GW - 80

WORK PLANS

1994

Phone (505) 623-2761
FAX (505) 625-8060

Transwestern Pipeline Company
TECHNICAL OPERATIONS
P. O. Box 1717 • Roswell, New Mexico 88202-1717

May 9, 1994

Mr. Roger Anderson
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

RE: Disposal of Concrete Housing Foundations at Compressor Station No. 5, Thoreau

NCK-LA

Dear Mr. Anderson:

Transwestern Pipeline Company, owner and operator of the Thoreau Compressor Station, requests approval from the Oil Conservation Division (OCD) to dispose of approximately 100 cubic yards of non contaminated concrete generated from the removal of two (2) onsite company houses. This facility is currently operating under Discharge Permit No. GW-80.

This request specifically addresses burial onsite of the concrete into a dedicated excavation area within the confines of the property. Approval of this request will allow Transwestern expedited completion of this construction project and will not create any adverse impacts to the facility environment.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

xc: Greg McIlwain
Bob Anderson
Butch Bentley
Butch Russell
file

Phone (505) 623-2761
FAX (505) 625-8060

Transwestern Pipeline Company
TECHNICAL OPERATIONS
P. O. Box 1717 • Roswell, New Mexico 88202-1717

April 26, 1994

Mr. Roger Anderson
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Subsurface pit investigation , Compressor Station No. 5, Thoreau, New Mexico

Dear Mr. Anderson:

Enclosed find a copy of the report describing the subsurface investigation of a concrete lined surface impoundment located at the Compressor Station No. 5, Thoreau, New Mexico.. The impoundment was historically used to store condensate and liquid wastes generated during activities at the facility. This feature was taken out of service in 1992.

At your convenience, review this report. Transwestern Pipeline Company will be contacting your agency in the near future to discuss formal closure of this pit.

Should you require any additional information concerning review of this report, contact our Roswell Technical Operations at 625-8022.

Sincerely,

Larry Campbell

Larry Campbell
Division Environmental Specialist

xc: Greg McIlwain w/o attachments
Bob Anderson " "
Butch Russell " "
Butch Bentley " "
file

Shallow Subsurface Investigation

Transwestern Pipeline Company
Compressor Station No. 5
Thoreau, New Mexico

Roswell Technical Operations Office
Transwestern Pipeline Company
6381 N. Main St.
Roswell, NM 88201

Environmental Affairs Department
ENRON Operations Corp./EOC - Group Technical Services
P.O. Box 1188
Houston, TX 77251-1188

November 15, 1993

Table of Contents

Introduction

A shallow subsurface investigation was performed at Transwestern Pipeline Company; Compressor Station No. 5; Thoreau, New Mexico, on May 10, 1993, through May 14, 1993.

This investigation was performed under the direction of the following Transwestern Pipeline Company representative:

Mr. Larry Campbell
Division Environmental Specialist
Roswell Technical Operations Office
Transwestern Pipeline Company
6381 North Main Street
Roswell, NM 88201
(505) 625-8022

This investigation was performed under the direction of the following ENRON Operations Corp. representative:

Mr. James C. Robinson,
Environmental Engineer
Cypress Engineering Services, Inc.
c/o Environmental Affairs Department
ENRON Operations Corp./EOC - Group Technical Services
Room 3AC-3150
P.O. Box 1188
Houston, TX 77251-1188
(713) 646-7696

Past Investigations

The following past investigations have been performed on the site of the Transwestern Pipeline Company; Compressor Station No. 5; Thoreau, New Mexico:

1. Woodward Clyde Consultants, *Polychlorinated Biphenyl Assessment, Transwestern Pipeline Company Facilities, New Mexico*, April 1987.

2. Daniel B. Stephens & Associates, Inc., *Hydrogeology at the Transwestern Pipeline Compressor Station No. 5, Thoreau, New Mexico*, February 1990.

3. Daniel B. Stephens & Associates, Inc., *Ground-Water Assessment Report for Compressor Station No. 5, Thoreau, New Mexico*, July 26, 1991.

Objective

The objective of this shallow subsurface investigation was to determine the presence/absence of hydrocarbon contamination resulting from waste oil impoundments at the facility.

Scope

The scope of this shallow subsurface investigation was limited to investigating two specific areas of potential hydrocarbon contamination of soils.

Procedure

The procedure of this shallow subsurface investigation consisted of completing shallow borings in the vicinity of potential hydrocarbon contamination. The geological characteristics of the shallow subsurface were documented during the boring process. Samples were collected for field and laboratory contaminant analysis.

Geological Characterization

Field procedures

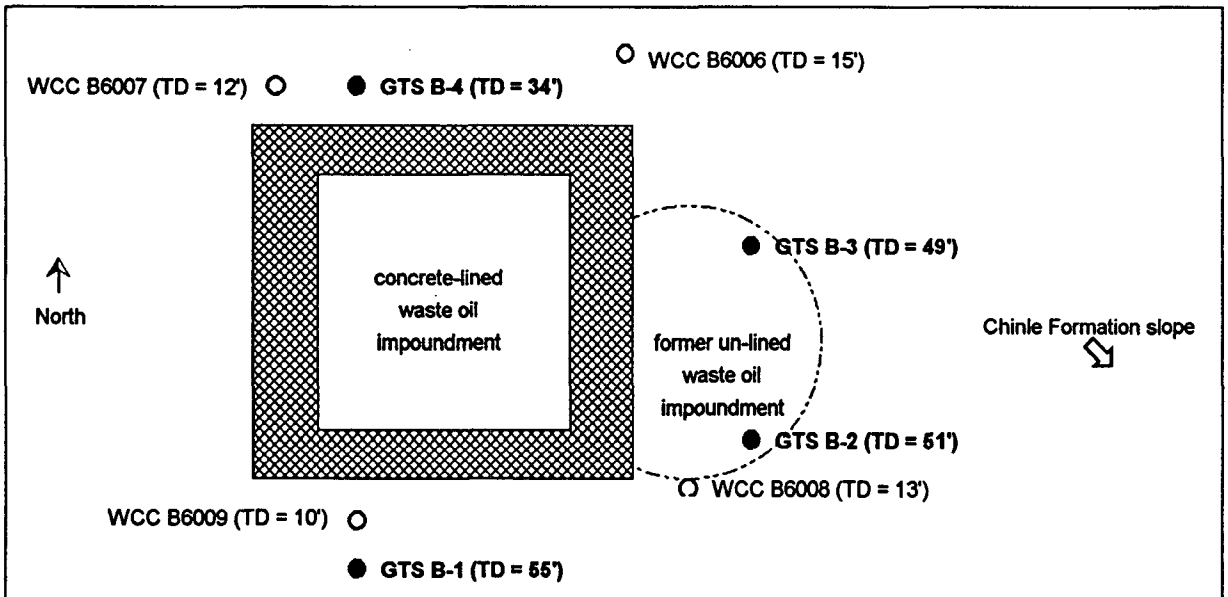
Borings were completed using a Failing F-10 mechanically driven rig fitted with a 4 3/4 in. ID (6 5/8 in. OD) hollow stem auger. Cores were recovered in 5 ft. lengths using a slip barrel continuous sampler. The drilling was performed by:

Stewart Brothers Drilling Co.
P.O. Box 2067
Milan, NM 87021
(505) 287-2986

The shallow subsurface investigation was limited to investigating two specific areas of potential hydrocarbon contamination of soils:

1. The site of a concrete-lined waste oil impoundment which partially overlays the site of a former un-lined waste oil impoundment

   Four borings (B-1, B-2, B-3, and B-4) were completed in this vicinity; one boring was located near each of the four corners of the concrete-lined waste oil impoundment. Two of the these borings (B-2, B-3) corresponded with the location of the former un-lined waste oil impoundment. The locations of the newly installed and previously installed (by Woodward Clyde Consultants [WCC]) borings in the vicinity of the concrete-lined waste oil impoundment (and site of a former un-lined waste oil impoundment) are illustrated below:



GTS: Well installed by ENRON Operations Corp./EOC - Group Technical Services
WCC: Well installed by Woodward Clyde Consultants
TD: Total Depth

2. The site of a former un-lined surface retention impoundment

   One boring (B-5) was completed in the center of the former un-lined surface retention impoundment (see Appendix A: Site Plan)

The locations of the concrete-lined waste oil impoundment (and site of a former un-lined waste oil impoundment), identified on the map as "Impoundment (Concrete)," and the former un-lined surface retention impoundment, identified on the map as "Surface Drainage Impoundment," are indicated on the Appendix A: Site Plan.

Summary

Descriptive geologic interpretations of the strata underlying the facility are found in the previous investigation by Woodward Clyde Consultants, 1987.

The site geology appeared consistent with what was reported in the previous investigation. It was observed that the degree of detail presented in previous geological interpretations may have over-emphasized the complexity of the strata. In some instances, the previous investigation represented distinct strata breaks whereas what was observed during this investigation was slight variations of a more subtle nature. The variations in strata observed in this investigation are believed to be of minimal impact to the potential vertical migration of hydrocarbons. No variations in strata that are believed to be confining layers were observed above the Chinle Formation.

The Chinle Formation is less permeable than the overlying strata and therefore acts as a restrictive bearier to the vertical migration of fluids. In the vicinity of the concrete-lined waste oil impoundment, the upper surface of the Chinle Formation slopes downward to the Southeast.

Borings B-1, B-2, and B-3 were terminated at the depth of the top of the Chinle Formation. Boring B-4, located up-dip from the concrete-lined waste oil impoundment (and site of a former un-lined waste oil impoundment), was terminated at a depth of 34'. Boring B-4 was not completed into the top of the Chinle Formation because it is located up-dip from the impoundments. Boring B-5, located in the vicinity of the former un-lined surface retention impoundment, was terminated at a depth of 30'. Boring B-5 was not completed into the top of the Chinle Formation.

Groundwater was not encountered in any of the soil borings.

Following are geologic interpretations of the soil borings completed on May 10, 1993, through May 14, 1993:

Boring	*depth (ft)*	*Classification*	*Description*
B-1	0-55 55	silty sand (SM) clay (CH)	reddish brown, moist, loose; firm @ 15'; clayey @ 26' reddish brown, dry, hard (Chinle Formation) terminated @ 55'
B-2	0-51 51	silty sand (SM) clay (CH)	reddish brown, moist, loose; firm @ 14'; rocks @ 31' reddish brown, dry, hard (Chinle Formation) terminated @ 51'
B-3	0-49 49	silty sand (SM) clay (CH)	reddish brown, moist, loose; firm @ 16', rocks @ 34' reddish brown, dry, hard (Chinle Formation) terminated @ 49'
B-4	0-34	silty sand (SM)	reddish brown, moist, loose; firm @ 10' terminated @ 34'
B-5	0-30	silty sand (SM)	reddish brown, moist, loose terminated @ 30'

Contaminant Characterization

Field procedures

Samples were collected from the 5 ft. continuous cores according to the following 3 tiers:

1. Samples were collected approximately every 1 ft. for field screening of volatile organic compounds by head-space analysis using a Thermo-Environmental 550B photo-ionization detector (PID). Samples were collected in 1 qt. plastic bags and allowed to equilibrate. The sampling tube of the PID was then inserted through the plastic bag and the peak reading was recorded.

2. Two samples were collected from each boring for laboratory analysis. The first sample was typically collected from the depth at which the maximum PID field screening concentration was observed. The second sample was typically taken from the bottom depth of the boring.

Lab analyses

Samples were submitted to:

PACE Laboratories
900 Gemini Ave.
Houston, TX 77058
(713) 488-1810

The following analytical program was specified for all samples submitted to the laboratory:

Test	Contaminant	Method	MDL[1]	Units
TPH	TPH	418.1	20	mg/kg
BTEX	benzene	8020	5	µg/kg
	ethylbenzene	8020	5	µg/kg
	toluene	8020	5	µg/kg
	m-xylene	8020	5	µg/kg
	o-xylene	8020	5	µg/kg
	p-xylene	8020	5	µg/kg
TCLP-O[2]	benzene	8240	0.05	mg/l
	carbon tetrachloride	8240	0.05	mg/l
	chlorobenzene	8240	0.05	mg/l
	1,2-dichloroethane	8240	0.05	mg/l
	1,1-dichloroethylene	8240	0.05	mg/l
	methyl ethyl ketone	8240	0.10	mg/l
	trichloroethylene	8240	0.05	mg/l
	vinyl chloride	8240	0.10	mg/l
	o-cresol	8270	0.10	mg/l
	m-cresol	8270	0.10	mg/l
	p-cresol	8270	0.10	mg/l
	2,4-dinitrotoluene	8270	0.050	mg/l
	hexachloro-1,3-butadiene	8270	0.10	mg/l
TCLP-F[3]	methylene chloride	8240	0.05	mg/l
	1,1,1-trichloroethane	8240	0.05	mg/l
	ortho-dichlorobenzene	8240	0.05	mg/l
	acetone	8240	0.10	mg/l
	ethyl benzene	8240	0.05	mg/l
	methyl isobutyl ketone	8240	0.10	mg/l
	trichloro-trifluoroethane	scan[4]	*[5]	mg/l
	trichlorofluoromethane	scan[4]	0.05	mg/l
	n-butyl alcohol	scan[4]	2.0	mg/l
	cyclohexanone	scan[4]	*[5]	mg/l
	isobutanol	scan[4]	2.0	mg/l

[1] MDL is the method detection limit reported by PACE Laboratories
[2] TCLP-O is a list of selected reported TCLP-Volatiles and TCLP-Semi-volatiles tests
[3] TCLP-F is a list of selected reported TCLP-Volatiles and library search volatiles tests
[4] scan indicates that the analyte is scanned by a library search
[5] * indicates that the analyte is not detected by a computerized search of the chromatogram

Summary

Field analyses did not indicate extensive shallow subsurface hydrocarbon contamination in the vicinity of the concrete-lined waste oil impoundment (and site of a former un-lined waste oil impoundment).

The laboratory analysis of a sample collected from the bottom of boring B-2 (at the depth of the Chinle Formation) indicated a high level of TPH. This is a suspicious result because field screening of a sample from this depth by PID did not indicate elevated levels of organic vapor by headspace analysis.

Is is possible that hydrocarbons may have migrated vertically through preferential pathways, without spreading over a large area extent, until reaching the Chinle Formation. Hydrocarbons may have migrated horizontally across the upper surface of the Chinle Formation, which generally slopes Southeastward.

At the time of this shallow subsurface investigation, the concrete-lined waste oil impoundment had not been removed, and it was not possible to complete a soil boring in the interior area of the region.

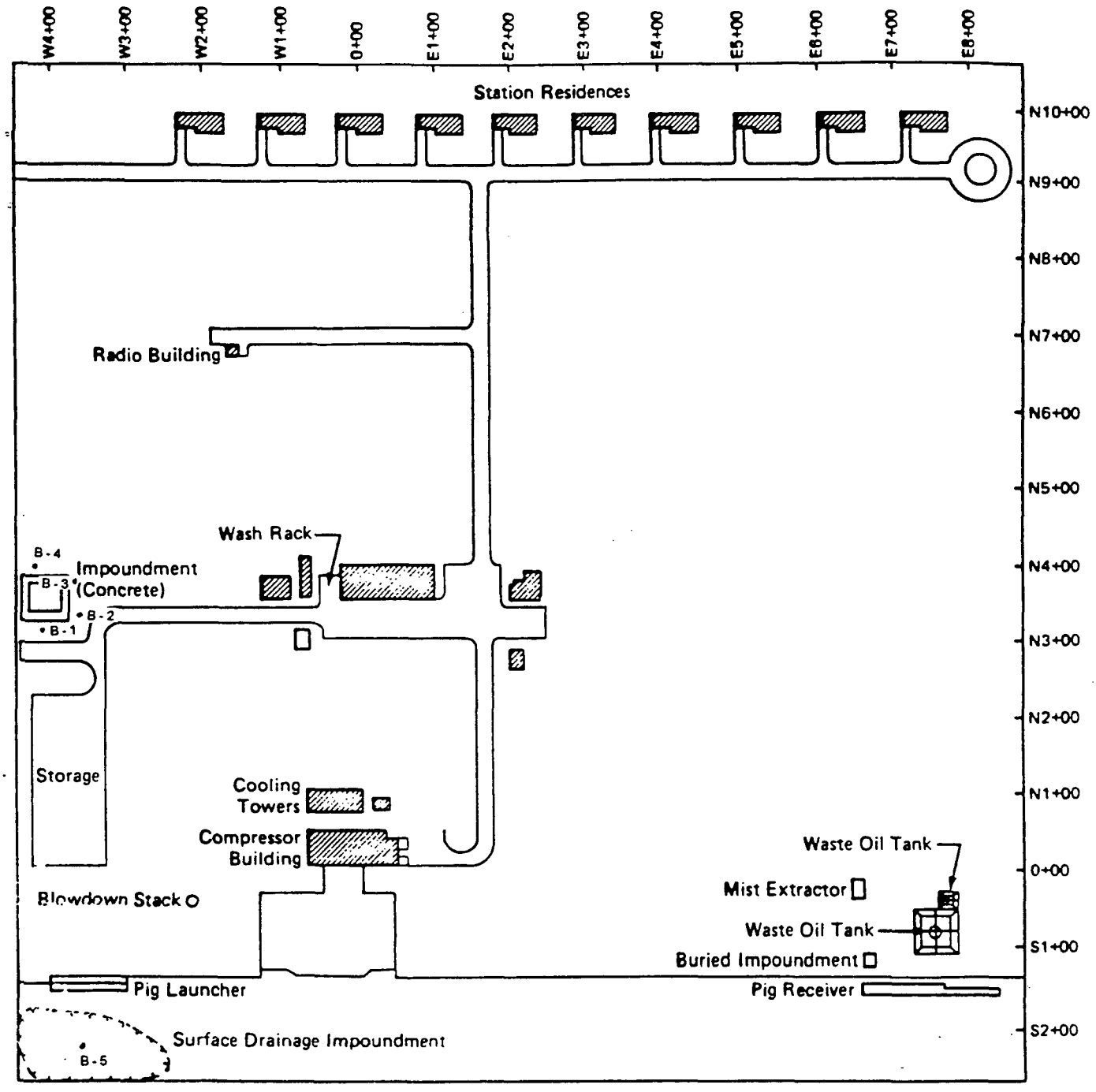
Samples from the one boring (B-5) completed in the vicinity of a former un-lined surface retention impoundment did not indicate elevated levels of hydrocarbon contamination.

A summary of the field analyses is presented in Appendix B: Summary of Field Analyses. A summary of the laboratory analyses is presented in Appendix C: Summary of Laboratory Analyses.

Appendices

Appendix A: Site Plan
Appendix B: Summary of Field Analyses
Appendix C: Summary of Laboratory Analyses
Appendix D: Laboratory Reports

Appendix A: Site Plan



STATION 5

Project No.		THOREAU COMPRESSOR STATION	
Woodward-Clyde Consultants			

Appendix B: Summary of Field Analyses

Appendix B: Summary of Field Analyses

Depth ft.	Boring B-1		Boring B-2		Boring B-3		Boring B-4		Boring B-5	
	Field PID ppm	Lab TPH mg/kg	Field PID ppm	Lab TPH mg/kg	Field PID ppm	Lab TPH mg/kg	Field PID ppm	Lab TPH mg/kg	Field PID ppm	Lab TPH mg/kg
1	299		0		0		39		0	
2	22		0		0		50		13	
3	75		34		0		38		7	
4	23		25		0		29		12	
5	0		16		0		79	BDL	9	
6	0		9		49		24		16	
7	0		0		79	BDL	5		16	BDL
8	1		0		36		17		0	
9	0		0		36		15		0	
10	0		0		34		78		0	
11	0		0		36		0		0	
12	0		0		49		0		0	
13	0	BDL	0		37		0		0	
14	0		0		27		0		0	
15	0		0		15		0		0	
16	0		0		13		0		0	
17	0		0		11		0		0	
18	0		0		2		0		0	
19	0		0	BDL	0		0		0	
20	0		0		0		0		0	
21	0		0		3		0		0	
22	0		0		0		0		5	
23	0		0		0		0		8	
24	0		0		1		0		8	
25	0		0		0		0		9	
26	0		0		0		0		11	
27	0		0		0		0		7	
28	0		0		0		0		8	
29	0		0		0		0		8	
30	0		0		0		0		6	BDL
31	0		0		0		0			
32	0		0		1		0			
33	0		0		0		0			
34	0		0		0		0	BDL		
35	0		0		0					
36	0		0		0					
37	0		0		0					
38	0		0		0					
39	0		0		0					
40	0		0		0					
41	0		0		0					
42	0		0		0					
43	0		0		0					
44	0		0		0					
45	0		0		0					
46	0		0		2					
47	0		0		0					
48	0		0		0					
49	0		0		0	BDL				
50	0		0							
51	0		0	31,000						
52	0									
53	0									
54	0									
55	0	BDL								

Appendix C: Summary of Laboratory Analyses

Appendix C: Summary of Laboratory Analyses

				Boring B-1		Boring B-2		Boring B-3		Boring B-4		Boring B-5	
Test	Contaminant	Method	MDL Units	13 ft.	55 ft.	19 ft.	51 ft.	7 ft.	49 ft.	5 ft.	34 ft.	7 ft.	30 ft.
TPH	TPH	418.1	20 mg/kg	BDL	BDL	BDL	31,000	BDL	BDL	BDL	BDL	BDL	BDL
BTEX	benzene	8020	5 µg/kg	BDL	BDL	BDL	BDL	300	BDL	BDL	BDL	BDL	BDL
	ethylbenzene	8020	5 µg/kg	BDL	BDL	BDL	BDL	1,200	BDL	BDL	BDL	BDL	BDL
	toluene	8020	5 µg/kg	BDL	BDL	BDL	BDL	490	BDL	BDL	BDL	BDL	BDL
	m-xylene	8020	5 µg/kg	BDL	BDL	BDL	BDL	5,200	BDL	BDL	BDL	BDL	BDL
	o-xylene	8020	5 µg/kg	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	p-xylene	8020	5 µg/kg	BDL	BDL	BDL	BDL	1,700	BDL	BDL	BDL	BDL	BDL
TCLP-O	benzene	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	carbon tetrachloride	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	chlorobenzene	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1,2-dichloroethane	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1,1-dichloroethylene	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	methyl ethyl ketone	8240	0.10 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	trichloroethylene	8240	0.05 mg/l	BDL	BDL	BDL	BDL	0.14	BDL	BDL	0.10	BDL	BDL
	vinyl chloride	8240	0.10 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	o-cresol	8270	0.10 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	m-cresol	8270	0.10 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	p-cresol	8270	0.10 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	2,4-dinitrotoluene	8270	0.050 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	hexachloro-1,3-butadiene	8270	0.10 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
TCLP-F	methylene chloride	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	1,1,1-trichloroethane	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	ortho-dichlorobenzene	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	acetone	8240	0.10 mg/l	BDL	BDL	1.20	0.32	BDL	0.25	BDL	BDL	BDL	BDL
	ethyl benzene	8240	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	methyl isobutyl ketone	8240	0.10 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	trichloro-trifluoroethane	scan	* mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	trichlorofluoromethane	scan	0.05 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	n-butyl alcohol	scan	2.0 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	cyclohexanone	scan	* mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	isobutanol	scan	2.0 mg/l	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

BDL indicates that the analyte was not detected at the method detection limit
MDL is the method detection limit reported by PACE Laboratories
TCLP-O is a list of selected reported TCLP-Volatiles and TCLP-Semi-volatiles tests
TCLP-F is a list of selected reported TCLP-Volatiles and library search volatiles tests
scan indicates that the analyte is scanned by a library search
* indicates that the analyte is not detected by a computerized search of the chromatogram

Appendix D: Laboratory Reports

pace® INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

June 01, 1993
Report No.: 00024809
Section A Page 1

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B1-13-C,D
LSG SAMPLE NO: H0237223
P.O. NO.: E5110P - Thoreau Sweaner Pit

DATE SAMPLED: 11-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNIT
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	< 0.05	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	< 0.10	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B1-13-C,D
LSG SAMPLE NO: H0237223

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B1-55-C,D
LSG SAMPLE NO: H0237224
P.O. NO.: E5110P

DATE SAMPLED: 11-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	< 0.05	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	< 0.10	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B1-55-C,D
LSG SAMPLE NO: H0237224

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

pace®
INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

June 01, 1993
Report No.: 00024809
Section A Page 5

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B2-19-C,D
LSG SAMPLE NO: H0237225
P.O. NO.: E5110P

DATE SAMPLED: 11-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	< 0.05	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	1.20	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B2-19-C,D
LSG SAMPLE NO: H0237225

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B2-51-C,D
LSG SAMPLE NO: H0237226
P.O. NO.: E5110P

DATE SAMPLED: 11-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	31,000	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	< 0.05	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	0.32	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B2-51-C,D
LSG SAMPLE NO: H0237226

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B3-7-C,D
LSG SAMPLE NO: H0237227
P.O. NO.: E5110P

DATE SAMPLED: 12-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	300	ug/kg
		Ethylbenzene	1,200	ug/kg
		Toluene	490	ug/kg
		m-Xylene	5,200	ug/kg
		o-Xylene	< 120 **	ug/kg
		p-Xylene	1,700	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	0.14	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	< 0.10	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B3-7-C,D
LSG SAMPLE NO: H0237227

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.
** The detection limit was elevated due to the dilution required because of the high concentration of non-target analytes.

REPORT OF LABORATORY ANALYSIS

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B3-49-C,D
LSG SAMPLE NO: H0237228
P.O. NO.: E5110P

DATE SAMPLED: 12-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	< 0.05	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	0.25	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B3-49-C,D
LSG SAMPLE NO: H0237228

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B4-5-C,D
LSG SAMPLE NO: H0237229
P.O. NO.: E5110P

DATE SAMPLED: 12-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	< 0.05	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	< 0.10	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B4-5-C,D
LSG SAMPLE NO: H0237229

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B4-34-C,D
LSG SAMPLE NO: H0237230
P.O. NO.: E5110P

DATE SAMPLED: 12-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	0.10	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	< 0.10	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B4-34-C,D
LSG SAMPLE NO: H0237230

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B5-7-C,D
LSG SAMPLE NO: H0237231
P.O. NO.: E5110P

DATE SAMPLED: 12-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: L Beyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	< 0.05	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	< 0.10	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B5-7-C,D
LSG SAMPLE NO: H0237231

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
ADDRESS: P.O. BOX 1717
ROSWELL, NM 88202-1717
ATTENTION: LARRY CAMPBELL

LSG CLIENT NO: 0734 0008
PACE PROJECT: H07340008
PACE CLIENT: 620562

SAMPLE ID: B5-30-C,D
LSG SAMPLE NO: H0237232
P.O. NO.: E5110P

DATE SAMPLED: 12-MAY-93
DATE RECEIVED: 14-MAY-93
APPROVED BY: D Meyer

LN	TEST CODE	DETERMINATION	RESULT	UNITS
1	I685S	Petroleum Hydrocarbons	< 20	mg/kg
2	G107S	BTEX Package		
		Benzene	< 5	ug/kg
		Ethylbenzene	< 5	ug/kg
		Toluene	< 5	ug/kg
		m-Xylene	< 5	ug/kg
		o-Xylene	< 5	ug/kg
		p-Xylene	< 5	ug/kg
4	S903	TCLP Bottle Leaching Procedure	Done	
5	S904	TCLP ZHE Leaching Procedure	Done	
6	OVZHE	Volatiles - ZHE/Part 261		
		1,1-Dichloroethylene	< 0.05	mg/L
		1,2-Dichloroethane	< 0.05	mg/L
		Benzene	< 0.05	mg/L
		Carbon tetrachloride	< 0.05	mg/L
		Chlorobenzene	< 0.05	mg/L
		Methyl ethyl ketone	< 0.10	mg/L
		Tetrachloroethylene	< 0.05	mg/L
		Trichloroethylene	< 0.05	mg/L
		Vinyl chloride	< 0.10	mg/L
8	G150L	TCLP Semivolatiles (40CFR Part 261)		
		2,4-Dinitrotoluene	< 0.050	mg/L
		Hexachlorobutadiene	< 0.10	mg/L
		m-Cresol	< 0.10	mg/L
		o-Cresol	< 0.10	mg/L
		p-Cresol	< 0.10	mg/L
10	OVZRV	Library Search - Volatiles - Reverse Search Only		
		1,1,1,1-TCLP F List	Done	mg/L
		1,1,1-Trichloroethane	< 0.05	mg/L
		Acetone	< 0.10	mg/L
		Cyclohexanone	*	mg/L
		Ethyl Benzene	< 0.05	mg/L
		Isobutanol	< 2.0	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

LABORATORY ANALYSIS REPORT

CLIENT NAME: TRANSWESTERN PIPELINE COMPANY
SAMPLE ID: B5-30-C,D
LSG SAMPLE NO: H0237232

LN	TEST CODE	DETERMINATION	RESULT	UNITS
		Methyl Isobutyl Ketone	< 0.10	mg/L
		Methylene Chloride	< 0.05	mg/L
		Ortho-Dichlorobenzene	< 0.05	mg/L
		Trichloro-Trifluoroethane	*	mg/L
		Trichlorofluoromethane	< 0.05	mg/L
		n-Butyl Alcohol	< 2.0	mg/L

COMMENTS: Results are reported on an "as received" basis without correction for percent moisture unless previously specified.
* This analyte was not detected by a computerized search of the chromatogram.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

pace®
INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

June 01, 1993
Report No.: 00024809
Section B Page 1

QUALITY CONTROL REPORT
SUPPLEMENTAL INFORMATION

			SAMPLE PREPARATION			SAMPLE ANALYSIS				
LN	TEST CODE	BATCH	LR-METHOD	DATE/TIME	ANALYST	LR-METHOD	DATE/TIME	ANALYST	ANLS BATCH	INSTRUMENT
SAMPLE ID: B1-13-C,D							LSG SAMPLE NO: H0237223			
1	I685S	31144	19-3550			02-418.1	18-MAY-93 500	Lin	0	302WAT
2	G107S	31179	NA			19-8020	21-MAY-93 126	R P	31176	7287GC
4	S903	31032	NA			32-268	17-MAY-93 1400	Lin	0	001EPE
5	S904	31030	NA			32-268	17-MAY-93 1400	Lin	0	005EPE
6	OVZHE	31133	NA			19-8240	19-MAY-93 2227	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230	RE	19-8270	20-MAY-93 1346	G F	30980	011TSD
10	OVZRV	0	NA				19-MAY-93 2227	J P	0	GCMSR
SAMPLE ID: B1-55-C,D							LSG SAMPLE NO: H0237224			
1	I685S	31144	19-3550			02-418.1	18-MAY-93 500	Lin	0	302WAT
2	G107S	31179	NA			19-8020	21-MAY-93 215	R P	31176	7287GC
4	S903	31032	NA			32-268	17-MAY-93 1400	Lin	0	001EPE
5	S904	31030	NA			32-268	17-MAY-93 1400	Lin	0	005EPE
6	OVZHE	31133	NA			19-8240	19-MAY-93 2300	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230	RE	19-8270	20-MAY-93 1427	G F	30980	011TSD
10	OVZRV	0	NA				19-MAY-93 2300	J P	0	GCMSR
SAMPLE ID: B2-19-C,D							LSG SAMPLE NO: H0237225			
1	I685S	31144	19-3550			02-418.1	18-MAY-93 500	Lin	0	302WAT
2	G107S	31179	NA			19-8020	21-MAY-93 304	R P	31176	7287GC
4	S903	31032	NA			32-268	17-MAY-93 1400	Lin	0	001EPE

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL REPORT
SUPPLEMENTAL INFORMATION

			SAMPLE PREPARATION			SAMPLE ANALYSIS				
LN	TEST CODE	BATCH	LR-METHOD	DATE/TIME	ANALYST	LR-METHOD	DATE/TIME	ANALYST	ANLS BATCH	INSTRUMENT
5	S904	31030	NA			32-268	17-MAY-93 1400	Lin	0	005EPE
6	OVZHE	31133	NA			19-8240	19-MAY-93 2332	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230	RE	19-8270	20-MAY-93 1509	G F	30980	01ITSD
10	OVZRV	0	NA				19-MAY-93 2332	J P	0	GCMSR

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

SAMPLE ID: B2-51-C,D LSG SAMPLE NO: H0237226

1	I685S	31144	19-3550			02-418.1	18-MAY-93 500	Lin	0	302WAT
2	G107S	31179	NA			19-8020	21-MAY-93 353	R P	31176	7287GC
4	S903	31032	NA			32-268	17-MAY-93 1400	Lin	0	001EPE
5	S904	31030	NA			32-268	17-MAY-93 1400	Lin	0	005EPE
6	OVZHE	31133	NA			19-8240	20-MAY-93 4	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230	RE	19-8270	20-MAY-93 1550	G F	30980	01ITSD
10	OVZRV	0	NA				20-MAY-93 4	J P	0	GCMSR

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

SAMPLE ID: B3-7-C,D LSG SAMPLE NO: H0237227

1	I685S	31144	19-3550			02-418.1	18-MAY-93 500	Lin	0	302WAT
2	G107S	31195	NA			19-8020	22-MAY-93 40	R P	31242	3678GC
4	S903	31032	NA			32-268	17-MAY-93 1400	Lin	0	001EPE
5	S904	31030	NA			32-268	17-MAY-93 1400	Lin	0	005EPE
6	OVZHE	31133	NA			19-8240	20-MAY-93 36	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230	RE	19-8270	20-MAY-93 1631	G F	30980	01ITSD
10	OVZRV	0	NA				20-MAY-93 36	J P	0	GCMSR

LR Method Literature Reference

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

QUALITY CONTROL REPORT
SUPPLEMENTAL INFORMATION

			SAMPLE PREPARATION			SAMPLE ANALYSIS				
LN	TEST CODE	BATCH	LR-METHOD	DATE/TIME	ANALYST	LR-METHOD	DATE/TIME	ANALYST	ANLS BATCH	INSTRUMENT

LR Method Literature Reference

02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

SAMPLE ID: B3-49-C,D LSG SAMPLE NO: H0237228

1	I685S	31144	19-3550			02-418.1	18-MAY-93 500	Lin	0	302WAT
2	G107S	31195	NA			19-8020	21-MAY-93 2255	R P	31195	3678GC
4	S903	31032	NA			32-268	17-MAY-93 1400	Lin	0	001EPE
5	S904	31030	NA			32-268	17-MAY-93 1400	Lin	0	005EPE
6	OVZHE	31133	NA			19-8240	20-MAY-93 109	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230	RE	19-8270	20-MAY-93 1712	G F	30980	01ITSD
10	OVZRV	0	NA				20-MAY-93 109	J P	0	GCMSR

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

SAMPLE ID: B4-5-C,D LSG SAMPLE NO: H0237229

1	I685S	31144	19-3550			02-418.1	18-MAY-93 500	Lin	0	302WAT
2	G107S	31179	NA			19-8020	21-MAY-93 619	R P	31176	7287GC
4	S903	31032	NA			32-268	17-MAY-93 1400	Lin	0	001EPE
5	S904	31030	NA			32-268	17-MAY-93 1400	Lin	0	005EPE
6	OVZHE	31133	NA			19-8240	20-MAY-93 141	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230	RE	19-8270	20-MAY-93 1754	G F	30980	01ITSD
10	OVZRV	0	NA				20-MAY-93 141	J P	0	GCMSR

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.

QUALITY CONTROL REPORT
SUPPLEMENTAL INFORMATION

			SAMPLE PREPARATION			SAMPLE ANALYSIS				
LN	TEST CODE	BATCH	LR-METHOD	DATE/TIME	ANALYST	LR-METHOD	DATE/TIME	ANALYST	ANLS BATCH	INSTRUMENT

LR Method Literature Reference

19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

SAMPLE ID: B4-34-C,D — LSG SAMPLE NO: H0237230

1	I685S	31144	19-3550		02-418.1	18-MAY-93	500	Lin	0	302WAT
2	G107S	31179	NA		19-8020	21-MAY-93	708	R P	31176	7287GC
4	S903	31032	NA		32-268	17-MAY-93	1400	Lin	0	001EPE
5	S904	31030	NA		32-268	17-MAY-93	1400	Lin	0	005EPE
6	OVZHE	31133	NA		19-8240	20-MAY-93	213	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230 RE	19-8270	19-MAY-93	700	G F	30980	01ITSD
10	OVZRV	0	NA			20-MAY-93	213	J P	0	GCMSR

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

SAMPLE ID: B5-7-C,D — LSG SAMPLE NO: H0237231

1	I685S	31144	19-3550		02-418.1	18-MAY-93	500	Lin	0	302WAT
2	G107S	31179	NA		19-8020	21-MAY-93	757	R P	31176	7287GC
4	S903	31032	NA		32-268	17-MAY-93	1400	Lin	0	001EPE
5	S904	31030	NA		32-268	17-MAY-93	1400	Lin	0	005EPE
6	OVZHE	31133	NA		19-8240	20-MAY-93	246	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230 RE	19-8270	20-MAY-93	1835	G F	30980	01ITSD
10	OVZRV	0	NA			20-MAY-93	246	J P	0	GCMSR

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

QUALITY CONTROL REPORT
SUPPLEMENTAL INFORMATION

			SAMPLE PREPARATION			SAMPLE ANALYSIS				
LN	TEST CODE	BATCH	LR-METHOD	DATE/TIME	ANALYST	LR-METHOD	DATE/TIME	ANALYST	ANLS BATCH	INSTRUMENT

LR Method Literature Reference

32 EPA- 40 CFR 268, Appendix I

SAMPLE ID: B5-30-C,D LSG SAMPLE NO: H0237232

1	I685S	31144	19-3550		02-418.1	18-MAY-93	500	Lin	0	302WAT
2	G107S	31179	NA		19-8020	21-MAY-93	845	R P	31176	7287GC
4	S903	31032	NA		32-268	17-MAY-93	1400	Lin	0	001EPE
5	S904	31030	NA		32-268	17-MAY-93	1400	Lin	0	005EPE
6	OVZHE	31330	NA		19-8240	27-MAY-93	1349	J P	0	GCMSR
8	G150L	31057	19-3520	18-MAY-93 1230 RE	19-8270	20-MAY-93	1917	G F	30980	01ITSD
10	OVZRV	0	NA			27-MAY-93	1349	J P	0	GCMSR

LR Method Literature Reference
02 EPA-Methods for Chemical Analysis of Water & Wastes, 1984.
19 EPA-Test Methods for Evaluating Solid Waste, 3rd ed, Nov. 1986
32 EPA- 40 CFR 268, Appendix I

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

June 01, 1993
Report No.: 00024809
Section C Page 1

QUALITY CONTROL REPORT
SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID:	B1-13-C,D		LSG SAMPLE NO:	H0237223	
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	94	-	
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	103	-	
		4-Bromofluorobenzene	110	-	
		Toluene-d8	106	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	94	-	
		2-Fluorobiphenyl	60	-	
		2-Fluorophenol	50	-	
		Nitrobenzene-d5	62	-	
		Phenol-d5	33	-	
		p-Terphenyl-d14	103	-	
SAMPLE ID:	B1-55-C,D		LSG SAMPLE NO:	H0237224	
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	96	-	
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	101	-	
		4-Bromofluorobenzene	115	-	
		Toluene-d8	105	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	96	-	
		2-Fluorobiphenyl	30	-	
		2-Fluorophenol	54	-	
		Nitrobenzene-d5	62	-	
		Phenol-d5	70	-	
		p-Terphenyl-d14	105	-	
SAMPLE ID:	B2-19-C,D		LSG SAMPLE NO:	H0237225	
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	97	-	
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	98	-	
		4-Bromofluorobenzene	109	-	
		Toluene-d8	104	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	96	-	
		2-Fluorobiphenyl	62	-	
		2-Fluorophenol	53	-	

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

QUALITY CONTROL REPORT
SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
		Nitrobenzene-d5	63	-	
		Phenol-d5	34	-	
		p-Terphenyl-d14	101	-	
SAMPLE ID:	B2-51-C,D		LSG SAMPLE NO:	H0237226	
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	96	-	
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	103	-	
		4-Bromofluorobenzene	110	-	
		Toluene-d8	105	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2-Fluorophenol	53	-	
		Nitrobenzene-d5	65	-	
		Phenol-d5	34	-	
		p-Terphenyl-d14	96	-	
		2,4,6-Tribromophenol	95	-	
		2-Fluorobiphenyl	66	-	
SAMPLE ID:	B3-7-C,D		LSG SAMPLE NO:	H0237227	
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	139 *	-	
* The surrogate was out of range due to matrix interferences which was confirmed by re-analysis.					
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	100	-	
		4-Bromofluorobenzene	111	-	
		Toluene-d8	106	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	87	-	
		2-Fluorobiphenyl	63	-	
		2-Fluorophenol	52	-	
		Nitrobenzene-d5	62	-	
		Phenol-d5	34	-	
		p-Terphenyl-d14	96	-	
SAMPLE ID:	B3-49-C,D		LSG SAMPLE NO:	H0237228	
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	100	-	
7	$VOAW	GC/MS Volatiles Surrogates			6

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

QUALITY CONTROL REPORT
SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
		1,2-Dichloroethane-d4	106	-	
		4-Bromofluorobenzene	111	-	
		Toluene-d8	106	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	89	-	
		2-Fluorobiphenyl	61	-	
		2-Fluorophenol	52	-	
		Nitrobenzene-d5	66	-	
		Phenol-d5	32	-	
		p-Terphenyl-d14	98	-	
SAMPLE ID: B4-5-C,D			LSG SAMPLE NO: H0237229		
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	99	-	
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	103	-	
		4-Bromofluorobenzene	110	-	
		Toluene-d8	105	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	92	-	
		2-Fluorobiphenyl	62	-	
		2-Fluorophenol	52	-	
		Nitrobenzene-d5	64	-	
		Phenol-d5	32	-	
		p-Terphenyl-d14	100	-	
SAMPLE ID: B4-34-C,D			LSG SAMPLE NO: H0237230		
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	96	-	
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	100	-	
		4-Bromofluorobenzene	106	-	
		Toluene-d8	104	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	61	-	
		2-Fluorobiphenyl	66	-	
		2-Fluorophenol	54	-	
		Nitrobenzene-d5	87	-	
		Phenol-d5	33	-	
		p-Terphenyl-d14	85	-	

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

QUALITY CONTROL REPORT
SURROGATE STANDARD RECOVERY

LN	TEST CODE	SURROGATE COMPOUND	PERCENT RECOVERY	ACCEPTANCE LIMITS	REF LN
SAMPLE ID:	B5-7-C,D		LSG SAMPLE NO:	H0237231	
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	96	-	
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	99	-	
		4-Bromofluorobenzene	107	-	
		Toluene-d8	102	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	83	-	
		2-Fluorobiphenyl	62	-	
		2-Fluorophenol	51	-	
		Nitrobenzene-d5	62	-	
		Phenol-d5	32	-	
		p-Terphenyl-d14	95	-	
SAMPLE ID:	B5-30-C,D		LSG SAMPLE NO:	H0237232	
3	$VARS	GC Volatile Aromatics Surrogate			2
		alpha,alpha,alpha-Trifluorotoluene	96	-	
7	$VOAW	GC/MS Volatiles Surrogates			6
		1,2-Dichloroethane-d4	106	-	
		4-Bromofluorobenzene	109	-	
		Toluene-d8	104	-	
9	$BNAL	GC TCLP 40 CFR 261 BNA Surrogates			8
		2,4,6-Tribromophenol	83	-	
		2-Fluorobiphenyl	62	-	
		2-Fluorophenol	54	-	
		Nitrobenzene-d5	65	-	
		Phenol-d5	33	-	
		p-Terphenyl-d14	96	-	

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

QUALITY CONTROL REPORT
LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	PERCENT RECOVERY	ACCEPTANCE LIMITS
BATCH: 31133	SAMPLE ID: Lab Control Sample		LSG SAMPLE NO: H0238663
OVZHE	Volatiles - ZHE/Part 261		
	1,1-Dichloroethylene	109	-
	Benzene	100	-
	Chlorobenzene	97	-
	Toluene	102	-
	Trichloroethylene	96	-
BATCH: 31144	SAMPLE ID: Lab Control Sample		LSG SAMPLE NO: H0238679
I685S	Petroleum Hydrocarbons	100.0	-
BATCH: 31179	SAMPLE ID: Lab Control Sample		LSG SAMPLE NO: H0238731
G107S	BTEX Package		
	Benzene	104	-
	Ethylbenzene	99	-
	Toluene	106	-
	m-Xylene	100 *	-
	o-Xylene	102	-
	p-Xylene	*	-
BATCH: 31195	SAMPLE ID: Lab Control Sample		LSG SAMPLE NO: H0238756
G107S	BTEX Package		
	Benzene	114	-
	Ethylbenzene	109	-
	Toluene	108	-
	m-Xylene	102	-
	o-Xylene	106	-
	p-Xylene	108	-
BATCH: 31330	SAMPLE ID: Lab Control Sample		LSG SAMPLE NO: H0239980
OVZHE	Volatiles - ZHE/Part 261		
	1,1-Dichloroethylene	86	-
	Benzene	95	-
	Chlorobenzene	90	-

* The compounds m-Xylene and p-Xylene co-elute. The reported result is the sum of the two.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

QUALITY CONTROL REPORT
LABORATORY CONTROL SAMPLE RECOVERY

TEST CODE	DETERMINATION	PERCENT RECOVERY	ACCEPTANCE LIMITS
	Toluene	101	-
	Trichloroethylene	89	-

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

June 01, 1993
Report No.: 00024809
Section E Page 1

QUALITY CONTROL REPORT
METHOD BLANK DATA

TEST CODE	Determination	RESULT	UNITS
BATCH: 31057	SAMPLE ID: Method Blank	LSG SAMPLE NO: H0237988	
G150L	TCLP Semivolatiles (40CFR Part 261)		
	1,4-Dichlorobenzene	< 0.010	mg/L
	2,4,5-Trichlorophenol	< 0.010	mg/L
	2,4,6-Trichlorophenol	< 0.010	mg/L
	2,4-Dinitrotoluene	< 0.005	mg/L
	Hexachlorobenzene	< 0.005	mg/L
	Hexachlorobutadiene	< 0.010	mg/L
	Hexachloroethane	< 0.010	mg/L
	Nitrobenzene	< 0.010	mg/L
	Pentachlorophenol	< 0.010	mg/L
	Pyridine	< 0.010	mg/L
	m-Cresol	< 0.010	mg/L
	o-Cresol	< 0.010	mg/L
	p-Cresol	< 0.010	mg/L
BATCH: 31133	SAMPLE ID: Method Blank	LSG SAMPLE NO: H0238664	
OVZHE	Volatiles - ZHE/Part 261		
	1,1-Dichloroethylene	< 0.005	mg/L
	1,2-Dichloroethane	< 0.005	mg/L
	Benzene	< 0.005	mg/L
	Carbon tetrachloride	< 0.005	mg/L
	Chlorobenzene	< 0.005	mg/L
	Methyl ethyl ketone	< 0.010	mg/L
	Tetrachloroethylene	< 0.005	mg/L
	Trichloroethylene	< 0.005	mg/L
	Vinyl chloride	< 0.010	mg/L
BATCH: 31144	SAMPLE ID: Method Blank	LSG SAMPLE NO: H0238680	
I685S	Petroleum Hydrocarbons	< 20	mg/kg
BATCH: 31179	SAMPLE ID: Method Blank	LSG SAMPLE NO: H0238732	
G107S	BTEX Package		
	Benzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Toluene	< 5	ug/kg
	m-Xylene	< 5	ug/kg
	o-Xylene	< 5	ug/kg

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

QUALITY CONTROL REPORT
METHOD BLANK DATA

TEST CODE	Determination	RESULT	UNITS
	p-Xylene	< 5	ug/kg
BATCH: 31195	SAMPLE ID: Method Blank	LSG SAMPLE NO:	H0238757
G107S	BTEX Package		
	Benzene	< 5	ug/kg
	Ethylbenzene	< 5	ug/kg
	Toluene	< 5	ug/kg
	m-Xylene	< 5	ug/kg
	o-Xylene	< 5	ug/kg
	p-Xylene	< 5	ug/kg
BATCH: 31330	SAMPLE ID: Method Blank	LSG SAMPLE NO:	H0239981
OVZHE	Volatiles - ZHE/Part 261		
	1,1-Dichloroethylene	< 0.005	mg/L
	1,2-Dichloroethane	< 0.005	mg/L
	Benzene	< 0.005	mg/L
	Carbon tetrachloride	< 0.005	mg/L
	Chlorobenzene	< 0.005	mg/L
	Chloroform	< 0.005	mg/L
	Methyl ethyl ketone	< 0.010	mg/L
	Tetrachloroethylene	< 0.005	mg/L
	Trichloroethylene	< 0.005	mg/L
	Vinyl chloride	< 0.010	mg/L

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

pace® INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

June 01, 1993
Report No.: 00024809
Section F Page 1

QUALITY CONTROL REPORT
DUPLICATE AND MATRIX SPIKE DATA

PREP BATCH: 31144 LSG SAMPLE NO: H0237225

TEST	DETERMINATION	ORIGINAL RESULT	DUPLICATE RESULT	UNITS	RANGE / RPD	UNITS	MS RESULT	MS % RCVRY
I685S	Petroleum Hydrocarbons	< 20	< 20	mg/kg	---	mg/kg	340	99.0

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

June 01, 1993
Report No.: 00024809
Section H Page 1

QUALITY CONTROL REPORT
MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

ANLS BATCH: 30980 LSG SAMPLE NO: H0237102

TEST	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RECOVERY	MSD PCT RECOVERY
G150L	1,4-Dichlorobenzene	33.5	36.4	ug/L	8.34	84	91
G150L	2,4,5-Trichlorophenol	37.6	35.6	ug/L	5.40	94	89
G150L	2,4,6-Trichlorophenol	35.2	36.5	ug/L	3.66	88	91
G150L	2,4-Dinitrotoluene	24.3	27.9	ug/L	13.8	61	70
G150L	Hexachlorobenzene	42.4	37.5	ug/L	12.2	106	94
G150L	Hexachlorobutadiene	34.2	34.4	ug/L	0.478	86	86
G150L	Hexachloroethane	34.3	36.1	ug/L	5.10	86	90
G150L	Nitrobenzene	32.8	32.6	ug/L	0.669	82	82
G150L	Pentachlorophenol	27.4	29.6	ug/L	7.72	68	74
G150L	Pyridine	31.1	33.7	ug/L	8.10	78	84
G150L	m-Cresol	68.3 *	72.4 *	ug/L	5.80	85	90
G150L	o-Cresol	33.0	35.8	ug/L	8.33	82	90
G150L	p-Cresol	*	*	ug/L	5.80	85	90

* The compounds m-Cresol and p-Cresol co-elute. The reported result is the sum of the two.

ANLS BATCH: 31176 LSG SAMPLE NO: H0237145

TEST	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RECOVERY	MSD PCT RECOVERY
G107S	Benzene	14.0	13.4	ug/kg	4.38	70	67
G107S	Ethylbenzene	7.71	7.48	ug/kg	3.02	38 *	37 *
G107S	Toluene	11.5	11.0	ug/kg	4.44	58 *	55 *
G107S	m-Xylene	10.4	10.7	ug/kg	2.84	52 *	54 *
G107S	o-Xylene	10.7	11.0	ug/kg	2.76	53 *	55 *
G107S	p-Xylene	10.8	11.3	ug/kg	4.52	54 *	56 *

* Recovery of the spike indicates the presence of a matrix interference. This should be considered in evaluating the data.

ANLS BATCH: 31195 LSG SAMPLE NO: H0237126

TEST	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RECOVERY	MSD PCT RECOVERY
G107S	Benzene	18.2	17.0	ug/kg	6.82	91	84
G107S	Ethylbenzene	13.1	12.4	ug/kg	5.49	66	62 *
G107S	Toluene	18.0	16.1	ug/kg	11.1	90	80

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

REPORT OF LABORATORY ANALYSIS

QUALITY CONTROL REPORT
MATRIX SPIKE AND MATRIX SPIKE DUPLICATE DATA

ANLS BATCH: 31195 LSG SAMPLE NO: H0237126

TEST	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RECOVERY	MSD PCT RECOVERY
G107S	m-Xylene	13.6	13.0	ug/kg	4.51	68	65
G107S	o-Xylene	15.4	14.5	ug/kg	7.09	77	72
G107S	p-Xylene	12.9	12.0	ug/kg	7.22	64 *	60 *

* Recovery of the spike indicates the presence of a matrix interference.
This should be considered in evaluating the data.

ANLS BATCH: 31242 LSG SAMPLE NO: H0237192

TEST	DETERMINATION	MS RESULT	MSD RESULT	UNITS	RPD	MS PCT RECOVERY	MSD PCT RECOVERY
G107S	Benzene	19.0	19.1	ug/kg	0.524	95	96
G107S	Ethylbenzene	16.5	17.1	ug/kg	3.57	82	86
G107S	Toluene	18.8	19.0	ug/kg	1.06	94	95
G107S	m-Xylene	35.4 *	35.0 *	ug/kg	1.14	88	88
G107S	o-Xylene	18.7	20.8	ug/kg	10.6	94	104
G107S	p-Xylene	*	*	ug/kg	1.14	88	88

* The compounds m-Xylene and p-Xylene co-elute. The reported result is the sum of the two.

900 Gemini Avenue
Houston, TX 77058
TEL: 713-488-1810
FAX: 713-488-4661

pace INCORPORATED
THE ASSURANCE OF QUALITY

129142

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Larry Campbell / Transwestern Pipeline Co.
Address: 6381 N. Main St. / Roswell, NM 88201
Phone: (505) 623-2761

Report To: Larry Campbell
Bill To: Larry Campbell
P.O. # / Billing Reference: E5110P
Project Name / No.: Thoreau SW corner pit

Pace Client No.
Pace Project Manager
Pace Project No.
*Requested Due Date: Normal

Sampled By (PRINT): James Robinson
Sampler Signature: James Robinson
Date Sampled: 5/12/93

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA	Ice	ANALYSES REQUEST: TPH	BTEX	TCLP-O	TCLP-F	REMARKS
1	B5-7-C	16:00	Soil		1					X	XXXX				TCLP-O, F are lists specified by L. Campbell
2	B5-7-D	16:00	Soil		1					X					
3	B5-30-C	17:00	Soil		1					X	XXXX				
4	B5-30-D	17:00	Soil		1					X					
5															
6															
7															
8															

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT / DATE	SHIPMENT METHOD RETURNED / DATE
1		Fed Ex 5/13/93	

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
1	James Robinson		5/13/93	10:00
	ENRON GTS	Jennifer Adams / PACE	5/14/93	915

H237223-232

Additional Comments
Send copy of report to: (fax and mail)
James Robinson
16300 Katy Fwy, Ste. 105
Houston, TX 77094-1609
(713) 578-3115, fax-3491

ORIGINAL

SEE REVERSE SIDE FOR INSTRUCTIONS

pace INCORPORATED
THE ASSURANCE OF QUALITY

129141

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Larry Campbell / Transwestern Pipeline Co.
Address: 6381 N. Main St. Roswell, NM 88201
Phone: (505) 623-2761

Report To: Larry Campbell
Bill To: Larry Campbell
P.O. # / Billing Reference: E5110P
Project Name / No.: Thoreau Waste Pit

Pace Client No.
Pace Project Manager
Pace Project No.
*Requested Due Date: Normal

Sampled By (PRINT): James Robinson
Sampler Signature: James Robinson
Date Sampled: 5/12/93

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA	Ice	ANALYSES REQUEST: TPH / BTEX / TCLP-O / TCLP-F	REMARKS
1	B3-7-C	09:00	Soil		1					X	XXXX	TCLP-O, F are lists specified by L. Campbell
2	B3-7-D	09:00	Soil		1					X		
3	B3-49-C	10:00	Soil		1					X	XXXX	
4	B3-49-D	10:00	Soil		1					X		
5	B4-5-C	13:00	Soil		1					X	XXXX	
6	B4-5-D	13:00	Soil		1					X		
7	B4-34-C	14:00	Soil		1					X	XXXX	
8	B4-34-D	14:00	Soil		1					X		

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT / DATE	SHIPMENT METHOD RETURNED / DATE
1		Fed Ex 5/13/93	

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
1	James Robinson ENRON GTS	Jennifer Adams / PACE	5/13/93	10:00
			5/14	915

Additional Comments

Send copy of report to: (fax and mail)

James Robinson
16306 Katy Fwy., Ste. 105
Houston, TX 77094-1609
(713) 578-3115, fax -3491

H227223-232

ORIGINAL

SEE REVERSE SIDE FOR INSTRUCTIONS

pace INCORPORATED
THE ASSURANCE OF QUALITY

129140

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Larry Campbell / Transwestern Pipeline Co.
Address: 6381 N. Main St., Roswell, NM 88201
Phone: (505) 623-2761

Report To: Larry Campbell
Bill To: Larry Campbell
P.O. # / Billing Reference: E5110P
Project Name / No.: Thoreau Waste Pit

Pace Client No.
Pace Project Manager
Pace Project No.
*Requested Due Date: Normal per L. Camp

Sampled By (PRINT): James Robinson
Sampler Signature: James Robinson
Date Sampled: 5/11/93

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA	Ice	ANALYSES REQUEST: TPH / BTEX / TCLP-O / TCLP-F	REMARKS
1	B1-13-C	09:00	Soil		1					X	XXXX	TCLP-O, F as specified by L. Campbell
2	B1-13-D	09:30	Soil		1					X		
3	B1-55-C	10:00	Soil		1					X	XXXX	
4	B1-55-D	10:00	Soil		1					X		
5	B2-19-C	12:30	Soil		1					X	XXXX	
6	B2-19-D	12:30	Soil		1					X		
7	B2-51-C	14:00	Soil		1					X	XXXX	
8	B2-51-D	14:00	Soil		1					X		

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT / DATE	SHIPMENT METHOD RETURNED / DATE
1		Fed Ex 5/13/93	

ITEM NUMBER	RELINQUISHED BY / AFFILIATION	ACCEPTED BY / AFFILIATION	DATE	TIME
1	James Robinson / ENRON GTS	Jennifer Adams / PACE	5/13/93	10:00
			5/14/93	9:15

Additional Comments:
Send copy of report to: (fax and mail)
James Robinson
16300 Katy Fwy., Ste. 105
Houston, TX 77094-1609
(713) 578-3115, fax-3491

#237223-232

ORIGINAL

SEE REVERSE SIDE FOR INSTRUCTIONS