, NEW MEXICO

610057
 FIG 4

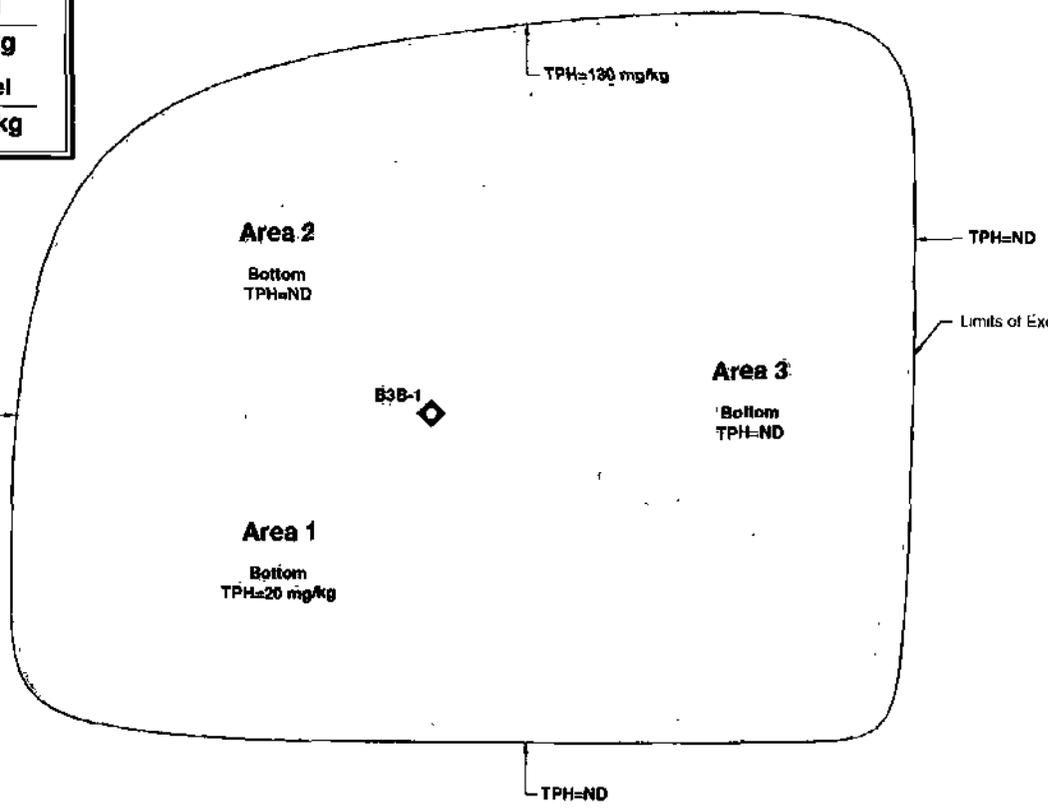
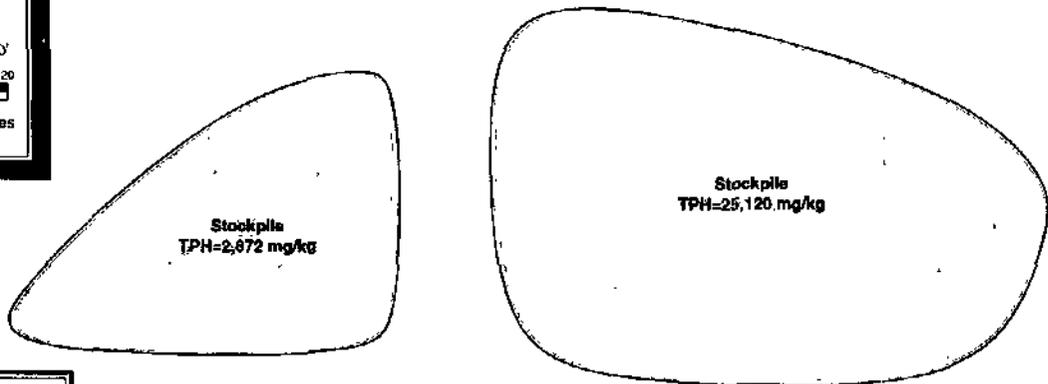


Approximate Scale: 1"=20'



NOTE: Adjacent properties are not to scale.

Background
TPH=24 mg/kg
Closure Level
TPH=124 mg/kg



EASEMENT

LEGEND

- Exploratory Boring advanced by KEI on March 6, 1997.
- Excavation
- Stockpile
- TPH= Total Petroleum Hydrocarbon Concentration (mg/kg)
- ND= Not Detectable

11/20/97, REV. G 11/91(DS/TF-4)



SITE DETAILS

TEXAS - NEW MEXICO PIPE LINE CO.

MONUMENT SITE NO. 3B

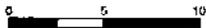
LEA COUNTY, NEW MEXICO

610057

FIG 5

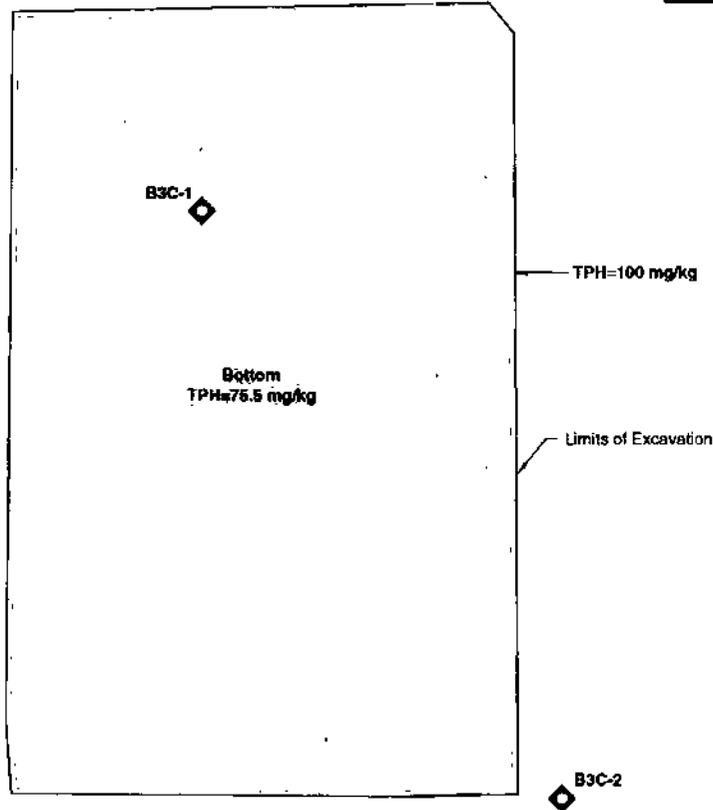


Approximate Scale: 1"=10'



NOTE: Adjacent properties are not to scale.

Closure Level
TPH=100.0 mg/kg



LEGEND

- ◆ Exploratory Boring advanced by KEI on March 5, 1997.
- Excavation

TPH= Total Petroleum Hydrocarbon Concentration (mg/kg)

11/24/97-RM-G-10057EE



SITE DETAILS

TEXAS - NEW MEXICO PIPE LINE CO. MONUMENT SITE NO. 3C LEA COUNTY, NEW MEXICO

610057

FIG 6

GENERAL NOTES

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

--- - Indicates sample was not analyzed for specified constituent.

Method detection limits:

Soil: TPH - 10 mg/kg
 BTEX - 0.020 to 0.100 mg/kg

Laboratory test methods: BTEX - EPA Method SW846-8020, 5030

TPH - EPA Method 418.1

TABLE I

**SUMMARY OF LABORATORY RESULTS - SOIL
MONUMENT SITE 3
LEA COUNTY, NEW MEXICO**

SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	BTEX (mg/kg)	TPH (mg/kg)
Boring Installation							
B3-1 at 1 - 2 feet	03/05/97	ND	ND	ND	ND	ND	48.0
B3-1 at 13 - 14 feet	03/05/97	ND	ND	ND	ND	ND	38.0
Excavation Sampling							
East Sidewall	02/24/97	ND	0.131	0.127	0.625	0.883	190
West Sidewall	02/24/97	ND	ND	ND	ND	ND	3,280
South Sidewall	02/24/97	ND	ND	ND	0.601	0.601	160
Soil Characterization Sampling							
Stockpile	02/24/97	ND	ND	ND	0.114	0.114	11,200
Stockpile(1)	03/21/97	ND	ND	ND	ND	ND	409
Background Sampling							
Background	04/18/97	---	---	---	---	---	56 ⁽²⁾
Confirmation Sampling							
Excavation Bottom	03/21/97	ND	ND	ND	ND	ND	79.0
Composite Sidewall	03/21/97	ND	ND	ND	ND	ND	20.0 ⁽³⁾

NOTES:

1. Indicates stockpile which included soils from Monument Site 3 and Site 3C.
2. The background concentration for Monument Site 3A was also utilized for Monument Site 3 due to the close proximity.
3. Indicates the retest of excavation side wall sample collected February 24, 1997, following overexcavation of additional soils.

TABLE II

SUMMARY OF LABORATORY RESULTS - SOIL
MONUMENT SITE 3A
LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	BTEX (mg/kg)	TPH (mg/kg)
Boring Installation							
B3A-1 at 4 - 5 feet	03/05/97	ND	ND	ND	ND	ND	49.5
B3A-1 at 6 - 7 feet	03/05/97	ND	0.135	0.082	0.489	0.706	2,830
B3A-1 at 10 - 11 feet	03/05/97	ND	ND	ND	ND	ND	31.5
Excavation Sampling							
Excavation Bottom	04/07/97	---	---	---	---	---	200
North Sidewall	04/07/97	---	---	---	---	---	250
South Sidewall	04/07/97	---	---	---	---	---	1,230
West Sidewall	04/07/97	---	---	---	---	---	4,360
East Sidewall	04/07/97	---	---	---	---	---	130
Deep Excavation Bottom	04/07/97	---	---	---	---	---	190
Soil Characterization Sampling							
East Stockpile	04/18/97	---	---	---	---	---	3,640
West Stockpile	04/18/97	---	---	---	---	---	200
Background Sampling							
Background	04/18/97	---	---	---	---	---	56
Confirmation Sampling							
Excavation Bottom	04/18/97	0.144	ND	ND	ND	0.144	48 ⁽¹⁾
Excavation North Sidewall	04/18/97	0.114	ND	ND	ND	0.114	104 ⁽¹⁾
Excavation South Sidewall	04/18/97	ND	ND	ND	ND	ND	ND ⁽¹⁾
Excavation West Sidewall	04/18/97	0.135	ND	ND	ND	0.135	208 ⁽¹⁾

NOTES:

1. Indicates the retest of excavation sample collected April 7, 1997, following overexcavation of additional soils.

TABLE III

SUMMARY OF LABORATORY RESULTS - SOIL
MONUMENT SITE 3B
LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	BTEX (mg/kg)	TPH (mg/kg)
Boring Installation							
B3B-1 at 4 - 5 feet	03/06/97	ND	ND	ND	ND	ND	37.0
B3B-1 at 13 - 14 feet	03/06/97	ND	ND	ND	ND	ND	52.0
Excavation Sampling							
Area 1 - Excavation Bottom	04/07/97	---	---	---	---	---	20
Area 2 - Excavation Bottom	04/07/97	---	---	---	---	---	ND
Area 2 - North Sidewall	04/07/97	---	---	---	---	---	40
Area 2 - West Sidewall	04/07/97	---	---	---	---	---	160
Area 3 - Excavation Bottom	04/07/97	---	---	---	---	---	ND
Area 3 - North Sidewall	04/07/97	---	---	---	---	---	130
Area 3 - South Sidewall	04/07/97	---	---	---	---	---	550
Area 3 - West Sidewall	04/07/97	---	---	---	---	---	40
Area 3 - East Sidewall	04/07/97	---	---	---	---	---	140
Soil Characterization Sampling							
North Stockpile	04/18/97	---	---	---	---	---	2,872
South Stockpile	04/18/97	---	---	---	---	---	25,120
Background Sampling							
Background	04/18/97	---	---	---	---	---	24
Confirmation Sampling							
Area 2 - West Sidewall	04/30/97	---	---	---	---	---	ND ⁽¹⁾
Area 3 - North Sidewall	04/30/97	---	---	---	---	---	130 ⁽¹⁾
Area 3 - South Sidewall	04/30/97	---	---	---	---	---	ND ⁽¹⁾
Area 3 - East Sidewall	04/30/97	---	---	---	---	---	ND ⁽¹⁾

NOTES:

1. Indicates the retest of excavation sidewall sample collected April 7, 1997, following overexcavation of additional soils.

TABLE IV

**SUMMARY OF LABORATORY RESULTS - SOIL
MONUMENT SITE 3C
LEA COUNTY, NEW MEXICO**

SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	BTEX (mg/kg)	TPH (mg/kg)
Boring Installation							
B3C-1 at 1 - 2 feet	03/05/97	ND	ND	ND	ND	ND	36.0
B3C-1 at 13 - 14 feet	03/05/97	ND	ND	ND	ND	ND	56.0
B3C-2 at 5 - 6 feet	03/05/97	ND	ND	ND	ND	ND	30.5
B3C-2 at 13 - 14 feet	03/05/97	ND	ND	ND	ND	ND	26.5
Excavation Sampling							
East Sidewall	02/24/97	ND	0.144	0.681	1.817	2.642	23,670
West Sidewall	02/24/97	ND	ND	0.920	2.150	3.070	43,330
Excavation Bottom	03/21/97	ND	ND	ND	ND	ND	75.5
Composite Sidewall	03/21/97	ND	ND	ND	ND	ND	283
Soil Characterization Sampling							
Stockpile	02/24/97	ND	0.606	0.338	2.759	3.703	44,830
Stockpile(1)	03/21/97	ND	ND	ND	ND	ND	409
Confirmation Sampling							
East Sidewall	04/07/97	---	---	---	---	---	100 ⁽²⁾

NOTES:

1. Indicates stockpile which included soils from Monument Site 3 and Site 3C.
2. Indicates the retest of excavation side wall sample collected March 21, 1997, following overexcavation of additional soils.

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

KEI
ATTN: MR. PAUL HARTNETT
5309 WURZBACH SUITE 100
SAN ANTONIO, TEXAS 78238
FAX: 9210-680-3763

Receiving Date: 02/25/97
Sample Type: SOIL
Project: 610057 .02.03
Project Location: MONUMENT, NM

Analysis Date: TPH 02/28/97
Analysis Date: BTEX: 02/25/97
Sampling Date: 02/24/97
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	TPH mg/kg
10281	STOCKPILE	<0.100	<0.100	<0.100	0.114	<0.100	11,200
10282	WEST SIDE	<0.100	<0.100	<0.100	<0.100	<0.100	3,280
10283	EAST SIDE	<0.100	0.131	0.127	0.395	0.23	190
10284	SOUTH SIDE	<0.100	<0.100	<0.100	0.372	0.229	160
	% IA	85	83	84	96	85	99
	% EA	100	94	89	100	91	102
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<1

METHODS: SW 846-8020,5030 , EPA 418.1



Michael R. Fowler

3.17.97

Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

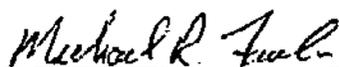
KEI
ATTN: MR. PAUL HARTNETT
5309 WURZBACH SUITE 100
SAN ANTONIO, TEXAS 78238
FAX: 9210-680-3763

Analysis Date: TPH 02/26/97
Analysis Date: BTEX: 02/25/97
Sampling Date: 02/24/97
Sample Condition: Intact/loose

Receiving Date: 02/25/97
Sample Type: SOIL
Project: 610057.02.03C
Project Location: MONUMENT, NM

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	TPH mg/kg
10285	STOCKPILE	<0.100	0.606	0.338	1.745	1.014	44,830
10286	EAST SIDE	<0.100	0.144	0.681	1.027	0.790	23,670
10287	WEST SIDE	<0.100	<0.100	0.920	1.271	0.879	43,330
	% IA	85	83	84	96	85	99
	% EA	100	94	89	100	91	102
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<1

METHODS: SW 846-8020.5030 , EPA 418.1


Michael R. Fowler

3-17-97
Date

ANALYTICAL REPORT 1-70560

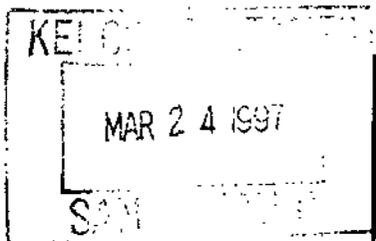
for

K.E.I. Consultants, Inc.

Project Manager: Ann Baker

Project Name: TNMPL Monument

March 12, 1997



HOUSTON - DALLAS - SAN ANTONIO

11381 Meadowglen Lane Suite L * Houston, Texas 77082-2647
Phone (713) 589-0692 Fax (713) 589-0695



11381 Meadowglen Suite L
Houston, Texas 77082-2647
(713) 589-0692 Fax: (713) 589-0695
Houston - Dallas - San Antonio

March 12, 1997

Project Manager: Ann Baker
K.E.I. Consultants, Inc.
5309 Wurzbach Rd., Suite 100
San Antonio, TX 78238

Reference: **XENCO Report No.: 1-70560**
Project Name: TNMPL Monument
Project ID: 610057-2-3,3A,3B,3C
Project Address: Sites 3,3A,3B,3C

Dear Ann Baker:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with XENCO Chain of Custody Number 1-70560. All results being reported to you apply only to the samples analyzed, properly identified with a Laboratory ID number. This letter documents the official transmission of the contents of the report and validates the information contained within.

All the results for the quality control samples passed thorough examination. Also, all parameters for data reduction and validation checked satisfactorily. In view of this, we are able to release the analytical data for this report within acceptance criteria for accuracy, precision, and completeness.

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 3 years in our archives and after that time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in COC No. 1-70560 will be filed for 60 days, and after that time they will be properly disposed of 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).

XENCO Laboratories is accredited by the American Association for Laboratory Accreditation (A2LA) for technical competence in the field of Environmental Testing (Certificate No. 0343-01). In accordance with A2LA's guidelines, XENCO operates a Quality System that meets ISO/IEC Guide 25 requirements and is strictly implemented and enforced through our standard QA/QC procedures.

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.

Sincerely,


Eddie Tomemoto, Ph.D.
QA/QC Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified in California, Oklahoma, Kansas, Arkansas, and approved by numerous other States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY!



1381 Meadowglan Suite L Houston, Texas 77082
 (713) 589-0692 Fax (713) 589-0696

**CHAIN OF CUSTODY RECORD
 AND ANALYSIS REQUEST FORM**

Page 1 of 2

Lab. Batch # 1765005A

Contractor: YET Consultants
 Address: 5309 Wurzbach, Ste 100, San Antonio TX 78238
 Project Name: TNMPL Monument
 Project Location: Sites 3, 3A, 3B, 3C
 Project Director: Paul Hartnett
 Project Manager: Ann Baker
 Sampler Signature: Brian Steinfeld
 Project No.: 60057-2-3, 3A, 3B, 3C

No. coolers this shipment: Contractor COC # 0005
 Carrier: Quote #: 7172
 Airbill No: P.O. No:

Field ID	SAMPLE CHARACTERIZATION				Date	Time	DEPTH	SOIL	WATER	COMPOST	GRA	CONTAINER	PRESERVATIVE		Tank No.	Sample Description	No. of CONTAINERS	Total	Remarks
	Uol	Dies	Ker	Unknowns															
B3-1 1-2	1545	3/5/97	12	X	402	402	X								B3-1, 1-2	1	1	X	
B3-1 13-14	1615		13		402	402									B3-1, 13-14	1	1		
B3A-1 4-5	1510		4		402	402									B3A-1, 4-5	1	1		
B3A-1 6-7	1510		6		402	402									B3A-1, 6-7	1	1		
B3A-1 6-7	1510		6		802	802									B3A-1, 6-7	1	1		
B3A-1 10-11	1525		10		402	402									B3A-1, 10-11	1	1	X	
B3B-1 4-5	0845	3/6/97	4		402	402									B3B-1 4-5	1	1		
B3B-1 13-14	0855		13		402	402									B3B-1, 13-14	1	1		
B3C-1 1-2	1050	3/5/97	1		402	402									B3C-1, 1-2	1	1		
B3C-1 13-14	1115		13		402	402									B3C-1, 13-14	1	1		

Relinquished by	Signature	DATE	TIME	Received by	Signature	DATE	TIME	Remarks
Brian Steinfeld		3/6/97	1600	Ann Baker		3/7/97	1005	Call with Highest TPH result
Ann Baker		3/7/97	1010					
				Received For Laboratory by				
						3/7/97	1010	



1381 Meadowlark Suite L Houston, Texas 77082
 (713) 589-0692 Fax (713) 589-0695

**CHAIN OF CUSTODY RECORD
 AND ANALYSIS REQUEST FORM**

Lab. Batch # 170500-SA

Contractor <i>KEF Consultants</i>		Phone (210) 680-3767		Contractor COC # 0005										
Address 6309 Wurzbach, Ste 100, San Antonio TX 78238		Project Director <i>Paul Hartnett</i>		Quote #:										
Project Name TJMPPL Monument		Project Manager <i>Ann Baker</i>		P.O. No: 7172										
Project Location Site 3, 3A, 3B, 3C		Project No. G10057-2-3, 3A, 3B, 3C		Airbill No:										
Sample Signature <i>Brian Siegfried</i>		Unit Dies Ker Unknown		Carrier:										
SAMPLE CHARACTERIZATION		Preservative		Airbill No:										
Field ID	Date	Time	DEPTH	WATER	COMPA	GRA B	Container Size	Type P, G	Ice	Other	Waste Oil	PT No:	Tank No:	Sample Description
B3C-2 5-6	3/5/97	1400	56	X			402	G	X					B3C-2, 5-6'
B3C-2 13-14	3/5/97	1450	13-14	X			402	G	X					B3C-2, 13-14
No. of CONTAINERS Total														
1 X X														
2 X X														
3														
4														
5														
6														
7														
8														
9														
10														
Remarks														
Please Hold														
ETEX (5030/8020-802)														
TPH (428)														
Turn-around														
- ASAP														
- 24 hrs														
- 48 hrs														
Standard														
Remarks														
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														
Remarks														
call with highest TPH result														
Relinquished by (Signature) <i>Brian Siegfried</i>		DATE 3/6/97		TIME 1600		Received by (Signature) <i>Ann Baker</i>		DATE 3/7/97		TIME 1005				
Relinquished by (Signature) <i>Ann Baker</i>		DATE 3/7/97		TIME 1010		Received by (Signature) <i>Ann Baker</i>		DATE 3/7/97		TIME 1010				
Relinquished by (Signature) <i>Ann Baker</i>		DATE 3/7/97		TIME 1010		Received by (Signature) <i>Ann Baker</i>		DATE 3/7/97		TIME 1010				



ANALYTICAL CHAIN OF CUSTODY REPORT CHRONOLOGY OF SAMPLES

K.E.I. Consultants, Inc.

XENCO COC#: 1-70560

Project Name: TNMPL Monument

Date Received in Lab: Mar 7, 1997 10:10 by CB

Project ID: 610057-2-3,3A,3B,3C
Project Manager: Ann Baker
Project Location: Sites 3,3A,3B,3C

XENCO contact : Carlos Castro/Edward Yonemoto

		Date and Time									
Field ID	Lab. ID	Method Name	Method ID	Units	Turn Around	Sample Collected	Addition Requested	Extraction	Analysis		
1 B3-1(1-2)	170560-001	BTEX	SW-846	ppm	Standard	Mar 5, 1997 15:45		Mar 10, 1997 by CB	Mar 10, 1997 22:53 by CB		
2		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 15:45		Mar 10, 1997 by HL	Mar 10, 1997 17:23 by HL		
3 B3-1(13-14')	170560-002	BTEX	SW-846	ppm	Standard	Mar 5, 1997 16:15		Mar 10, 1997 by CB	Mar 10, 1997 23:10 by CB		
4		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 16:15		Mar 10, 1997 by HL	Mar 10, 1997 17:26 by HL		
5 B3A-1(4-5')	170560-003	BTEX	SW-846	ppm	Standard	Mar 5, 1997 15:10		Mar 10, 1997 by CB	Mar 10, 1997 23:28 by CB		
6		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 15:10		Mar 10, 1997 by HL	Mar 10, 1997 17:29 by HL		
7 B3A-1(6-7')	170560-004	BTEX	SW-846	ppm	Standard	Mar 5, 1997 15:10		Mar 11, 1997 by CB	Mar 11, 1997 11:57 by CB		
8		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 15:10		Mar 10, 1997 by HL	Mar 10, 1997 17:34 by HL		
9 B3A-1(10-11')	170560-005	BTEX	SW-846	ppm	Standard	Mar 5, 1997 15:25		Mar 10, 1997 by CB	Mar 10, 1997 23:45 by CB		
10		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 15:25		Mar 10, 1997 by HL	Mar 10, 1997 17:37 by HL		
11 B3B-1(4-5')	170560-007	BTEX	SW-846	ppm	Standard	Mar 6, 1997 08:45		Mar 10, 1997 by CB	Mar 11, 1997 09:03 by CB		
12		TPH	EPA 418.1	ppm	Standard	Mar 6, 1997 08:45		Mar 10, 1997 by HL	Mar 10, 1997 17:41 by HL		
13 B3B-1(13-14')	170560-008	BTEX	SW-846	ppm	Standard	Mar 6, 1997 08:55		Mar 10, 1997 by CB	Mar 11, 1997 09:20 by CB		
14		TPH	EPA 418.1	ppm	Standard	Mar 6, 1997 08:55		Mar 10, 1997 by HL	Mar 10, 1997 17:44 by HL		
15 B3C-1(1-2')	170560-009	BTEX	SW-846	ppm	Standard	Mar 5, 1997 10:50		Mar 10, 1997 by CB	Mar 11, 1997 09:37 by CB		
16		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 10:50		Mar 10, 1997 by HL	Mar 10, 1997 17:47 by HL		
17 B3C-1(13-14')	170560-010	BTEX	SW-846	ppm	Standard	Mar 5, 1997 11:15		Mar 10, 1997 by CB	Mar 11, 1997 09:55 by CB		
18		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 11:15		Mar 10, 1997 by HL	Mar 10, 1997 17:50 by HL		
19 B3C-2(5-6')	170560-011	BTEX	SW-846	ppm	Standard	Mar 5, 1997 14:10		Mar 10, 1997 by CB	Mar 11, 1997 01:12 by CB		
20		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 14:10		Mar 10, 1997 by HL	Mar 10, 1997 17:53 by HL		
21 B3C-2(13-14')	170560-012	BTEX	SW-846	ppm	Standard	Mar 5, 1997 14:50		Mar 10, 1997 by CB	Mar 10, 1997 16:00 by CB		
22		TPH	EPA 418.1	ppm	Standard	Mar 5, 1997 14:50		Mar 10, 1997 by HL	Mar 10, 1997 17:56 by HL		

CERTIFICATE OF ANALYSIS SUMMARY 1-70560

K.E.I. Consultants, Inc.

Project ID: 610057-2-3,3A,3B,3C
 Project Manager: Ann Baker
 Project Location: Sites 3,3A,3B,3C

Project Name: *TNMPL Monument*

Date Received in Lab: Mar 7, 1997 10:10 by CB
 Date Report Faxed: Mar 12, 1997

XENCO contact: Carlos Castro/Edward Yonemoto

Analysis Requested	Lab ID: Field ID: Depth:	Date Analyzed - Analytical Results																		
		170560-001	170560-002	170560-003	170560-004	170560-006	170560-007	170560-008	170560-009	170560-010	ppm (mg/L - mg/Kg)									
BTEX by EPA 8020																				
Benzene	B3-1 1-2'	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 11, 1997	Mar 10, 1997	Mar 11, 1997	Mar 11, 1997	Mar 11, 1997	Mar 11, 1997	Mar 11, 1997	Mar 11, 1997	Mar 11, 1997	Mar 11, 1997	Mar 11, 1997	Mar 11, 1997				
Toluene	B3-1 13-14'	< 0.020	< 0.020	< 0.020	< 0.050	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ethylbenzene	B3A-1 4-5'	< 0.020	< 0.020	< 0.020	0.135	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
m,p-Xylenes	B3A-1 10-11'	< 0.020	< 0.020	< 0.020	0.082	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
o-Xylene	B3A-1 6-7'	< 0.040	< 0.040	< 0.040	0.387	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040	< 0.040
Total BTEX	B3-1 1-2'	< 0.020	< 0.020	< 0.020	0.102	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
	B3-1 13-14'	< 0.120	< 0.120	< 0.120	0.706	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120	< 0.120
Total Petroleum Hydrocarbons by EPA 418.1																				
Total Petroleum Hydrocarbons		Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997	Mar 10, 1997
		48.0	38.0	49.5	2830	31.5	37.0	52.0	36.0	56.0										

This report summary, and the entire report it represents, has been made for the exclusive and confidential use of K.E.I. Consultants, Inc. The interpretations and results expressed through this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories, however, assumes no responsibility and makes no warranty to the end use of the data hereby presented.


 Edward H. Yonemoto, Ph.D.
 QA/QC Manager



CERTIFICATE OF ANALYSIS SUMMARY 1-70560

K.E.I. Consultants, Inc.

Project Name: TNMPL Monument **Date Received in Lab : Mar 7, 1997 10:10 by CB**
Date Report Faxed: Mar 12, 1997
XENCO contact : Carlos Castro/Edward Yonemoto

Project ID: 610057-2-3,3A,3B,3C
Project Manager: Ann Baker
Project Location: Sites 3,3A,3B,3C

Analysis Requested	Lab ID: Field ID: Depth:	170560-011		170560-012		Date Analyzed - Analytical Results	ppm (mg/L - mg/Kg)
		B3C-2	5-6'	B3C-2	13-14'		
BTEX by EPA 8020							
Benzene		Mar 11, 1997	< 0.020	Mar 10, 1997	< 0.020		
Toluene			< 0.020		< 0.020		
Ethylbenzene			< 0.020		< 0.020		
m,p-Xylenes			< 0.040		< 0.040		
o-Xylene			< 0.020		< 0.020		
Total BTEX			< 0.120		< 0.120		
Total Petroleum Hydrocarbons by EPA 418.1							
Total Petroleum Hydrocarbons		Mar 10, 1997	30.5	Mar 10, 1997	26.5		

[Signature]
Edward Yonemoto, Ph.D.
QA/QC Manager

This report summary, and the entire report it represents, has been made for the exclusive and confidential use of K.E.I. Consultants, Inc. The interpretations and results expressed through this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories, however, assumes no responsibility and makes no warranty to the end use of the data hereby presented.



Certificate of Quality Control for Batch : 17A25A73

SW- 346 5030/3020 BTEX

Date Validated: Mar 11, 1997 10:00

Date Analyzed: Mar 10, 1997 13:07

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: CB

Matrix: Solid

MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY

Q.C. Sample ID 170565-002	Parameter	[A]	[B]	[C]	[D]	[E]	[F]		[G]	[H]	[I]	[J]
		Sample Result ppm	Matrix Spike Result ppm	Matrix Spike Duplicate Result ppm	Matrix Spike Amount ppm	Method Detection Limit ppm	Matrix Limit Relative Difference %	QC Spike Relative Difference %	QC Matrix Spike Recovery %	QC M.S.D. Recovery %	QC Matrix Spike Recovery Range %	Qualifier
	Benzene	< 0.020	2.160	2.020	2.000	0.020	25.0	6.7	108.0	101.0	65-135	
	Toluene	< 0.020	2.060	1.938	2.000	0.020	25.0	6.1	103.0	96.9	65-135	
	Ethylbenzene	< 0.020	2.180	2.040	2.000	0.020	25.0	6.6	109.0	102.0	65-135	
	m,p-Xylenes	< 0.040	4.440	4.180	4.000	0.040	25.0	6.0	111.0	104.5	65-135	
	o-Xylene	< 0.020	2.180	2.040	2.000	0.020	25.0	6.6	109.0	102.0	65-135	

Spike Relative Difference [F] = $100 \cdot (B-C)/(B+C)$

Matrix Spike Recovery [G] = $100 \cdot (B-A)/(D)$

M.S.D. = Matrix Spike Duplicate

M.S.D. Recovery [H] = $100 \cdot (C-A)/(D)$

N.D. = Below detection limit or not detected

All results are based on MDL and validated for QC purposes


 Edward H. Yonemoto, Ph.D.
 QA/QC Manager



Certificate of Quality Control for Batch : 17A25A74

SW- 846 5030/8020 BTEX

Date Validated: Mar 11, 1997 11:00
 Date Analyzed: Mar 10, 1997 22:18
 QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: CB
 Matrix: Solid

MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY

Q.C. Sample ID 170563-001	Parameter	[A] Sample Result ppm	[B] Matrix Spike Result ppm	[C] Matrix Spike Duplicate Result ppm	[D] Matrix Spike Amount ppm	[E] Method Detection Limit ppm	Matrix Limit Relative Difference %	[F]		[G]		[H]		[I] Matrix Spike Recovery Range %	[J] Qualifier
								Spike Relative Difference %	QC	Matrix Spike Recovery %	QC	M.S.D. Recovery %			
	Benzene	< 0.020	1.762	1.798	2.000	0.020	25.0	2.0	88.1	89.9	89.9	89.9	89.9	65-135	
	Toluene	< 0.020	1.784	1.842	2.000	0.020	25.0	3.2	89.2	92.1	92.1	92.1	92.1	65-135	
	Ethylbenzene	< 0.020	1.856	1.934	2.000	0.020	25.0	4.1	92.8	96.7	96.7	96.7	96.7	65-135	
	m,p-Xylenes	< 0.040	3.740	3.940	4.000	0.040	25.0	5.2	93.5	98.5	98.5	98.5	98.5	65-135	
	o-Xylene	< 0.020	1.808	1.928	2.000	0.020	25.0	6.4	90.4	96.4	96.4	96.4	96.4	65-135	

Spike Relative Difference [F] = 200*(B-C)/(B+C)
 Matrix Spike Recovery [G] = 100*(B-A)/[D]
 M.S.D. = Matrix Spike Duplicate
 M.S.D. Recovery [H] = 100*(C-A)/[D]
 N.D. = Below detection limit or not detected
 All results are based on MDL and validated for QC purposes

[Signature]
 Edward H. Yonemoto, Ph.D.
 QA/QC Manager



Certificate of Quality Control for Batch : 17A25A75

SW- 846 5030/8020 BTEX

Date Validated: Mar 11, 1997 16:30

Date Analyzed: Mar 11, 1997 09:38

QA/QC Manager: Edward H. Yonemoto, Ph.D.

Analyst: CB

Matrix: Solid

Q.C. Sample ID 170563-002	Parameter	MATRIX SPIKE / MATRIX SPIKE DUPLICATE AND RECOVERY											
		[A] Sample Result ppm	[B] Matrix Spike Result ppm	[C] Matrix Spike Duplicate Result ppm	[D] Matrix Spike Amount ppm	[E] Method Detection Limit ppm	[F] Matrix Limit Relative Difference %	[G] QC Matrix Spike Recovery %	[H] QC M.S.D. Recovery %	[I] Matrix Spike Recovery Range %	[J] Qualifier		
Benzene	< 0.020	1.866	1.784	2.000	0.020	25.0	93.3	89.2	65-135				
Toluene	< 0.020	1.884	1.810	2.000	0.020	25.0	94.2	90.5	65-135				
Ethylbenzene	< 0.020	1.872	1.800	2.000	0.020	25.0	93.6	90.0	65-135				
m,p-Xylenes	< 0.040	3.840	3.680	4.000	0.040	25.0	96.0	92.0	55-135				
o-Xylene	< 0.020	1.882	1.812	2.000	0.020	25.0	94.1	90.6	65-135				

Spike Relative Difference [F] = 200*(B-C)/(B+C)
 Matrix Spike Recovery [G] = 100*(B-A)/[D]
 M.S.D. = Matrix Spike Duplicate
 M.S.D. Recovery [H] = 100*(C-A)/[D]
 N.D. = Below detection limit or not detected
 All results are based on MDL and validated for QC purposes


 Edward H. Yonemoto, Ph.D.
 QA/QC Manager



Certificate Of Quality Control for Batch : 17A30A82

EPA 418.1 Total Petroleum Hydrocarbons

Date Validated: Mar 11, 1997 11:00

Analyst: HL

Date Analyzed: Mar 10, 1997 17:29

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

MATRIX SPIKE ANALYSIS

Q.C. Sample ID 170560- 003	[A]	[B]	[C]	[D]	[E]	[F]	[G]
	Sample Result	Matrix Spike Result	Matrix Spike Amount	Method Detection Limit	QC	LIMITS	
Parameter	ppm	ppm	ppm	ppm	Matrix Spike Recovery %	Recovery Range %	Qualifier
Total Petroleum Hydrocarbons	49.50	211	198	7.50	81.7	65-135	

Matrix Spike Recovery [E] = 100*(B-A)/(C)

N.C. = Not calculated, data below detection limit

N.D. = Below detection limit

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


Edward H. Yonemoto, Ph.D.
QA/QC Manager



Certificate Of Quality Control for Batch : 17A30A82

EPA 418.1 Total Petroleum Hydrocarbons

Date Validated: Mar 11, 1997 11:00

Analyst: HL

Date Analyzed: Mar 10, 1997 17:34

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

MATRIX DUPLICATE ANALYSIS						
Q.C. Sample ID 170560- 004	[A]	[B]	[C]	[D]	[E]	[F]
	Sample Result	Duplicate Result	Method Detection Limit	QC Relative Difference	LIMITS Relative Difference	
Parameter	ppm	ppm	ppm	%	%	
Total Petroleum Hydrocarbons	2830	3170	75.0	11.3	30.0	

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

N.C. = Not calculated, data below detection limit

N.D. = Below detection limit

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


Edward H. Yonemoto, Ph.D.
QA/QC Manager



Certificate Of Quality Control for Batch : 17A30A82

EPA 413.1 Total Petroleum Hydrocarbons

Date Validated: Mar 11, 1997 11:00

Analyst: HL

Date Analyzed: Mar 10, 1997 17:11

Matrix: Solid

QA/QC Manager: Edward H. Yonemoto, Ph.D.

BLANK SPIKE ANALYSIS

Parameter	[A]	[B]	[C]	[D]	[E]	[F]	[G] Qualifier
	Blank Result	Blank Spike Result	Blank Spike Amount	Method Detection Limit	QC	LIMITS	
	ppm	ppm	ppm	ppm	Blank Spike Recovery %	Recovery Range %	
Total Petroleum Hydrocarbons	< 7.50	186	198	7.50	94.1	65-135	

Blank Spike Recovery [E] = 100*(B-A)/(C)
 N C = Not calculated, data below detection limit
 N D. = Below detection limit
 All results are based on MDL and validated for QC purposes only


 Edward H. Yonemoto, Ph.D.
 QA/QC Manager

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

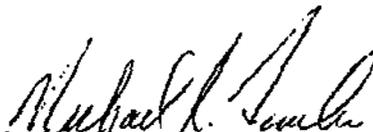
TEXAS NEW MEXICO PIPE LINE COMPANY
ATTN: MR. TONY SAVOIE
P.O. BOX 1030
JAL. NM 88252
FAX: 915-395-2636

RECEIVING DATE: 04/08/97
SAMPLE TYPE: SOIL
PROJECT: TNMPL SITE #3A-3C-3B-4
PROJECT NAME: NONE GIVEN
PROJECT LOCATION: MONUMENT, NM.

ANALYSIS DATE: 04/08/97
SAMPLING DATE: 04/07/97
SAMPLE CONDITION: Intact/fced

ELT#	FIELD CODE	TPH (mg/kg)
10679	3B - AREA 3 - NORTH SIDE WALL	130
10680	3B - AREA 3 - SOUTH SIDE WALL	550
10681	3B - AREA 3 - EAST SIDE WALL	140
10682	3B - AREA 2 - BOTTOM HOLE	<10
10683	3B - AREA 2 - NORTH SIDE WALL	40
10684	3B - AREA 2 - WEST SIDE WALL	160
10685	SITE 4 - NORTH WEST SIDE WALL	4,440
10686	SITE 4 - SOUTH WEST SIDE WALL	3,260
10687	SITE 4 - BOTTOM HOLE	1,980
10688	SITE 4 - NORTH EAST SIDE WALL	860
10689	SITE 4 - SOUTH EAST SIDE WALL	1,330
	QUALITY CONTROL	216
	TRUE VALUE	202
	% PRECISION	107

Methods: EPA 418.1


Michael R. Fowler

4-8-97
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY
ATTN: MR. TONY SAVOIE
P.O. BOX 1030
JAL, NM 88252
FAX: 915-395-2636

RECEIVING DATE: 04/08/97
SAMPLE TYPE: SOIL
PROJECT: TNMPL SITE #3A-3C-3B-4
PROJECT NAME: NONE GIVEN
PROJECT LOCATION: MONUMENT, NM.

ANALYSIS DATE: 04/08/97
SAMPLING DATE: 04/07/97
SAMPLE CONDITION: Intact/Iced

ELT#	FIELD CODE	TPH (mg/kg)
10669	3A - BOTTOM HOLE	200
10670	3A - NORTH SIDE WALL	250
10671	3A - WEST SIDE WALL	4,360
10672	3A - SOUTH SIDE WALL	1,230
10673	3A - EAST SIDE WALL	130
10674	3A - DEEP BOTTOM HOLE	190
10675	3C - EAST SIDE WALL	100
10676	3B - AREA 1 - BOTTOM HOLE	20
10677	3B - AREA 3 - BOTTOM HOLE	<10
10678	3B - AREA 3 - WEST SIDE WALL	40

QUALITY CONTROL	211
TRUE VALUE	202
% PRECISION	104

Methods: EPA 418.1


Michael R. Fowler

4-8-97
Date

Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763
 (915) 563-1800 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Phone #: 915/682-3546
 FAX #: 915/682-4182

ANALYSIS REQUEST

Company Name & Address

ALLSTATE SERVICES ENVIRONMENTAL, MIDLAND, TEXAS

Project #:

Project Name:

TAMPA SITE 3A-3C-3B + 4

Project Location

Sampler Signature

Accumant. N. Mex

[Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING DATE	TIME	
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICR			NONE
10680	B-B ARCA 3 South S.W.	1		✓				✓					4-7-97 16:25	
10681	B-B ARCA 3 East S.W.	1		✓				✓					4-7-97 16:25	
10682	B-B ARCA 2 Bottom H.	1		✓				✓					4-7-97 16:37	
10683	B-B ARCA 2 North S.W.	1		✓				✓					4-7-97 16:37	
10684	B-B ARCA 2 West S.W.	1		✓				✓					4-7-97 16:40	
10685	SITE 4- N.W. SIDEWALK	1		✓				✓					4-7-97 16:46	
10686	SITE 4- S.W. SIDEWALK	1		✓				✓					4-7-97 16:48	
10687	SITE 4- Bottom H.H.	1		✓				✓					4-7-97 16:52	
10688	SITE 4- N.E. SIDEWALK	1		✓				✓					4-7-97 16:55	
10689	SITE 4- S.E. SIDEWALK	1		✓				✓					4-7-97 17:00	

Retrieved by:

[Signature]

Time:

0730

Retrieved by:

[Signature]

Time:

0930

Retrieved by:

[Signature]

Time:

REMARKS

Retrieved by:	Time:	Received by:	Time:
<i>[Signature]</i>	0730	<i>[Signature]</i>	0930
<i>[Signature]</i>		<i>[Signature]</i>	

Retrieved by:

[Signature]

Time:

Retrieved by:

[Signature]

REMARKS

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE
ATTN: MR. TONY SAVOIE
P.O. BOX 1030
JAL. NEW MEXICO 88252
FAX: 505-395-2636
FAX: 915-882-4182

Receiving Date: 04/18/97
Sample Type: SOIL
Project #: SITE #4, 3B, 3A
Project Name: TEXAS NEW MEXICO
Project Location: LEA CO. NEW MEXICO

Analysis Date: 04/21/97
Sampling Date: 04/18/97
Sample Condition: Intact/Iced

ELT#	FIELD CODE	TPH mg/kg
10871	970418, SITE 4 E. SIDE WALL	24
10872	970418, SITE 4 N. SIDE WALL	152
10873	970418, SITE 4 W. SIDE WALL	88
10874	970418, SITE 4 S. SIDE WALL	160
10875	970418, SITE 4 BOTTOM HOLE	120
10876	970418, N. DIRT PILE	1,600
10877	970418, S. DIRT PILE	672
10878	970418, BACKGROUND #4	104
10879	970418, BACKGROUND 3-B	24
10880	970418, 3-B N. DIRT PILE	2,872
10881	970418, 3-B S. DIRT PILE	25,120
10882	970418, 3-A BOTTOM HOLE	48
10883	970418, 3A-W. SIDE WALL	208
10884	970418, 3A-N. SIDE WALL	104
10885	970418, 3A-S. SIDE WALL	<10
10886	970418, 3A-E. DIRT PILE	3,640
10887	970418, 3A-W. DIRT PILE	200
10888	970418, 3A- BACKGROUND	56
	BLANK	<10
	% INSTRUMENT ACCURACY	109
	% EXTRACTION ACCURACY	90

METHOD: EPA 418.1


Michael R. Fowler

4-21-97
Date

**Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763
 (915) 563-1800 FAX (915) 563-1713**

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Phone #: 915/682-3546
 FAX #: 915/682-4182

Company Name & Address:

ALLSTATE SERVICES ENVIRONMENTAL, MIDLAND, TEXAS

Project #:

SITE # 4 + 3-B

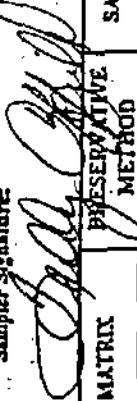
Project Name:

TEX NEW MEX

Project Location:

LEA CO. NMEX

Sampler Signature:

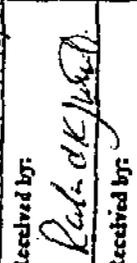


LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	NONE	OTHER	DATE	TIME
10B71	970418 SITE 4 E. SIDEWALK	1		✓								✓		4/18/97	0944
10B72	970418 SITE 4 N. SIDEWALK	1		✓								✓		4/18/97	0945
10B73	970418 SITE 4 W. SIDEWALK	1		✓								✓		4/18/97	0950
10B74	970418 SITE 4 S. SIDEWALK	1		✓								✓		4/18/97	0954
10B75	970418 SITE 4 Bottom Hole	1		✓								✓		4/18/97	0957
10B76	970418 D. DIRT PILE	1		✓								✓		4/18/97	1003
10B77	970418 S. DIRT PILE	1		✓								✓		4/18/97	1010
10B78	970418 BACKGROUND #4	1		✓								✓		4/18/97	1020
10B79	970418 BACKGROUND 3-B	1		✓								✓		4/18/97	1100
10B80	970418 3-B N DIRT PILE	1		✓								✓		4/18/97	1110
10B81	970418 3-B S. DIRT PILE	1		✓								✓		4/18/97	1115

ANALYSIS REQUEST

BTEX 8020/5030	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	ROI
✓	✓	✓	✓	✓	✓	✓	✓

REMARKS

Relinquished by:	Date:	Received by:	Date:	Relinquished by:	Date:	Received by:	Date:
	4-18-97	14:25				Received by Laboratory	

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY
ATTN: MR. TONY SAVOIE
P.O. BOX 1030
JAL. NM 88252
FAX: 915-682-4182
FAX: 505-395-2636

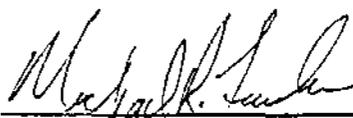
Receiving Date: 04/18/97
Sample Type: SOIL
Project: SITE #4, 3B, 3A
Project Location: LEA CO, NEW MEXICO

Analysis Date: 04/21/97
Sampling Date: 04/18/97
Sample Condition: Intact/Iced

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg
10871	970418, SITE 4 E. SIDE WALL	0.183	<0.100	<0.100	<0.100	<0.100
10872	970418, SITE 4 N. SIDE WALL	<0.100	<0.100	<0.100	<0.100	<0.100
10873	970418, SITE 4 W. SIDE WALL	0.205	<0.100	<0.100	<0.100	<0.100
10874	970418, SITE 4 S. SIDE WALL	0.130	<0.100	<0.100	<0.100	<0.100
10875	970418, SITE 4 BOTTOM HOLE	0.412	0.236	0.190	0.271	0.157
10882	970418, 3-A BOTTOM HOLE	0.144	<0.100	<0.100	<0.100	<0.100
10883	970418, 3A-W. SIDE WALL	0.135	<0.100	<0.100	<0.100	<0.100
10884	970418, 3A-N. SIDE WALL	0.114	<0.100	<0.100	<0.100	<0.100
10885	970418, 3A-S. SIDE WALL	<0.100	<0.100	<0.100	<0.100	<0.100

% IA	104	105	110	109	110
% EA	93	97	100	98	98
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: SW 846-8020,5030


Michael R. Fowler

4-22-97
Date

**Environmental Lab of Texas, Inc. 12600 West 120 East Odessa, Texas 79763
 (915) 563-1800 FAX (915) 563-1713**

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Phone #: 915/682-3546 FAX #: 915/682-4182

Company Name & Address: ALLSTATE SERVICES ENVIRONMENTAL, MIDLAND, TEXAS

Project #: 3-A
Project Name: Tex New Mex 3-A

Project Location: LEA CO. N.MEX
Sampler Signature: *[Signature]*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						PRESERVATIVE METHOD				SAMPLING		
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	NONE	OTHER	DATE	TIME	
10082	3-A Bottom Hole	1		✓								✓			4-8-97	
10083	3A-W SIDEWALL	1		✓								✓			4-8-97	
10084	3A-N SIDEWALL	1		✓								✓			4-8-97	
10085	3A-S SIDEWALL	1		✓								✓			4-8-97	
10086	3AE. DIRT PILE	1		✓								✓			4-8-97	
10087	3A-W DIRT PILE	1		✓								✓			4-8-97	
10088	3A-BACKGROUND	1		✓								✓			4-8-97	

Received by:	Date:	Time:	REMARKS
<i>[Signature]</i>	4-18-97	14:25	
Received by:	Date:	Time:	
Received by:	Date:	Time:	

ANALYSIS REQUEST
BTEX 8120/5030
TPH 418.1
TCLP Metals Ag As Ba Cd Cr Pb Hg Se
Total Metals Ag As Ba Cd Cr Pb Hg Se
TCLP Volatiles
TCLP Semi Volatiles
TDS
RCI

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

TEXAS NEW MEXICO PIPE LINE COMPANY
ATTN: MR. TONY SAVOIE
P.O. BOX 1030
JAL. NM 88252
FAX: 915-682-4182
FAX: 505-395-2636

RECEIVING DATE: 04/21/97
SAMPLE TYPE: SOIL
PROJECT #: SITE 3-A
PROJECT NAME: TNM 3A
PROJECT LOCATION: LEA CO. NEW MEXICO

ANALYSIS DATE: 04/22/97
SAMPLING DATE: 04/21/97
SAMPLE CONDITION: Intact/Iced

ELT#	FIELD CODE	TPH (mg/kg)
10903	970421 WSW	20

QUALITY CONTROL	278
TRUE VALUE	264
% PRECISION	105

Methods: EPA 418.1


Michael R. Fowler

4-22-97
Date

CERTIFICATE OF WASTE STATUS

NON-EXEMPT WASTE MATERIAL

Originating Location: TNM Sites 3, 3A, 3B, 3C + 4 Monument area, Lea County

Source: Crude Oil Pipeline SPILL

Disposal Location: C + C Land Farm Inc. 2 miles South of Monument NM

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's July 1988 Regulatory Determination. To my knowledge, this waste will either be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous or has been verified non-hazardous due to "Knowledge of Process." I further certify that to my knowledge no "hazardous or listed wastes" pursuant to the provisions of 40 CFR Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3 (b).

I, the undersigned as the agent for the Texas New Mexico Pipeline Co.
concur with the status of the waste from the subject site.

NAME John A. Savoie

TITLE/AGENCY Senior Tech

ADDRESS P.O. Box 1030

SIGNATURE John A. Savoie

DATE 4-23-97

UDD HUBBS
OFFICE
APR 23 1997
RECEIVED

District I - (505) 393-6161
 P. O. Box 1980
 Hobbs, NM 88241-1980
 District II - (505) 748-1283
 811 S. First
 Artesia, NM 88210
 District III - (505) 334-6178
 1000 Rio Brazos Road
 Aztec, NM 87410
 District IV - (505) 827-7131

New Mexico
 Energy Minerals and Natural Resources Department
 Oil Conservation Division
 2040 South Pacheco Street
 Santa Fe, New Mexico 87505
 (505) 827-7131

Form C-13
 Originated 8/8/9

Submit Origin:
 Plus 1 Cop
 to appropriate
 District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> <i>PFA 20 P.P.C.R. - NR 404 4/23/97</i>	4. Generator <i>Texas N.M. Pipeline Company</i>
Verbal Approval Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	5. Originating Site <i>Cooper Sites 3, 3A, 3B, 3C & 4</i>
2. Management Facility Destination <i>C + C Land Farm Inc.</i>	6. Transporter <i>Turner Trucking</i>
3. Address of Facility Operator <i>2 miles South of Monument</i>	8. State <i>New Mexico</i>
7. Location of Material (Street Address or ULSTR) <i>NE 1/4 SW 1/4 Sect. 36, T19S, R36E</i>	
9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. (B) All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport.	

BRIEF DESCRIPTION OF MATERIAL:

Crude oil Affected Soil

Non Hazardous By Knowledge of Process N.M.D.C.D

Approved November, 1996

UCC HOBBS
 APR 23 1997
 RECEIVED

Estimated Volume 3000 cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: *Jimmy T. Cooper* TITLE: Pres. DATE: 4-16-97
Waste Management Facility Authorized Agent
 TYPE OR PRINT NAME: Jimmy T. Cooper TELEPHONE NO. _____

(This space for State Use)
 APPROVED BY: *[Signature]* TITLE: Finer Finer DATE: 4/23/97
 APPROVED BY: _____ TITLE: _____ DATE: _____