IRP-200
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CLOSURE REPORT

TEXAS - NEW MEXICO PIPE LINE COMPANY
TNM-96-S14 (STEPHEN'S PROPERTY)
SECTION 14, TOWNSHIP 21 SOUTH, RANGE 37 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-96-S14 (STEPHEN'S PROPERTY)
SECTION 14, TOWNSHIP 21 SOUTH, RANGE 37 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

M. Kay Hawthorne, REM

Theresa Nix
Project Manager

Pat Bullinger, P.E.

KEI Job No. 710031-1

April 29, 1999

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PURPOSE AND SCOPE

The purpose of the site closure activities was to obtain closure for the site based on New Mexico Oil Conservation Division (OCD) regulations. The scope of activities performed to achieve this objective consisted of:

- determination of OCD closure standards
- excavation of soils above OCD standard closure levels
- characterization of excavated impacted soil
- confirmation sampling in excavation
- off-site landfarming of impacted soil

5-12-1999

PREVIOUS INVESTIGATION

The Texas - New Mexico Pipe Line Company (TNMPL) release site is located approximately 2 miles north of Eunice, Lea County, New Mexico in Section 14, Township 21 South, Range 37 East. A site plan is presented as FIG. 1.

A hydrocarbon release from a TNMPL 4 inch pipeline was identified at the site during July of 1997. The release appeared to migrate down hill into a former Chevron pit, accumulated on a portion of the pit surface, and then migrated off the former pit into adjacent pasture land. The boundaries of the former Chevron pit and the TNMPL release surface stain were clearly visible. Based on available information, it appeared the former pit was being remediated on the surface (plow and fertilizer), but no vertical delineation had been performed, to our knowledge.

KEI conducted an initial release response subsurface investigation from July 25, 1997 through August 6, 1997. The purpose of the investigation was to assess the extent of hydrocarbons across the site. The scope of work included installing 13 soil borings, collecting native soil samples, and submitting the samples for determination of total petroleum hydrocarbon (TPH) concentrations. Details of the initial release response investigation are presented in the KEI report dated December 1, 1997. A Remedial Action Plan (RAP) was submitted by KEI in a letter dated November 24, 1997.

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:

Depth to Ground Water	45 to 50 Feet (assumed)	20 Points
Well Head Protection	Unknown distance to Water Source Unknown distance to Private Water Source	0 Points
Surface Water Body	Unknown distance	0 Points
	Total Ranking Score	**20 Points**

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

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

SOIL EXCAVATION, CHARACTERIZATION, LANDFARMING, AND CONFIRMATION

After receiving OCD approval of the Remedial Action Plan on July 16, 1998, hydrocarbon-impacted soil was excavated and stockpiled on-site. In the former Chevron pit area, soils were excavated to the depth of the visible stain (approximately 4.5 feet) and the remainder of the pit area was turned over to Chevron for further action. As approved in the RAP, confirmation sampling was not performed in the Chevron pit because of the presence of hydrocarbon in this pit prior to the TNMPL release. The approximate dimensions and depths of the excavation and soils removed are summarized below:

MEASUREMENT	VALUE
Approximate Length	375 feet
Approximate Width	5 to 45 feet
Approximate Area	8,000 square feet
Approximate Depth	0 to 6 feet
Volume Landfarmed	1110 cubic yards
Assumed Depth to Water	45 to 50 feet

The stockpiled soils were transported to the EPL Landfarm located approximately 3 miles south of Eunice, New Mexico on July 31, 1998. Disposal documentation is included in APPENDIX C. Analytical results from composite samples of the stockpiled soils indicated the following concentration ranges:

CONSTITUENT	CONCENTRATION RANGE (mg/kg)
BENZENE	ND
BTEX	ND
TPH	56 and 88

Soil samples from the side and bottom of the initial excavation were submitted for determination of BTEX and TPH concentrations. KEI personnel collected 10 samples on August 7, 1998. Three of the sampled areas from the initial excavation exceeded the TPH cleanup standard. Additional soils were excavated in these areas and TNMPL personnel

collected an additional 8 samples on August 18, 1998. Final concentration ranges of the sidewall and bottom soils are summarized below:

CONSTITUENT	CONCENTRATION RANGE (mg/kg)
BENZENE	ND to 0.885
BTEX	ND to 11.135
TPH	ND to 276

Soil analytical results are summarized in TABLE I. Although samples No. 27 and No. 29 obtained from the bottom of the excavation within the roadway slightly exceed the TPH closure standard of 100 mg/kg, excavation was halted to avoid damage to the underlying roadbed. All other samples are within closure limits. The laboratory report and chain-of-custody documentation are provided in APPENDIX A.

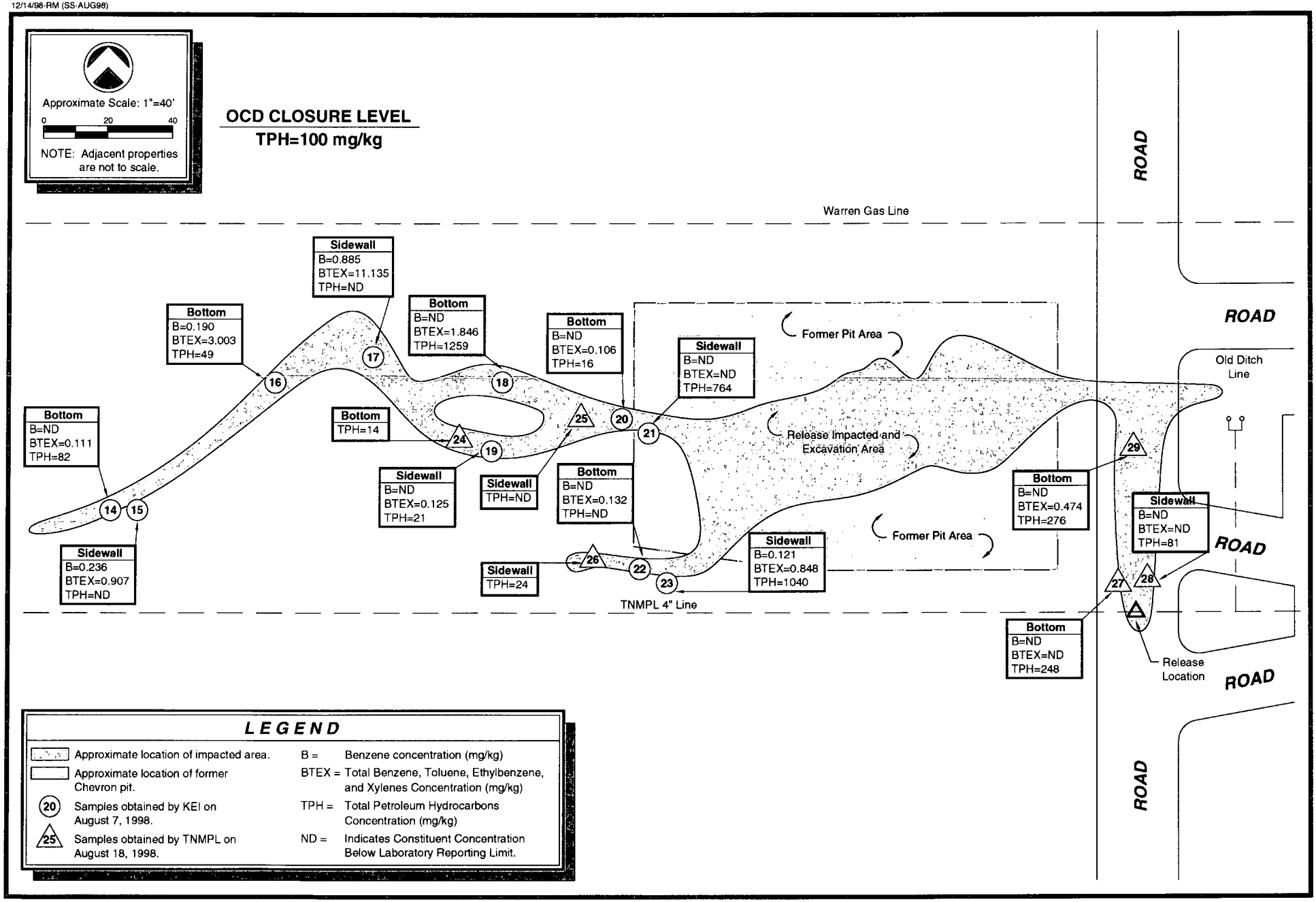
CLOSURE SUMMARY

The following can be summarized from field and laboratory data:

- previously impacted soil was excavated, stockpiled, and landfarmed off-site
- samples obtained from the excavated area indicated BTEX and TPH concentrations below closure standards, with the exception of two samples within the roadway, which had TPH concentrations of 248 and 276 mg/kg

Based on activities completed at the site and analytical results from selected soil samples, we request the site be closed under OCD regulations.

12/14/98-RM (SS-AUG98)



k·e·i	*SOIL SAMPLE RESULTS - AUGUST 1998*	710031-1
	TNMPL TNM-96-S14 **LEA COUNTY, NEW MEXICO**	**FIG 1**

TABLE I

SUMMARY OF SOIL RESULTS - BTEX AND TPH
TEXAS - NEW MEXICO PIPE LINE COMPANY
TNM-96-S14
LEA COUNTY, NEW MEXICO

SAMPLE LOCATION	SAMPLE DATE	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL-BENZENE (mg/kg)	XYLENES (mg/kg)	TOTAL BTEX (mg/kg)	TPH (mg/kg)
#14 Excavation Bottom	08/07/98	ND	ND	ND	0.111	0.111	82
#15 Excavation Sidewall	08/07/98	0.236	ND	0.168	0.503	0.907	ND
#16 Excavation Bottom	08/07/98	0.190	0.234	0.560	2.019	3.003	49
#17 Excavation Bottom	08/07/98	0.885	1.68	2.03	6.54	11.135	ND
#18 Excavation Bottom	08/07/98	ND	0.186	0.377	1.283	1.846	1,259
#19 Excavation Sidewall	08/07/98	ND	ND	ND	ND	0.125	21
#20 Excavation Bottom	08/07/98	ND	ND	ND	ND	0.106	16
#21 Excavation Sidewall	08/07/98	ND	ND	ND	ND	ND	764
#22 Excavation Bottom	08/07/98	ND	ND	ND	ND	0.132	ND
#23 Excavation Sidewall	08/07/98	0.121	0.224	0.118	0.385	0.848	1,040
#24 Excavation Bottom (Replaced #18)	08/18/98	---	---	---	---	---	14
#25 Excavation Sidewall (Replaced #21)	08/18/98	---	---	---	---	---	ND
#26 Excavation Sidewall (Replaced #23)	08/18/98	---	---	---	---	---	24
#27 Excavation Bottom	08/18/98	ND	ND	ND	ND	ND	248
#28 Excavation Sidewall	08/18/98	ND	ND	ND	ND	ND	81
#29 Excavation Bottom	08/18/98	ND	ND	0.108	0.366	0.474	276
#30 Stock Pile Composite	08/18/98	ND	ND	ND	ND	ND	88
#31 Stock Pile Composite	08/18/98	ND	ND	ND	ND	ND	56

NOTES:
ND - Indicates constituent was not detected above the method dection or reporting limit.
--- - Indicates constituent was not analyzed.

Method reporting/detction limits:
BTEX - 0.100 mg/kg
TPH - 10 mg/kg

Laboratory test methods:
BTEX - EPA Method SW846-8020
TPH - Modified EPA Method 81015 Diesel Range Organics

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

KEI
ATTN: THERESA NIX
5309 WURZBACH SUITE 100
SAN ANTONIO, TEXAS 78238
FAX: 210-680-3763
FAX: 505-395-2636

Receiving Date: 08/07/98
Sample Type: SOIL
Project #:710031-1-0, Steven's
Project Location: EUNICE

Analysis Date: 08/07/98
Sampling Date: 08/07/98
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 (DRO) C10-C28 mg/kg
15066	#14 Bottom of Excavation	<0.100	<0.100	<0.100	0.111	<0.100	82
15067	#15 Side of Excavation	0.236	<0.100	0.168	0.271	0.232	<10
15068	#16 Bottom of Excavation	0.190	0.234	0.560	1.31	0.709	49
15069	#17 Bottom of Excavation	0.885	1.68	2.03	3.64	2.90	<10
15070	#18 Bottom of Excavation	<0.100	0.186	0.377	0.784	0.499	1,259
15071	#19 Side of Excavation	<0.100	<0.100	<0.100	0.125	<0.100	21
15072	#20 Bottom of Excavation	<0.100	<0.100	<0.100	0.106	<0.100	16
15073	#21 Side of Excavation	<0.100	<0.100	<0.100	<0.100	<0.100	764
15074	#22 Bottom of Excavation	<0.100	<0.100	<0.100	0.132	<0.100	<10
15075	#23 Side of Excavation	0.121	0.224	0.118	0.272	0.113	1,040
	% IA	93	95	93	92	96	101
	% EA	91	93	92	91	95	106
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: SW 846-8020,5030 , 8015m DRO

Raland K. Tuttle

8-8-98
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: Theresa Nix
Phone #: 210-680-3767
FAX #: 210-680-3763
Company Name & Address: K-E-I Consultants
Project #: 710031-1-0
Project Name: STEVEN'S
Project Location: Eunice
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8020/5030	TPH 8015 DRO - Basin	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
15066	#14	Bottom of Excavation	2	902	✓						✓			8-7-98	7:45	✓	✓						
15067	#15	Side of Excavation	2												7:51								
15068	#16	Bottom of Excavation	2												8:10								
15069	#17	Bottom of Excavation	2												8:15								
15070	#18	Bottom of Excavation	2												8:22								
15071	#19	Side of Excavation	2												8:28								
15072	#20	Bottom of Excavation	2												8:32								
15073	#21	Side of Excavation	2												8:35								
15074	#22	Bottom of Excavation	2												8:40								
15075	#23	Side of Excavation	2	↓	↓						↓			↓	8:38	↓	↓						

Relinquished by:	Date:	Time:	Received by:
	8-7-98	1:06 pm (1:15 pm)	
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by Laboratory:

REMARKS:
- Please Fax Results to Theresa Nix at 210-680-3767 and Tony Savoie at 505-395-2636
- BTEX: EPA method SW846-8020
- TPH: EPA Method MDRO 8015
- Rush on Results (Saturday)

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

Receiving Date: 08/18/98
Sample Type: Soil
Project #: TNM 96-514
Project Name: Stephens
Project Location: 2 mi. North of Eunice

Analysis Date: 08/18/98
Sampling Date: 08/18/98
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 (DRO) C10-C28 (mg/kg)
15219	#24 Bottom Hole	*	*	*	*	*	14
15220	#25 Side Wall	*	*	*	*	*	<10
15221	#26 Side Wall	*	*	*	*	*	24
15222	#27 Bottom Hole	<0.100	<0.100	<0.100	<0.100	<0.100	248
15223	#28 Side Wall	<0.100	<0.100	<0.100	<0.100	<0.100	81
15224	#29 Bottom Hole	<0.100	<0.100	0.108	0.253	0.113	276
15225	#30 Stock Pile	<0.100	<0.100	<0.100	<0.100	<0.100	88
15226	#31 Stock Pile	<0.100	<0.100	<0.100	<0.100	<0.100	56
	% IA	91	98	100	98	102	103
	% EA	81	87	87	85	91	81
	BLANK	<0.001	<0.001	<0.001	<0.001	<0.001	<10

METHODS: EPA SW 846-8020,5030, 8015M DRO

Raland K. Tuttle

8-19-98
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 #:

FAX #: 505-395-2636

Company Name & Address:
Texas N M. Pipeline Co.

Project #: TNM 96-514

Project Name: Stephens

Project Location:
12 mi North of Eunice

Sampler Signature: J. R. Bowie

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	BTEX 81020/5030	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	TDH 8015 DRO M
15219	#24 Bottom Hole	1	402		✓						✓			8/18/98	0730									✓
15220	#25 Side Wall	1	✓		✓						✓			✓	✓									✓
15221	#26 Side Wall	1	✓		✓						✓			✓	✓									✓
15222	#27 Bottom Hole	1	✓		✓						✓			✓	✓	✓								✓
15223	#28 Side Wall	1	✓		✓						✓			✓	✓	✓								✓
15224	#29 Bottom Hole	1	✓		✓						✓			✓	✓	✓								✓
15225	#30 Stock Pile	1	✓		✓						✓			✓	✓	✓								✓
15226	#31 Stock Pile	1	✓		✓						✓			✓	✓	✓								✓

Relinquished by:	Date:	Times:	Received by:
J. R. Bowie	8-18-98	11:00 MDST	J McNurney
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date:	Times:	Received by Laboratory:

REMARKS

QA/QC PROCEDURES

SOIL SAMPLING

Representative soil samples selected for analysis were placed in sterile glass containers 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. The 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 for determination of the following constituents:

- BTEX concentrations by EPA Method SW846-8020
- TPH concentrations by EPA Method 8015 Diesel Range Organics

Proper chain-of-custody documentation was maintained throughout the sampling process.

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.

P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
) Rio Brazos Road
ec, 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-1
Originated 8/8

Submit Orig
Plus 1 C
to appropr
District Off

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. RCRA Exempt: ☐ Non-Exempt: ☒ By Wayne Price 7/31/98	4. Generator TNM PLLC
Verbal Approval Received: Yes ☒ No ☐	5. Originating Site TNM-96-514
2. Management Facility Destination EPL	6. Transporter Merryman Const. Co.
3. Address of Facility Operator 3m. S of Hwy 176 + Hwy 18 Eunice	8. State N. M.
7. Location of Material (Street Address or ULSTR) S14 T21S R37E	La. NM

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 approval

RECEIVED
Hobbs
OCD

Estimated Volume 1110 cy Known Volume (to be entered by the operator at the end) _____ cy

SIGNATURE: Ben Miller Waste Management Facility Authorized Agent TITLE: V.P. DATE: July 31, 1998

TYPE OR PRINT NAME: Ben Miller TELEPHONE NO. 394-3481

(This space for State Use)

APPROVED BY: [signature] TITLE: Env. Engr. DATE: 7/31/98

APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

NON-EXEMPT WASTE MATERIAL

Originating Location: Site TNM-96-514 Sec. 14, T21S, R37E Lea N.M.

Source: Crude oil Pipeline SPILL

Disposal Location: 3mi South of Hwy 176 & Hwy 18 Eunice N.M.

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 N.M. Pipeline Co. concur with the status of the waste from the subject site.

NAME John A. Savoie

TITLE/AGENCY Env Rep

ADRESS P.O Box 1030 Jal NM 88252

SIGNATURE J. A. Savoie

DATE 7-31-98